INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.

2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.

3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.

4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Xerox University Microfilms
300 North Zeeb Road
Ann Arbor, Michigan 48106

75-29,212

EDWARDS, Patsy Kaye Dernberger, 1937-
TEACHERS' PERCEPTIONS OF PRESENT PRACTICES, PROCESS-NEEDS, ALTERNATIVE DELIVERY SYSTEMS AND PRIORITY OF INSERVICE EDUCATION.

The University of Michigan, Ph.D., 1975
Education, teacher training

Xerox University Microfilms, Ann Arbor, Michigan 48106

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED.

TEACHERS' PERCEPTIONS OF PRESENT PRACTICES, PROCESS-NEEDS, ALTERNATIVE DELIVERY SYSTEMS AND PRIORITY OF INSERVICE EDUCATION

by
Patsy Kaye Dernberger Edwards

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Education)
in The University of Michigan
1975

Doctoral Committee

Professor Frederick W. Bertolaet, Chairman
Assistant Professor Anna B. Brown
Assistant Professor Hyman Kornbluh
Assistant Professor George C. Mills
Doctor June S. Wilson, Genesee Intermediate School District

ACKNOWLEDGEMENTS

In the course of this study many persons have provided assistance in a variety of ways. Prof. Frederick Bertolaet, my committee chairman, directed and counseled the development of this study. Prof. Anna Brown, Prof. Hyman Kornbluh, Prof. George Mills, and Dr. June Wilson contributed ideas to the design and structure of the study. A deep appreciation is extended to Dr. June Wilson, who has supported and encouraged my efforts continuously. Esther Schaeffer, through her patience and understanding, guided me through the statistical analysis of the data.

I am particularly grateful to Erwin L. Davis, Superintendent of the Genesee Intermediate School District and Frank W. Mead, Superintendent of Marquette-Alger Intermediate School District, who offered their districts as sites for this study; and to the teachers in both districts for their contributions to this study.

Special acknowledgements are extended to those "unknown" teachers who provided opportunities for the

writer to develop a positive attitude, perseverance and typing skills.

Hopefully, there is a Dr. Russell Wilson, a Dr. Donald Bush, a Dr. Curtis VanVoorhees, a Dr. William Kromer, a Helen Candiotti, and a Priscilla Lisicich in everyone's life -- to smooth out the rough spots!

To my husband Hubert, and our children, Cheryl, Cindy, and Caryn for their continual patience, time and sacrifice, I express my love.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS ii

LIST OF TABLES vi

LIST OF APPENDIXES ix

CHAPTER

I INTRODUCTION 1

Purpose of the Study
Hypotheses
Definition of Terms
Assumptions of the Study
Limitations of the Study
Methodology
Footnotes

II REVIEW OF RELATED LITERATURE 37

Historical Development of Inservice Education
Definition, Purposes, and Conceptual Framework of Inservice Education
Governance of Inservice Education
Delivery Systems of Inservice Education
Effect of Perceptual Psychology on Inservice
Research Studies on Inservice Education
Footnotes

III THE PRESENTATION AND ANALYSIS OF DATA 114

Application of the Questionnaire
Characteristics of the Population
Process-Need Identification in Inservice Education
Hypothesis I

TABLE OF CONTENTS (Continued)

CHAPTER

Alternative Delivery Systems of Inservice Education
Hypothesis II
Present Process-Need Practices in Inservice Education
Hypothesis III
Present Alternative Delivery Systems in Inservice Education
Hypothesis IV
Inservice Priority Identification
Content-Need Identification of Inservice Education
Footnotes

IV SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS 207

Summary
Findings, Conclusions, and Implications
Recommendations
Footnotes

APPENDIXES 246

BIBLIOGRAPHY 305

LIST OF TABLES

TABLE

1 Demographic Characteristics of Total Sample and Subgroups: Marquette-Alger and Genesee Intermediate School Districts 116

2 Process-Need Identification in Inservice Education of Total Group 119

3 Significant Chi-Square Results for Process-Needs of Marquette-Alger Intermediate School District and Genesee Intermediate School District Teachers 136

4 Significant Chi-Square Results for Process-Needs of Grade Assignments 139

5 Significant Chi-Square Results for Process-Needs of Years of Experience 142

6 Significant Chi-Square Results for Process-Needs of Educational Degrees 144

7 Alternative Delivery Systems Identification of Inservice Education 147

8 Significant Chi-Square Results for Alternative Delivery Systems of Marquette-Alger Intermediate School District and Genesee Intermediate School District Teachers 155

9 Significant Chi-Square Results for Alternative Delivery Systems of Grade Assignments . . 157

LIST OF TABLES (Continued)

TABLE

10 Significant Chi-Square Results for Alternative Delivery Systems of Years of Experience . . 160

11 Significant Chi-Square Results for Alternative Delivery Systems of Education Degrees . . . 163

12 Present Process-Need Practices in Inservice Education 166

13 Significant Chi-Square Results for Process-Needs and Practices 174

14 Present Alternative Delivery Systems in Inservice Education 188

15 Significant Chi-Square Results for Alternative Delivery Systems of Needs and Practices . . 191

16 Inservice Priority (Raw Scores Summed) 199

17 Inservice Priority (Weighted Scores Summed) . . 201

18 Content-Need Identification of Inservice Education Respondents 202

19 Content-Need Identification of Inservice Education 204

20 Inservice Education Need Areas and Identified Statements 212

21 Process-Need Identification in Inservice Education of Marquette-Alger Intermediate School District Teachers 259

22 Process-Need Identification in Inservice Education of Genesee Intermediate School District Teachers 266

LIST OF TABLES (Continued)

TABLE

23 Chi-Square Results for Process-Needs of Marquette-Alger Intermediate School District Teachers and Genesee Intermediate School District Teachers 273

24 Chi-Square Results for Process-Needs of Grade Assignments 277

25 Chi-Square Results for Process-Needs of Years of Experience 280

26 Chi-Square Results for Process-Needs of Education Degrees 283

27 Chi-Square Results for Process-Needs and Practices 286

28 Alternative Delivery Systems Identification of Marquette-Alger Intermediate School District Teachers 290

29 Alternative Delivery Systems Identification of Genesee Intermediate School District Teachers 292

30 Chi-Square Results for Alternative Delivery Systems of Marquette-Alger Intermediate School District Teachers and Genesee Intermediate School District Teachers 295

31 Chi-Square Results for Alternative Delivery Systems of Grade Assignments 297

32 Chi-Square Results for Alternative Delivery Systems of Years of Experience 299

33 Chi-Square Results for Alternative Delivery Systems of Education Degrees 301

34 Chi-Square Results for Alternative Delivery Systems Needs and Practices 303

LIST OF APPENDIXES

APPENDIX

A Questionnaire 247

B Process-Need Identification in Inservice Education of Marquette-Alger Intermediate School District Teachers and Genesee Intermediate School District Teachers 258

C Chi-Square Results for Process-Needs of Both Districts, Grade Assignments, Years of Experience, Education Degrees and Practices . . 272

D Alternative Delivery System Identification in Inservice Education of Marquette-Alger Intermediate School District Teachers and Genesee Intermediate School District Teachers 289

E Chi-Square Results for Alternative Delivery Systems of Both Districts, Grade Assignments, Years of Experience, Education Degrees and Practices 294

CHAPTER I

INTRODUCTION

Purpose of the Study

The purpose of this study is to examine teachers' perceptions of: present inservice education practices; identification of inservice education process and content needs; desired alternative delivery systems of inservice education; and the priority of inservice education in relation to other identified education needs.

Background Information

Inservice education is a process for change; the ultimate goal is positive change in pupil behavior through constructive alteration of teacher behavior.[1] While change in pupil behavior is essential, an intermediate objective of inservice education is modified teacher behavior through teacher education.

Today, in the United States, education is a necessity. Arthur W. Combs states:

> After years of taking it for granted, we have suddenly discovered that education is not merely useful but absolutely necessary for our way of life. To keep the world we live in running requires the production of intelligent people in ever-increasing numbers. Education has become essential to survival! As a consequence, people everywhere are taking a good hard look at our public schools to find out if they truly meet our needs.[2]

Combs continues with implications for teacher change:

> Some of the improvements we seek in education can be brought about by spending more money, by building better schools, by introducing new courses of study, new standards, or new equipment. But the really important changes will only come about as teachers change. Institutions are made up of people, and it is the behavior of teachers in classrooms that will finally determine whether or not our schools meet or fail to meet the challenge of our times.[3]

John Moffit emphasizes the importance of teacher education to total education:

> Proper education of the nation's teachers is and should be the concern of every citizen. It is the education of teachers that determines the quality of learning and therefore the quality of the people of this country. . . It therefore appears safe to conclude that the quality of the any school system may largely be determined by the quality of the in-service educational programs involving the total professional staff.[4]

Inservice education has long been recognized as a vital part of the continuing educational process of teachers. Traditionally, historically, and legally, inservice teacher education has been assigned to school administrators for planning and implementation. Most

inservice training programs have lacked meaningful and measurable expectations, particularly related to pupil learning. A perusal of the literature over the past three decades, reveals widespread criticism of inservice education. Don Davies writes, "In-service teacher training is the slum of American education--disadvantaged, poverty-stricken, broken promises, and conflict."[5] Louis J. Rubin comments:

> In-service education has indeed been virtually a lost cause. Taken in toto, . . . teacher professional growth has not been taken seriously, it lacks a systematic methodology, and it has been managed with astonishing clumsiness. It is not surprising, therefore, that teachers have grown accustomed to its impotence, and that administrators have come to regard it as a routine exercise in futility.[6]

While the criticisms of inservice education are substantial, it is still regarded as one of the most effective continuing processes for the professional preparation and self-renewal of teachers to effect change in their students. Philip W. Jackson recognizes inservice as one method of improving teaching.

> In-service training, in other words, is only one of many schemes to make teaching better. Whether it is the one on which we should pin our highest hopes and expend our major energies is a question I am not prepared to answer. All we need assume is that in-service training, as a strategy for improving education, is of sufficient merit to warrant further thought. Whether the money spent on such activities would have been better spent on a new rug for the teachers' lounge no one knows, nor can

> we wait to find out before trying to move ahead toward a fuller understanding of the various shapes and forms in-service programs might take.[7]

Harris and Bessant comment that, "In-service education has become, to a great extent, an instrument for bringing about changes in education."[8] Moffit places high regard on inservice education in stating, "therefore, it appears safe to conclude that the quality of any school system may largely be determined by the quality of in-service educational programs.[9] Hass stressing the value of inservice education says:

> The major purpose for in-service education is to promote the continuous improvement of the total professional staff of the school system. All teachers, administrators, and supervisors must constantly study in order to keep up with advances in subject matter and in the theory and practice of teaching. Continuous in-service education is needed to keep the profession abreast of new knowledge and to release creative abilities.[10]

After a perusal of education literature, this writer notes several situations forcing new dimensions to inservice education.[11]

1. New teaching knowledge, innovations, changes, concepts, etc., have increased at an extremely rapid rate in the past two decades and will continue to do so.

2. Recent college graduates, who comprise small percentages annually of total teaching staffs, cannot be depended upon for diffusion of new education patterns.

3. While the requirements for permanent teaching certification are usually fulfilled in the first five years, teaching is a lifetime career and requires additional, continuous study.

4. Community, parent, and student dissatisfaction with education is increasing the expectations of teacher performance and knowledge.

5. A new kind of teacher - the humanist - is being demanded today. This and other alternative roles require different patterns of behavior of teachers.

6. New organizational patterns of schools (extended school year, ungraded, open classrooms, etc.) require new patterns of teacher behavior.

7. New concepts of team teaching, paraprofessionals, differentiated staffing, accountability, community involvement, etc. require new understandings and demands on the majority of teachers.

8. Pay incentives for higher degree educational levels have brought about renewed interest in further educational training.

9. Teachers are demanding more involvement and responsibility in improving education. They want a major role in inservice planning and implementation.

10. The advent of teachers unions, associations and negotiations is playing a major role in educational change.

11. Lower pupil enrollments, large number of new, young teachers, and low teacher turnover creates stable teacher staffs needing continual renewal.

These situations are indicators of change, not only in the area of inservice education, but in total education. Most of the recent literature of inservice education calls for reform in the entire educational system before inservice can be effectively developed. Allen states:

> What is required, then, before sensible inservice training can be developed, is a careful differentiation and task analysis of the various aspects of the teacher's role. But the current structure of education makes such analysis impossible.[12]

Meade comments:

> Until we have a better understanding of the precise relationship between teaching and learning, so that we can establish direct connections between one and the other, our efforts to improve the quality of teaching will have little effectiveness.[13]

Meade comments further that the effectiveness of inservice education is dependent on administrators of schooling designating inservice as a high priority.[14]

Koerner writes of the necessary political change which must come about in teacher education.

> Improvement is preeminently a political problem. . . . Changing the minds of those in power is obviously no easier in teacher education than in any other field, especially if the proposed changes will diminish their authority. But this is what one must try to do first of all in teacher education.[15]

While changes in the total education scene may be needed and could facilitate the possibility of effective inservice teacher education, educational reform is not likely. Sizer reflects:

> Schools, and the expectations of society for them, are unlikely to be very different in 1980 from what they are today. That there will be minimal change should be no surprise: Schools have altered remarkably little, relative to the changes in society and scholarship, since 1900. The factors

> that have reinforced the status quo in recent decades will be even more pronounced in the next ten years.[16]

Donald J. McCarty, as the editor of New Perspectives on Teacher Education, introduces the collected chapters by stating:

> The persistant message flowing from the pens of these thoughtful authors is that schools are not going to change. There is almost a desperate defeatism in these pages. Liberal arts professors are detached from the concerns of teacher education, tight budgets inhibit significant educational reform, the public likes the schools the way they are, leadership from state departments and the federal government is often confusing and disruptive rather than constructive, and teaching is a pseudoprofession, resting on experience and apprenticeship rather than ideas.[17]

Alfred P. Wilson at the Association for Supervision and Curriculum Development Conference, said:

> A massive federally sponsored study by the Commission of Instructional Technology (to improve learning, 1969), concluded that educational technology is failing to make any significant impact on the nation's schools.[18]

The call for reform in education is reflected in the demand for teacher education reform. Silberman writes:

> Teacher education has been the subject of heated and frequently acrimonious debate since the early nineteenth century, and it has been the object of recurrent investigation since the end of World War I; indeed, the preparation of teachers has been studied as frequently as the plight of the black man in America, and with as little effect. Since 1920, in fact, ten major studies of teacher education have been published, one of them running to six, another to eight volumes. In addition, the National Society for the Study of Education, the

> American association of Colleges for Teacher Education, the John Dewey Society, and the Association for Student Teaching have each devoted one or more of their annual yearbooks to the question, and the past two decades have seen a plethora of conference reports, serious critical studies, polemical attacks and counter-attacks, and announcements of "revolutions" and breakthroughs.[19]

Sizer, speaking of reform in inservice education states:

> Although reform is needed, it is reform within the parameters of the existing school, by existing teachers and under existing governmental structures. One cannot seriously quarrel with this implication, for it is realistic.[20]

In the background information, it is necessary to comment on inservice teacher education in Michigan. John W. Porter, Superintendent of Public Instruction in Michigan, states:

> Approximately 100,000 certified classroom teachers and administrators were employed in 1972-73 in 600 Michigan school districts. The total state, local and federal fund budget for these school districts is approximately $2.2 billion, and 73 per cent of this total is required for salaries and wages of professional personnel who provide educational services to Michigan's school children and youth.
>
> Many school systems have provided inservice training programs for their staff. Despite this local effort most persons conclude that this has not been a satisfactory response to teacher needs for new knowledge and new teaching skills and that a state-supported program directed at the approximately 35-year period after permanent or continuing certification is needed.
>
> Each year many of these professional staff members earn additional college credits in response to State Board of Education requirements or because local school district salary provisions tie salary increases to college credit preparation levels.

> While some graduate college credit programs are related to the teacher's preparation field, others are not, and there is no state assurance relating increased preparation to the professional's assignment. Most teachers are desirous of improving in their specialty fields but specific assistance related to improvement may not be available.[21]

A position paper, A Proposed Statute Authorizing Teacher Centers for Michigan, was circulated in the State of Michigan. The purpose of the proposed state-administered teacher centers is the provision of professional development programs responding to the current inservice teacher education situation in Michigan. The proposed statute authorizes the establishment of teacher centers in connection with intermediate school districts. The position paper accompanying the Proposed Statute offers insight on the Michigan inservice situation:

> While the authorization for teacher centers is a new proposal for Michigan, local and intermediate school districts have long provided inservice training programs of one kind or another. Some of these were supported by federal funds and others by funds from local sources. Some of these were designed without an appropriate relationship to the needs of teachers for help in improving their teaching. All previous programs were developed in the absence of the organizational context now available in the form of pupil performance objective statements. In the absence of these objectives, inservice training programs lacked meaningful and measurable expectations specifically related to pupil learning.
>
> Federally-funded programs for professional development or inservice training do not usually include

> the total staff of a given school system, and since many are provided on a special purpose project basis, must be characterized as intermittent. State support for professional development or inservice training programs has not been provided on a regular basis. Similar programs supported from local sources depend upon successful outcomes of local operational millage elections and local pressures for reduced funding make this an undependable source of support. At this time it must be concluded that there is not now an adequate source of funds, a state recognition of importance, nor a state source of help for professional development programs.[22]

The background information of this study established inservice education: 1) as one acceptable vehicle of continuing teacher education; 2) as a change process in pupil behavior through altered teacher behavior; 3) as one area of needed reform in total education; and 4) as one area of inadequacy in education in Michigan. Historic and current conditions discussed give support to the idealistic reformation of education; however, evidence also indicates reform must be realistic within existing parameters.

In the final analysis, the teacher is the most important item in the inservice education process. Postman and Weingarten state:

> Let us consider here the teachers, and especially their attitudes. We take it as axiomatic that the attitudes of teachers are the most important characteristic of the inquiry environment. This point is frequently passed over even by those who advocate

> the use of inquiry methods, but especially by those innovators who are in constant quest of "teacher-proof" programs and methodologies. There can be no significant innovation in education that does not have at its center the attitudes of teachers, and it is an illusion to think otherwise. The beliefs, feeling, and assumptions of teachers are the air of a learning environment; they determine the quality of life within it.[23]

Need for the Study

Through undergraduate or preservice programs and certification, students become legalized teachers; furthermore, after acquisition of additional credit hours required by the state, a permanent certificate is issued. In most states, the possession of a permanent teaching certificate is a license or credential to teach continuously with no further state-imposed sanctions. Few would argue with the assumption that permanent certification and effective teaching are not synonymous. Teaching is recognized as a lifetime career and requires additional, continuous study, referred to as the continuing education of teachers. The term continuing education refers to professional development through a continuing program of activities which enables a teacher to experience self-renewal in the knowledge and skills required for effective profess-

ional practice. Dr. William L. Smith of the United States Office of Education comments:

> There will always be a need for renewal in teacher education. The knowledge revolution, the decline in births, and the shortage of jobs for teachers demands that renewal efforts help those already in the classroom.[24]

Due to many reasons, not the least of which is teacher need and demand, there is a surging commitment to alternative teacher education renewal experiences today, a commitment which is forcing new directions to inservice education.

While inservice has long been an established means of teacher education and renewal, few research efforts have been undertaken to determine the types of inservice programs which would be most beneficial to teachers within the existing parameters. Harris and Bessent state:

> Aside from a few milestone publications, such as the Fifty-Sixth NSSE Yearbook entitled <u>In-Service Education</u>, there is not much available for the practitioner in his in-service efforts. Research in this field is meager. Reports of practices are sketchy and tend to be reported as local "success" stories rather than as objective descriptions. Good case studies are a rarity, and to the authors' knowledge a handbook describing practices in any extensive way simply does not exist.[25]

Harris and Bessent note that, "Rigorous studies are rarely reported, forcing practitioners to speculate

concerning the mistakes that others have made in in-service."[26] They cite the following three areas:

1. Failure to relate the in-service program plans to genuine needs of staff participants.

2. Failure to select appropriate activities for implementing program plans.

3. Failure to implement in-service program activities with sufficient staff and other resources to assure effectiveness.

Involvement is an important concept in any process. With specific reference to teacher involvement in inservice education, Kinnick writes:

> Unless teachers help in the identification of their problems and plan how they will work on those problems, in-service experiences presented to teachers are likely to be the same for all and of little practical help to anyone. Are the same problems significant to teachers at successive stages of their professional life or do individual differences exist among teachers as well as among pupils? If teachers' problems are somewhat developmental in pattern, and many teachers feel that they are, then schools need in-service programs which provide for this diversity of needs.[27]

At this time, several attempts, from federal to local levels, are in practice as delivery systems for the provision of professional development programs in inservice education. Due to lack of funds, lack of insight as to the importance of inservice, and lack of knowledge, adequate sources of help for professional development programs and practices are inconsistent.

The advent of teacher associations and unions have had influences on teacher education. Although no research efforts have been undertaken to determine the priority of inservice teacher education for a bargaining position, it would be helpful to have an indication from teachers of their priority on inservice in relation to other education needs. The position paper on the Proposed Statute for Michigan states:

> The Public Employment Relations Act of 1965 authorized bargaining between school boards and local teacher associations. That bargaining process has included agreements on the rate of pay, a yearly calendar which includes the provision of a minimum of 180 days of student instruction, and the length of a work day. The net results of the give and take of the bargaining process produce stresses for both sides since many issues center around finance. Final actions in a bargaining process frequently occur in a setting where there is not enough available money to provide for all local needs, and hard decisions are required. One vulnerable local program is the budget item for inservice training. In the absence of state designation on importance, this program is frequently eliminated.[28]

The need for this study is summarized in the Florida Teacher Education Center Act of 1973:

> The most important influence the school can contribute to the learning of any student is the attitudes, skills, knowledge and understanding of the teacher. If any change is desired in the nature or quality of the educational programs of the school it will come about only if teachers play a major role in the change. Teachers can best assist with improving education when they

> directly and personally participate in identifying needed changes and in designing, developing, implementing and evaluating solutions to meet the identified needs.[29]

The inservice education of teachers is an imperative for education, teachers, and students. While many areas of inservice education need research, three concerns are relevant to this study: teacher involvement in inservice needs identification; teacher selection of appropriate activities or delivery systems for inservice; and teacher identification of priority of inservice education in relation to other education needs.

The need for this study is evident in developing answers to the following questions:

1. What are the present process practices and delivery systems of inservice education?

2. What do teachers perceive as process needs and delivery systems of inservice education?

3. What do teachers perceive as content needs of inservice education?

4. Are different inservice education process needs and delivery systems identified by population subgroups of teachers of various grade level assignments, years of experience, degree completion, and/or geographic location?

5. What is the priority of inservice education in relation to other identified education needs?

Statement of the Problem

The essential focus of this investigation is to examine teachers' perception of: present inservice education practices; identification of inservice education process and content needs; alternative inservice delivery systems; and the priority of inservice education in relation to other identified education needs.

Hypotheses

I. No significant differences will be found in process-need identification in inservice education between population subgroups:

   A. Teachers in Genesee Intermediate School District and Marquette-Alger Intermediate School District

   B. Teachers in Elementary (K-5), Middle (6-8), and Senior (9-12) grade assignments

   C. Teachers with teaching experience of: 1 year or less, 2-4 years, 5-9 years, 10 and over

   D. Teachers with: BS or BA degrees, MS or MA degrees, Ed. Spec. degrees, Ph.D. or Ed.D. degrees

II. No significant differences will be found in identification of desired alternative delivery systems of inservice education between population subgroups:

A. Teachers in Genesee Intermediate School District and Marquette-Alger Intermediate School District

B. Teachers in Elementary (K-5), Middle (6-8), and Senior (9-12) grade assignments

C. Teachers with teaching experience of: 1 year or less, 2-4 years, 5-9 years, 10 and over

D. Teachers with: BS or BA degrees, MS or MA degrees, Ed. Spec. degrees, Ph.D. or Ed.D. degrees

III. The extent to which an inservice process-need is desired is not related to the extent to which the process-need is practiced.

IV. The extent to which an inservice education alternative delivery system is desired is not related to the extent to which the system is practiced.

Proposition Statements

Additional information is stated in the form of Proposition Statements:

1. The teachers will identify desired process-needs for inservice education.

2. The teachers will identify desired alternative delivery systems for inservice education.
3. The teachers will identify present inservice process-need practices.
4. The teachers will identify present alternative delivery system practices.
5. The teachers will establish the priority of inservice education in relation to other identified education needs.
6. The teachers will identify inservice education content needs.

Definition of Terms

Continuing Education as used in this study refers to professional development through a continuing program of activities which enables a teacher to experience self-renewal in the knowledge of skills required for effective professional practice. Throughout the literature on continuing education, the following terms are used frequently and often interchangeably when referring to the continuing education of school personnel: teacher renewal, professional growth, professional development. Such opportunities include, but are not limited to: attending conferences, workshops and seminars; taking

coursework through colleges and universities; travel; discussion groups; self study; and participation on state, national, or international policy program advisory and decision-making bodies.[30]

Inservice Teacher Education as used in this study includes school, system, or district sponsored and planned activities for improvement of instruction by teachers. Throughout the literature on inservice teacher education, the following terms are used frequently and often interchangeably when referring to inservice teacher education activities of school personnel: inservice education, inservice training, growth inservice activities, and staff development.

School as used in this study refers to a physical plant designated as a school building, such as: North Road Elementary School.

System as used in this study refers to a local school system or district of the first, second, third, or fourth class as defined by Act. No. 269 of the Public Acts of 1955, as amended in the Michigan Constitution, such as: Fenton Public School District or system.

District as used in this study refers to an intermediate district established in accordance with Act No. 190 of the Public Acts of 1962, as amended in the Michi-

gan Constitution; such as: Genesee Intermediate School District.

Teacher as used in this study includes any person legally certified to teach in the state of Michigan who is engaged in professional teaching practice within the public elementary and secondary schools of the state at which attendance fulfills requirements of the compulsory education law. This shall include, but not be limited to: classroom teachers, school librarians, and counselors, but shall specifically exclude nurses, social workers, school psychologists, teacher aides, paraprofessionals, or school principals and other administrators.[31]

Existing Parameters as used in this study includes the conditions of the educational school, system, or district which presently exist "as are", not "as should be", such as: the existing school, the existing governmental structures, etc..

Identified Education Needs as used in this study refers to negotiable items of contracts identified in the Michigan Education Association Negotiation Handbook. Such items or needs include, but are not limited to: class load; teaching conditions; sabbatical leave; teacher protection; etc..

An Agreement Level of 70 Per Cent as used in this study is considered as the separation point in the data analysis between agreement of the sample population with respect to the desirability of a need and/or delivery system. The separation point is determined by the percentage of the sample population who identify a need and/or delivery system within the first two vertical rows (1, 2) of the columns of the questionnaire. (See Appendix A, p. 247)

Process Need as used in this study refers to those needs, as perceived by teachers, concerned with the planning, implementation, and evaluation tasks of inservice education.

Content Need as used in this study refers to those needs, as perceived by teachers, concerned with the subject or topic area of planned and directed inservice education programs.

Assumptions of the Study

In an article by Ronald Lippitt and Robert Fox entitled, "Development and Maintenance of Effective Classroom Learning,"[32] the authors outline six areas of inquiry in inservice education. In the outline of the analysis of the six areas, Lippitt and Fox list

several assumptions concerning inservice education. The writer adopts the following assumptions from Lippitt and Fox:

1. Most teachers have experienced a wide variety of attempts to influence them to change their performance or to improve themselves. Many of these experiences have not appeared relevant to any felt need of the teacher, and have resulted in defensive attitudes.

2. Typically the stimulus to participate in inservice training is an unwelcome imposition of authority, or an inept invitation to volunteer, with no previous involvement or warm-up opportunity to explore the potentialities of the training.

3. The professional development problems of teachers are not solely matters of individual growth but must be seen in the context of a group process, of team relationships, of total staff development.

   A. Improvement in education demands change in behavior on the part of the teachers, rather than just the learning of something new. Such changes are most likely to come through a process of problem solving in which the teacher is centrally involved.

   B. The change potential of a teacher is determined in part by what he perceives to be the expectations of his peers.

   C. The effectiveness of change activities on the part of teachers or teacher groups is enhanced if the sanctioners (administrators, students, parents, school board members) are involved as participants.

4. The leadership and technical resources for meeting the inservice professional development needs of teachers are to be found in a great variety of locations. If sufficient leadership for a wide variety and continuing sequence of inservice

activities is to be provided, much of it will need to come from within the local school system.

5. Preservice education is only the beginning of professional training. Professional development must continue throughout a teacher's career if he is to keep up with changing conditions and new knowledge. Responsibility for continuing professional growth has traditionally rested with the individual teacher, to be managed on his own time and at his own expense. School systems have therefore given low priority to providing funds and staff for the conduct of inservice education programs.

6. Changing behavior usually requires an unfreezing process within which an individual (or group) has a chance to examine questions of relevance, value, risk, potential support, and priority, and to develop commitment to change.

7. In a large proportion of inservice training activities the content is preselected and preorganized by the trainer without involvement of trainees as to training needs, readiness, level of sophistication, variety of individual expectations, and so forth.

8. The learning of new behavior patterns is very unlikely to occur as a result of acquiring information about relevant basic principles or about the desirable behavior patterns.

In addition to Lippitt and Fox's assumptions, the background information for this study suggests the following assumptions:

1. Inservice education is an accepted means of continuing teacher education.

2. Inservice education is a change process in pupil behavior through altered teacher behavior.

3. Inservice education needs reform within the existing parameters.

4. The teacher is the most important influence in the change process of inservice education.

5. Some selected examples of inservice teacher education are effective; however, most reflect three conditions: failure to relate inservice program plans to genuine needs of staff participants; failure to select appropriate activities for implementing program plans; and failure to implement inservice program activities with sufficient staff and other resources to assure effectiveness.

6. Inservice education is one of several demands by teachers organizations in contract negotiations.

Limitations of the Study

This study is limited to perceptions of teachers in Genesee Intermediate School District and Marquette-Alger Intermediate School District in Michigan.

The total concept of inservice education encompasses many areas. It is necessary to limit the scope of this study. The review of the literature is directed toward an understanding of: the historical development of inservice education in the United States; the definition, purposes, and conceptual framework of inservice education; the governance of inservice education; alternative delivery systems, the relationship of perceptual pscychology to inservice education planning and implementation; and research studies on inservice education. Preservice education, credentials, performance-based education,

intrinsic-extrinsic motivation, and evaluation of inservice education are omitted from the review.

The study is limited to the process-need statements and the alternative delivery system statements used on the questionnaire. (See Appendix A, p. 247) The item on the questionnaire concerning the priority of inservice is limited to four education needs.

Methodology

The present discussion describes the sample, the instrumentation, data collection and methods for analyzing the data.

Sample

The Genesee Intermediate School District and the Marquette-Alger Intermediate School District of Michigan were selected as sites for this study.

The teachers in the Flint Community School System were not included in the random sample of Genesee Intermediate School District because of the large number of Flint teachers in the total district (three of every eight). The Flint Community School System has an inservice administration department and inclusion of the System in the sample would have biased the results

to reflect primarily Flint Community School System inservice education.

One hundred and fifty teachers in a random sample in each district were asked, by mail, to participate in this study and complete a questionnaire designed for this study. Staff lists from both intermediate district offices of the 1973-74 school year were used. Parochial schools were included in both districts; however, specialized teachers, such as: speech therapists, reading consultants, preschool teachers, etc., were omitted from the samples in both districts.

In Marquette-Alger Intermediate School District, 150 teachers were selected, using a random table of numbers, from a list of 817 teachers (total population). In Genesee Intermediate School District, 150 teachers were selected, using a random table of numbers, from a list of 5,212 teachers (total population).

Instrumentation

Available questionnaires and survey instruments do not contain the appropriate items concerning areas to be investigated in this study; therefore, it was necessary to design a questionnaire containing pertinent and discriminatory items pertaining to the desired areas

of investigation. In the process, a number of existing questionnaires and scales were investigated. Appropriate elements were adopted to formulate a new instrument from two existing questionnaires:

1. The "Teacher Attitude Toward In-Service Education Inventory"[33] was used in a statewide research study of Tennessee teachers. The inventory includes a series of thirty-four statements regarding inservice education programs. Using a Likert-type scale, respondents are asked to react to each statement using responses of strongly agree, agree, uncertain, disagree, and strongly disagree. Brimm and Tollett developed this questionnaire for use in their study without establishing reliability or validity.

2. In "An Assessment of the In-Service Education Program in Huntsville, Alabama Schools"[34] (an unpublished dissertation), John C. Smith developed a sixty item questionnaire by identifying characteristics noted by authorities in the field as discussed in his Review of the Literature. The assessment of teacher perceptions includes two dimensions: the extent to which selected teachers perceived the characteristics as being desirable, and the extent to which the characteristic was perceived as a present part of the inservice program.

A third source of items considered for use in the questionnaire was an article by Ronald Lippitt and Robert Fox entitled, "Development and Maintenance of Effective Classroom Learning."[35] In this article, Lippitt and Fox outline six areas of inquiry with an analysis including: assumptions about the process of improving teacher performance; some implications for these assumptions formulated as goals for teacher training; and some illustrative designs and training activities relevant to the particular goals. The implications and illustrated designs and activities listed by Lippitt and Fox were adapted to items for questionnaire considerations.

In addition to items selected from the two questionnaires and article described above, descriptive items of inservice education delivery systems were studied. A total of 176 items was studied to determine which would best obtain the necessary data. The final questionnaire pertaining to process-needs consists of two similar questions on seventeen areas, for a total of thirty-four items, as noted below:

Questions	1, 18	Teacher Input into Decision-making
	2, 19	New Teaching Methods
	3, 20	Atmosphere for Learning
	4, 21	Teacher-Administrator Planning
	5, 22	Required vs. Voluntary Attendance by Teachers
	6, 23	University-School Collaborative Efforts

7, 24 Intrinsic-Extrinsic Motivation
8, 25 Relevant Classroom Inservice
9, 26 Released Time for Inservice
10, 27 Inservice for New Teachers
11, 28 Required vs. Voluntary Attendance by Administrators
12, 29 Sequence vs. One-shot Programs
13, 30 Small Group Opportunities
14, 31 Total Staff Inservice Days
15, 32 Individual Differences in Teachers
16, 33 Local School Options
17, 34 Evaluation of Inservice

In addition, eighteen items are included on the questionnaire describing delivery systems or models of inservice education. A total of fifty-two items appear on the questionnaire. The assessment of teacher perceptions on each item includes two dimensions: (1) the extent to which the teachers perceive the process need or delivery system as desired in inservice education (with response catagories: highly desired, desired, slightly desired, not desired), and (2) the extent to which the process need or delivery system on inservice education is practiced in the school environment (with response catagories: high degree, acceptable degree, limited degree, not at all).

An additional task on the questionnaire pertains to priority ranking of inservice education in relation to other identified education needs. The identified education needs used for priority ranking on the quest-

ionnaire were chosen from results of a 1974 Metro Study by the Research Division of the Michigan Education Association.[36] A random sample of teachers was asked to answer the question: What should the Education Association emphasis be on the following issues: teachers' salaries and fringe benefits, student integration, public welfare programs, protection of teacher rights, improvement of teacher bargaining rights, teachers' authority to determine classroom procedures, teachers' authority in setting instructional goals of the district, school faculty integration, teachers' authority in licensing educators, environmental protection, modification of the Michigan Educational Accountability Program. Responses available were: more, about the same and less. Percentages of the 982 returned questionnaires were figured for each response on each item. In totaling the percentages of the first two response columns (more and about the same), the first, fifth, and seventh priority items were: protection of teacher rights (98%); teachers salaries and fringe benefits (95%); and modification of the Michigan Educational Accountability Program (88%). The identified education needs used for priority ranking on the questionnaire for this study are: teacher rights, teacher salaries,

teacher accountability, and inservice education.

The completed questionnaire was submitted to a group of three professors in the field of education administration, two intermediate district superintendents, and two inservice field persons. The questionnaire was field-tested in four graduate education classes. This resulted in minor rearrangements and adjustments. The final version of the questionnaire is in Appendix A.

Data Collection

Two contacts by mail were planned for this study. The first mail contact consisted of: (1) a cover letter signed by the researcher and each school superintendent explaining the purpose of the study; (2) the questionnaire; (3) a preaddressed stamped envelope for returning the questionnaire; and (4) a preaddressed postcard for requesting a copy of the abstract of the study. This packet of material was sent through school addresses to a total of 300 teachers in Genesee Intermediate School District and Marquette-Alger Intermediate School District.

Three weeks after the first contact was mailed, 154 questionnaires and 149 preaddressed postcards (requesting a copy of the abstract of the study) had been returned. A second contact by mail was a postcard to the teachers

who had not returned the preaddressed postcard. The second contact reminded the teachers of the study and asked to have questionnaires returned to the writer. Three weeks later a total of 208 questionnaires had been returned.

Data Analysis

Hypotheses I and II, pertaining to comparisons of independent samples within the sample population on process-needs and alternative delivery systems, have been investigated using chi-square. Rejection of the null hypothesis is determined at the .05 level of significance.

Hypotheses III and IV, pertaining to relationships between present practices and identified process-needs and/or delivery systems, have been investigated using chi-square. Rejection of the null hypothesis is determined at the .01 level of significance.

Proposition Statements 1, 2, 3, and 4, pertaining to present inservice practices, process-needs, and delivery systems, have been investigated using percentages of responses in categories; whereby, an agreement level of 70 per cent or better of the population indicates identified need or delivery system.

Proposition Statement 5, pertaining to the priority ranking of inservice education with other identified education needs, has been investigated using two methods: (1) established priority by summing raw scores, and (2) established priority by weighting individual rank order choices and establishing group frequencies of order.

Proposition Statement 6, pertaining to the content needs of inservice education, is a list of content or topic choices of inservice education with frequency of mention.

The purpose of this study is to examine teachers' perceptions of inservice education. Chapter I presented the rationale for the study, the hypotheses and proposition statements, and the methodology for the study.

Chapter II is a review of the literature; Chapter III is the presentation and analysis of the data; and Chapter IV is the summary, findings, conclusions, implications and recommendations for the study.

FOOTNOTES

[1]Robert N. Bush, "Curriculum-Proof Teachers," in Improving In-Service Education, ed. by Louis J. Rubin (Boston: Allyn and Bacon, 1971), p. 65.

[2]Arthur W. Combs, The Professional Education of Teachers (Boston: Allyn and Bacon, Inc., 1965), p. v.

[3]Ibid.

[4]John Clifton Moffit, In-Service Education for Teachers (Washington, D.C.: Center for Applied Research in Education, Inc., 1965), pp. 7-8.

[5]Don Davies, "Notes and Working Papers Prepared for the Senate Sub-Committee on Education," Washington, D.C., April 1967. (Mimeographed.)

[6]Louis J. Rubin, "Teacher Growth in Perspective," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 245.

[7]Philip W. Jackson, "Old Dogs and New Tricks," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 20.

[8]Ben M. Harris and Wailand Bessent, In-Service Education: A Guide to Better Practice (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969), p. 20.

[9]Moffit, In-Service Education for Teachers, p. 8.

[10]C. Glen Hass, "In-Service Today," In-Service Education for Teachers, Supervisors, and Administrators, in Fifty-Sixth Yearbook of the National Society for the Study of Education, (Chicago: The University of Chicago Press, 1957), p. 13.

[11]Patsy Edwards, "Teacher Center Report," A paper submitted to Dr. Frederick Bertolaet, University of Michigan, February 1974.

[12]Dwight W. Allen, "In-Service Training," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 111.

[13]Edward J. Meade, Jr., "No Health In Us," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 215.

[14]Ibid., p. 220.

[15]James D. Koerner, "Governance of Teacher Education," in New Perspectives on Teacher Education, ed. Donald J. McCarty (San Francisco: Jossey-Bass, Publ., 1973), p. 101.

[16]Theodore R. Sizer, "Teacher Education for the 1980s," in New Perspectives on Teacher Education, ed. Donald J. McCarty (San Francisco: Jossey-Bass, Publ., 1973), p. 2.

[17]Donald J. McCarty, ed., New Perspectives on Teacher Education (San Francisco: Jossey-Bass, Publ., 1973), p. 2.

[18]Alfred P. Wilson, "Individualized In-Service Training," A paper presented at the Association for Supervision and Curriculum Development, St. Louis, Missouri, 7 March 1971.

[19]Charles E. Silberman, Crisis in the Classroom (New York: Random House, 1971), pp. 414-415.

[20]Sizer, "Teacher Education for the 1980s," p. 45.

[21]Michigan Department of Education Teacher Preparation and Professional Development Services, A Proposed Statute Authorizing Teacher Centers for Michigan, December, 1973, p. 1.

[22]Ibid., p. 4.

[23]Neil Postman and Charles Weingarten, Teaching As a Subversive Activity (New York: Dell Publishing Co., 1969), p. 33.

[24]Mary Kay Murphy, "Dallas: Renewal's in the Wind," Texas, [1972]. (Mimeographed.)

[25]Harris and Bessent, In-Service Education, p.3.

[26]Ibid., p. 4.

[27]Jo Kinnick, "The Teachers and the In-Service Program," In-Service Education for Teachers, Supervisors, and Administrators, in Fifty-Sixth Yearbook of the National Society for the Study of Education, (Chicago: The University of Chicago Press, 1957), p. 133.

[28]A Proposed Statute, p. 5.

[29]Florida Constitution, art. 3, sec. 42.

[30]Michigan Education Association, Michigan Education Association Negotiations Handbook, East Lansing, Michigan, 1970.

[31]Ibid.

[32]Ronald Lippitt and Robert Fox, "Development and Maintenance of Effective Classroom Learning," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), pp. 134-165.

[33]Jack L. Brimm and Daniel J. Tollett, "How Do Teachers Feel About In-Service Education?" Educational Leadership 31 (March 1974): 523.

[34]John C. Smith, "An Assessment of the In-Service Education Program in Huntsville, Alabama Schools," (Ed.D. dissertation, University of Alabama, 1971), pp. 259-263.

[35]Lippitt and Fox, "Development and Maintenance," pp. 134-165.

[36]Results of the Metro Study are forthcoming by the Michigan Education Association. This writer was allowed access to the questionnaires and results.

CHAPTER II

REVIEW OF RELATED LITERATURE

A perusal of the literature in inservice teacher education over the past three decades reveals a large amount of writings on history, trends, criticisms and programs. The total concept of inservice education is reflected in many areas of education. It is impossible, in a study of this size, to do an in-depth review of the many facets of inservice education. Complete dissertation studies could be written on inservice education in many specific areas of education. Due to the scope of inservice education and the vast amount of material, it is necessary to limit the review of literature in this study.

The literature reviewed in this chapter is directed toward an understanding of the following: (1) the historical development of inservice education in the United States, (2) the definition, purposes, and conceptual framework of inservice education, (3) the governance of inservice education, (4) delivery systems of

inservice education, (5) the relationship of perceptual psychology to inservice education, and (6) research studies on inservice education.

While the following are recognized as important areas, they are omitted from this study: preservice education, credentials and certification, performance-based teacher education, intrinsic-extrinsic motivation, and evaluation in inservice education.

Historical Development of Inservice Education

The review of the literature on the historical development of inservice education in the United States relates the effects of change in inservice education relative to the growth of the teaching profession, the role of higher education, the credential process, the supervisor's function, the model adaptations of inservice, the effects of changing educational theories on inservice education, and a review of the criticism of present inservice education efforts.

In the United States, the history of inservice education for teachers is difficult to relate due to many factors. Richey comments on these factors in relation to the total education program.

> The history of in-service teacher education in the United States is complicated by the influence of various factors contributing to the gradual structuring of the total educational program, of which the promotion of continuing professional growth on the part of teachers has been only a small, although an important, part. The history of in-service education is further complicated by the fact that its development has not been uniform, either among or within states. In the course of their development, in-service programs have reflected the differences in the educational programs of the several states, differences that arose from the freedom of each state to shape its own educational enterprise and from the efforts that were made by all states to meet the needs of different groups such as city-dwellers, on the one hand, and country folk, on the other.[1]

The beginnings of inservice education in the United States were centered on the purpose of remedial improvement of teachers. This purpose was reflective of the following descriptions of America's early teachers. Moffitt states:

> Separated from older nations by the span of oceans, difficult transportation, and slow communication, it was nearly impossible to find teachers educationally prepared to meet the needs of this young country. Consequently, many of the teachers were not well educated and gave little thought to improving their skills while they were teaching.[2]

LaBue comments:

> It is claimed by some that many teachers of that time were incapable of adequate adjustment to the normal demands of society and consequently "turned" to teaching. Some of these teachers were former criminals; others were generally incompetent and immature.[3]

Cubberly states:

> The historians of education in the United States typically declare that a substantial number of those earlier teachers were itinerant wanderers, odd in both dress and behavior, frequently intemperate, and brutally severe in their discipline of students.[4]

Richey offers:

> During the period between the establishment of state systems of public education and the recovery from the effects of the Civil War, the public schools, as a whole, were staffed by probably the most indifferent, incompetent, and poorly educated teachers in the history of American education.[5]

John Moffitt, in In-Service Education for Teachers, cites Horace Mann's Sixth Annual Report (1843) declaring that hundreds of public schools were terminated due to grossly incompetent teachers.[6] The need for inservice education as a remedial program to correct deficiencies was obvious. Richey states:

> During the nineteenth century, in-service programs of teacher training and ideas current regarding them reflected, above all else, the prevailing and partially valid assumption that the immaturity, meager educational equipment, and inexperience of the teacher rendered him unable to analyze or criticize his own teaching, or, unless given direction, to improve it. This assumption, combined with the teacher's obvious need for a better command of the subject matter that he expected to teach and of appropriate methods of teaching it, went far to determine the purposes, content, and methods of in-service programs of teacher improvement.
>
> The conditions described, the prevailing ideas regarding education, and the temper of the people generally made it essential that programs of in-

> service education of the period should be directed toward the correction of the most obvious defects of teachers, i.e., inadequate command of subject matter to be taught and lack of professional skill; that they should take into account the needs of the inexperienced and entirely untrained teacher; that they should be inexpensively operated; and that they should involve large numbers of teachers. Of programs suggested or devised during the period, the teachers' institute most nearly fulfilled these conditions.[7]

The later 1800's was a period of immense growth and development of the United States and for education. Elementary schooling gradually became compulsory, and new schools brought improved curriculum. Normal schools were opened, and although they had little influence on teacher improvement during the 1800's, they established the foundations for later teacher education institutions. From 1880 until the First World War, the summer courses in the normal schools were strategically the most important agencies of inservice education in the United States.[8]

The commitment to universal elementary education required the employment of thousands of teachers with little or no preparation, many of whom did not have a high school education. Teachers' institutes became the chief means of remedial inservice education to correct deficiencies. Ralph Tyler comments:

> Typically in the 1850's and '60's and '70's, they depended upon institutes of two or three days' duration and short courses in the evening to furnish in-service education. The purpose of these institutes was primarily to enable teachers to bridge the gap between what they were expected to know and do and what were in fact their level of knowledge and their teaching competencies; that is, in-service education of that time was largely remedial. The institutes usually included a review of the "common branches," arithmetic, spelling, geography, and history, with comments on points of difficulty, a statement of principles of discipline, and recommended approaches to the teaching of reading, writing, and numbers.[9]

In the early 1900's teachers institutes were required in about two-thirds of the states. Brenton reports on a teacher institute in Jamestown, Pennsylvania, on January 14, 1858:

> . . . teachers gathered to discuss these questions: Is it better for teachers to board around? Should the teachers encourage pupils to chew tobacco? Should teachers open their schools in the morning by reading a portion of the Scripture? Should the door be closed against pupils who are not present by 9 o'clock in the morning? Should the rod be used in school? Should the wages of females be equal to those of male teachers?[10]

Teachers institutes developed in a period when there was a shortage of even partially trained teachers; few teachers had received high-school diplomas; therefore, the teacher's institute became the most efficient inservice model in the late 1800's and early 1900's. Congruent with the influx of the institutes, was the development of normal schools and teacher training

institutions which continually upgraded teachers.

Richey states:

> The extent and nature of the change wrought in the status of the teaching staff in a period of some forty years may be noted in the rise of the admission requirements of teacher training institutions, the upward extension and enrichment of the programs of those schools, the adoption of higher standards for certification, the increase in the stability of the teaching staff, and in other changes involved in the improvement and upgrading of the teaching staff.[11]

The institute model of inservice changed very slowly to adjust to the process of the birth of teaching as a profession in the United States. Most institutes continued to address the remedial needs of teachers.

Richey continues:

> Criticism mounted toward the close of the century. Many teachers, if still a minority, were rapidly outgrowing the old institute which had become formalized, endowed in legislation, and resistant to change. But what was rapidly becoming an anachronism in some situations continued to be looked upon as a necessity in others. And always there was a tendency toward organizing all institutes and their programs in terms of the needs or assumed needs of the more backward systems and the poorer teachers.[12]

Richey comments further:

> In 1933, the National Survey reported that the institutes were losing ground steadily and that there were unmistakable tendencies toward substituting other forms of in-service training for them. It was also noted that the general level of teacher preparation was rapidly rising. It had by that time become clear that the long struggle

> to improve teachers and teaching had passed the stage in which superficial institute courses, lacking in continuity and offered without adequate facilities, had much, if anything, to offer the classroom teacher.[13]

The original concept of remedial inservice education was slowly changing, and this change was reflected in the modification or terminiation of some institutes. The name "institute" continued in inservice jargon long after the demise of the early teachers' institutes. Although vestiges of county-wide institutes are still in existance, their value was replaced in the early 1900's by other developments in education which emerged in response to changing conditions.

Certification of teachers reflected the growing status of teaching as a profession. In 1890, relatively few teachers had a high school education; however, by 1950, 19 states required four years of college work as a minimum requirement for certification.[14] Tyler comments on certification and inservice:

> After the First World War and until the Great Depression of the 1930s, in-service education was greatly affected by the establishment of quantitative standards for teaching certificates. At that time educators believed that major improvement in the quality of teaching in the American public schools could be brought about by requiring all teachers to have a bachelor's degree. When the drive to implement this view began, over half of the teachers could show on their credentials only the equivalent of two years of college. Hence,

> from 1918 until fifteen or twenty years later, inservice programs were not aimed primarily at helping teachers meet new problems but rather at filling gaps in college degree requirements. This had a deleterious effect both on the institutions and on the teachers enrolled. Instead of planning for summer courses that were new and exciting to the professors who offered them, colleges and universities sought to identify and offer old courses that teachers had not taken previously. The teachers came, not with the purpose of getting new insight, understanding, and competence, but rather with the purpose of getting certificates renewed by patching up their backgrounds.[15]

During the early 1900's teachers colleges experienced growth from the normal school movement. Moffitt states:

> Gradually, normal schools either ceased to exist or were converted into teachers colleges. Like the normal school, the teachers college became a significant institution for educating teachers for American schools. Like its predecessor, however, the teachers college--its staff and curriculum--eventually became inadequate. The attempt to adapt to the changing needs of the times brought about a transition to state colleges and state universities. From 1910 to the middle of the century, plans and programs for educating teachers changed greatly.[16]

Other changes were evident in the growing stability of the teaching profession. Better trained teachers who remained on the staff longer, wanted continuous training and renewal. A sharp reduction in the nation's economy during the depression created a higher level of unemployment; and young people, not able to obtain jobs, stayed in school longer. Teachers needed new skills and curriculums needed redesigning to keep pace with the changes.

Alternative education developments became available in the early 1900's. Richey comments on some of these alternatives:

> Although summer schools, extension courses, after-hour classes, and correspondence study had their origins in the nineteenth century, all made their greatest contribution to teacher education well after the opening of the twentieth century. Relatively young, they had not yet become bound by tradition and were able, therefore, to shape themselves more readily than the older agencies to fit the needs of teachers striving toward full professional status. . . Extension courses were established long before the close of the nineteenth century. The earlier ones, however, whether offered by university or other agencies, were generally of secondary level and admitted anyone who, in the instructor's judgment, could profit from the instruction given. Although teachers were promenent in attendance at these courses, they made little concession to teacher needs. Extension courses of this type did provide opportunity for teachers to make good their cultural and subject-matter deficiencies. Largely after the turn of the century, colleges and teacher-training institutions reorganized their extension programs, raised the standards of admission, and granted college credit for work successfully completed, thus permitting teachers to earn credit toward degrees without loss of salary--an opportunity accepted increasingly, particularly about 1910.[17]

In the 1930's colleges and universities became increasingly important in the models of inservice education for teachers. Tyler comments on several specific programs:

> The Eight-Year Study begun in 1933 involved thirty school systems which, under an agreement with the colleges and universities, were made responsible

> for developing and implementing new educational programs designed to reach all high school students. Shortly thereafter, a similar arrangement was established for selected southern high schools, and this was followed by a state-wide program of secondary school curriculum development in Michigan. By 1939, colleges of teacher education became involved in pre-service and in-service education focused on the new educational programs of the schools. The American Council on Education established the Commission on Teacher Education and aided a selected group of colleges and universities to develop new programs of teacher education and new ways of working with schools and teachers.[18]

Higher education colleges and universities became the acceptable means of obtaining teacher certification and primary emphasis in courses was given to the acquisition of knowledge and skills; the traditional notion of content persisted. Inservice education also helped in the certification process. Tyler comments:

> The Second World War, followed by a sharp increase in the birth rate, created conditions in which there was an acute shortage of teachers. In-service education during this period largely offered courses that would enable teachers to fill the gaps in meeting certification requirements.[19]

While supervision has always been one of the oldest methods for the improvement of instruction, during the middle 1900's, supervision became one of the most important methods of teacher improvement. The person in the role of superintendent or principal was accepted as a person of authority based on competence and understanding superior to teachers. Richey

elaborates further on the authority role:

> Teacher dependence upon established authority was perhaps more firmly fixed by the fact that administrators were generally men and generally older and more experienced than teachers. Not only their age but their sex demanded the respect of many young women teachers who were not entirely certain in their own minds that men were not their natural superiors. Under these conditions and since most superintendents, principals, and directors of supervision were helpful and kindly in their relations with teachers, questioning of the nature of their leadership was slow to develop.[20]

Determining proper methods and standards of inservice education was placed with management and supervisory staff because inservice was too large and complicated a burden for teachers. As Richey indicates, teachers offered little opposition.

> The administrator, aware of the urgency of the task of improving instruction, was interested in developing a program and employing means that would most rapidly remedy the situation. Direction, then as now, was widely regarded as the most efficient procedure for achieving immediate improvement, particularly of the rank and file. And, although the rising qualifications of teachers, particularly throughout the first three decades of the twentieth century, were making increasingly untenable the long-accepted assumption that their meager education, inexperience, inadequate training, and ammaturity rendered them incapable, except under direction, of analyzing their own weaknesses or of developing new understandings and skills, direction from above continued throughout the period to be the guiding force of most programs of in-service improvement. Teachers, long conditioned to prescription and direction, were little disposed to be critical of the direction of those in whom legal authority resided.[21]

As teachers became better skilled and acquired more knowledge, the supervisor's role in inservice education began to be questionned. Richey comments on teacher dissatisfaction with administrative directed programs:

> The continued upgrading of classroom teachers, during the period, was accompanied by a growing recognition of the expertness of an increasing number of them and their growing capacity for self-direction. More and more teachers were becoming equipped, through extended training and lengthened experience, with knowledge and skills possessed by neither superintendent nor principal with a body of theory equal or superior to that possessed, in some spheres, by the supervisor. The growing complexity of the educational enterprise was making expertness at all levels and in many areas increasingly essential. The many high-level competencies required could hardly be the possession of a single person or of a single group of persons such as administrators and supervisors. To the extent that competence became general and special abilities were distributed among all levels of the staff, the assumption of an inferior-superior relationship between two levels became untenable and administratively-organized-and-directed programs to train teachers in-service lost whatever meaning they may have once possessed.[22]

Supervision, by necessity, began to relinquish the inspection system and direction function of inservice, and was revised in terms of the advanced status of teachers and new knowledge of motivation, psychology and leadership theory. Total administrative designed programs of inservice were replaced by coopera-

tive teacher-administrator efforts, as Richey states:

> It was not, however, until after teachers in large numbers had demonstrated that backround, preparation, and experience had made them experts in areas to which the specialization of the administrator and supervisor did not extend that the earlier concept was strongly challenged and that teachers began to be freed, in large numbers, from the imposition of administratively designed programs of in-service education.[23]

> Programs of supervision planned for the teaching staff did give way slowly in favor of an attack by teachers, supervisors, and others upon problem situations that were recognized to be of common concern. The aim of the co-operative effort was the solution of the problem; an important concomitant was the growth of teachers and supervisors in understanding and in the ability to attack and solve problems.[24]

Under the planning and implementation of administrators, inservice workshops became the most prominent model of school sponsored inservice. The workshop has remained the most prominent model of inservice today. Workshops are one day programs for teachers in a school, system, or district. Richey defines the concept:

> There is no accepted definition of a workshop, but it normally consists of a number of teachers working together, with resource persons and a director, under conditions that are designed to provide for individual growth through contact with a stimulating environment, a part of which is the group itself.[25]

The history of inservice education in the United States indicates sporadic development; therefore, it is

possible to find teacher inservice education programs in all stages of administrative and model development in existance at this time. Tyler comments on the present in regard to the history of inservice education:

> As we look at the present against the background of 125 years of in-service education, we can make a few generalizations. Much less attention is given today than in earlier times to remedying gross deficiencies in the pre-service preparation of teachers. In-service education is still viewed by many teachers as a means of increasing communication and reducing the sense of loneliness and isolation that is prevalent in an occupation in which contact with other adults is limited. In-service education is still a major way of achieving social mobility in the educational profession, not only by acquiring paper credentials that are necessary for more responsible positions and higher salaries, but also by gaining wider visibility in the professional world. In-service education continues to be one avenue by which an individual teacher's personal interests and needs can be served. Actually, the only new major purpose of in-service education since 1930 is to aid the school in implementing new educational programs by helping teachers acquire understanding, skills, and attitudes essential to the roles they are to play in the new programs.[26]

The review of the history of inservice education is incomplete without discussing the changing learning theories and practices of American education. Learning theories reflect the notion that interaction, such as teaching, is based on whatever beliefs people have about the nature of man and his behavior. Combs, Avila, and

Purkey comment on the historical pattern of beliefs.

> In earliest times our concepts about the nature of man and his behavior were derived from folklore and tradition. Later on they were largely formulated from philosophical or theological sources. More recently, we have learned to apply the methods of sciences such as psychology, anthropology, and sociology, which are designed to explore the nature of man's behavior in all kinds of settings.[27]

American psychology in the past eighty years has centered on three movements. The earliest of these movements was the stimulus-response psychology, a view which seeks the explanations of behavior in the stimuli to which the organism is subjected. Combs describes the approach in education.

> Present-day teacher education is still deeply influenced by the stimulus-response (S-R) approach to human behavior characteristic of American psychology. When it first appeared on the scene many educators embraced it wholeheartedly, hoping it might provide the basis for a scientific approach to problems of teaching and learning. But his hope has given way to disappointment as it has become clear that so mechanistic a view of psychology cannot supply the answers we need. . . Its greatest effect upon education in particular came in the 1920's and 1930's: it was then that educational psychology came into being and that the ideas of stimulus-response psychology began to be applied to educational problems.[28]

Following World War I, the psychoanalytic movement was stimulated by Sigmund Freud. Combs comments:

> This was really an extension of the S-R approach: it included not just immediate stimuli, but the whole gamut of experiences to which a person had

> been subjected in his lifetime. Looking at man in this way provided useful clues for dealing with many of our educational problems.[29]

During the late 1800's and early 1900's, many teachers embraced one or both movements to search for answers to existing problems. Tyler remarks on several conditions and reflects on inservice education:

> The very heavy immigration into the United States from Europe from 1870 until the First World War brought to attention new problems for the American schools. Children enrolled who spoke no English in the home or in the local community. Children came to school with attitudes, habits, and values different from those which had been taken for granted by the schools in the past. . . This change forced many teachers to re-examine the assumptions upon which their practices had been based, and it stimulated the addition of new topics for consideration in in-service training programs. In this period, too, the ideas of Darwin and of other modern scientists were influencing some educators to look more carefully at the teaching-learning situation and to try new ideas in the classroom. John Dewey was profoundly influenced by the spirit and contributions of science. His School and Society made a great impression upon the more venturesome writers and speakers at institutes and in summer schools. Frances W. Parker, first in Quincy, Mass., and then in Chicago, developed a large following as he sought to change the schools from institutions that "imprison man in the cells of custom" to those that "free the human spirit" and aid man in developing his own potential.[30]

As early as 1900, the seeds of the third movement in American Psychology were beginning--the humanist movement. During the past twenty years in American educational psychology, the humanistic movement has greatly

influenced teachers' beliefs about students and their behavior. Combs describes the movement:

> It is a psychology that is deeply interested in the person's own experience, his internal life. It seeks understanding the nature of people's feelings, attitudes, beliefs, concepts, purposes, desires, loves, hates, and human values. Because these qualities are the very ones that most uniquely make us human, this psychology has come to be known as the humanist movement. Since feelings, values, beliefs, and purposes lie inside people and are not available for direct observation by outsiders, psychologists dealing with these matters are forced to operate from the internal frame of reference, also called the phenomenological frame of reference.[31]

For the historical development of learning theory in American education, the three movements were discussed as unique movements; however, they do not exist as 'pure' schools of thought. The integration of the theories is evident in present inservice practices.

Present Inservice Conditions

There is widespread criticism of present inservice efforts. Bush relates the criticism to the unresponsiveness of inservice to the changes in teachers.

> Much of the current paraphernalia and practice in in-service education has grown up haphazardly and without a coherent rationale over a half century or more. It grew in response to a situation in which teachers were, to a large degree, not well prepared. They required supervision and every possible exhortation to bring themselves up to a minimum level of competence. This condition has

> changed drastically over the past fifty years. In-service education has not. It now needs to be brought into harmony with the current competence of teachers.[32]

The National Education Association in the publication, Inservice Education and Teacher Centers, lists several reasons for dissatisfaction with present inservice education:[33]

> 1. In-service education, a legal mandate in some states and a long-established tradition in others, has come to be viewed as a "requirement" which in some cases means that as many as ten days (of teacher time) each year must be filled with something.
>
> 2. Such programs are often planned unilaterally by central administrative staff for an entire school system without teacher participation in planning.
>
> 3. In-service programs are frequently presented as uncoordinated, one-shot affairs--discipline last month, drugs this month, and behavioral objectives next -- devoid of the systematic continuity that makes for outside preparation, classroom trial, and collegial discussion.
>
> 4. Too many consultants and other outside experts who come to dominate "in-service offerings" are theoreticians -- "paper educators" who are often out of touch with unique local conditions in the real world of a particular school today.
>
> 5. When held after school, the "in-service experience" is presented to teachers who are exhausted from a full day in the classroom and who are sometimes unable or unwilling to stay awake.
>
> 6. A manifest lack of individualized instruction, therefore, can be said to characterize most in-service programs which, as they are presently conceived, can in no way meet the individual requirements of each teacher for professional growth.

Dwight W. Allen attributes current dissatisfaction to the practice of inservice in relation to learning theories:

> The fairly common in-service schedule of two visits per year to the classroom, separated by four or five months, makes very little sense in the light of any theory of learning. If supervision is intended to be an integral part of inservice training, at least as a diagnostic device, then it would make much more sense for a supervisory session to be followed by specific in-service training experiences designed to overcome the teacher's observed needs. Another supervisory session should then follow immediately to determine whether or not the training has had any effect on the teacher's classroom performance.[34]

Lippitt and Fox[35] list several assumptions which outline present dissatisfaction of teachers based on their past experience in inservice education.

> 1. Most teachers have experienced a wide variety of attempts to influence them to change their performance or to improve themselves.
>
> 2. Many of these experiences have not appeared relevant to any felt need of the teacher, and have resulted in defensive attitudes.
>
> 3. Most teachers have participated in some of these activities and have been disappointed by the impracticality of the help offered.
>
> 4. Typically the stimulus to participate in in-service training is an unwelcome imposition of authority, or an inept invitation to volunteer, with no previous involvement or warm-up opportunity to explore the potentialities of the training.

Brearley, Goddard, Browse, and Kallet state that in-service "is not a closely coordinated service and relies alot on local and personal initiative. Inevitably, therefore, provision nationally is uneven."[36] Fischer comments further on this diversity in stating:

> In the absence of a common, agreed upon program of teacher education, any effort at in-service education that has surface validity will be useful for some teachers and useless for others. Large-scale, systematic, efficient use of time, energy, and money in such a case is not possible. Programs will continue on a hit and miss basis.[37]

Rubin attributes complacent attitudes as a contributing factor to dissatisfaction of inservice education.

> In-service education has been a standard educational artifact for most of the twentieth century. That its benefits have been recognized, however, has not been of much consequence. Men tend to survive whatever does not bother them greatly, and the futility of most professional growth activities has not been much of both.[38]

Dissatisfaction in present inservice education practices reflects high emphasis on activities in the cognative domain with little emphasis on humanistic education. Meade comments:

> Frustrated by the magnitude of problems that deal with human wants and needs, we have turned to technical questions, engineering questions, that lend themselves to rational solutions: hence our preoccupation with materials over people. Much of our activity is given to developing expertise and technical finesse in our teachers. We roam about in the cognitive domain not because we think it is the more important, although some obviously do hold

> that view, but because the terrain is much more uncertain in the affective domain.
>
> Yet we know that more than knowledge about subject and method, the teacher needs knowledge about the children he teaches. Methods will change, schools will vary, as will society's expectations. The constant factor will be people (teachers) dealing with people (children). Until our programs of inservice education include an emphasis on humanistic skills, they will remain incomplete.[39]

The review of the literature on the history of inservice education in the United States has related the growth of the teaching profession, the role of higher education, the credential process, the supervisor's function, the model adaptations of inservice education, the effects of changing educational theories on inservice education, and a review of the criticism of present inservice education efforts.

Definition, Purposes, and Conceptual Framework of Inservice Education

Broadly conceived, inservice education includes all activities a teacher experiences. Many experiences will be outside the teacher's professional life. All of life in a broad sense is an inservice experience. Arnold Finch begins to narrow the boundaries of the concept as it pertains to the professional sphere of the teacher:

> Broadly speaking, inservice education includes all activities that teachers engage in during their service, designed to contribute to their improvement and effectiveness on their assignment. This may be travel, professional reading, participation in supervisory and curriculum development programs, attendance at summer session courses, and any other of a wide range of activities--varying from a classroom observation to a sabbatical; from viewing a film or television program, to total personal involvement of great depth and long duration.[40]

Finch's view of the concept, at this point, includes incidental learning through experience, non-goal directed or planned. Phillip Jackson comments on another non-directed inservice experience:

> It is necessary to consider the possible sources of a teacher's knowledge about his work. I believe anyone who thinks about it will have to admit that the single most important source is the act of teaching itself. Indeed, the acceptance of this fact is clearly reflected in the salary schedules of most school systems. . . A teacher who did nothing but teach presumably would grow in his professional ability even if he never read a professional journal or attended a professional convention. Thus, from one point of view, the greatest contribution to in-service training is the experience of teaching itself.[41]

Before narrowing the definition further, it is necessary to discuss other broad ramifications of the concept of inservice education.

There is no specific time at which a person progresses from non-teacher to teacher. Jackson comments:

> Not only is there no specific time at which a person becomes a teacher, but there is also no definable time at which a teacher stops becoming one. This is simply another way of saying that there is no such thing as the "complete" teacher.[42]

The concept of inservice education involves a dimension of continuing education. Smith comments on continuous teacher preparation:

> As long as knowledge about education continues to increase and new techniques and devices are contrived, there will be something new for the teacher to learn regardless of his degree or years of experience. The continuum of preparation can therefore cover the teacher's entire career.[43]

Smith further comments on continuing education on a continuum:

> That part of the continuum that precedes certification is ordinarily referred to as preservice training. Preparation beyond this is called "in-service training," or more recently, "continuing education." We shall use the term "perennial education." This expression will be used because not all of a teacher's education after certification is acquired in service, and because the expression "continuing education" has been preempted by those who are concerned with schooling below the bachelors degree level.[44]

Throughout the literature on inservice, many terms are used frequently and often interchangeably: continuing education, perennial education, teacher renewal, professional growth, professional development, and others. These self-directed opportunities include, but are not limited to: incidental learning, travel, reading,

attending conferences, self study, taking course work through universities, and actual teaching.

To develop a functioning definition of inservice education for this study, it is necessary to limit the broad concept of inservice by distinquishing programmatic efforts at staff improvement from individual efforts for professional growth. This does not diminish the importance of incidental, individual experiential learning; however, for the purposes of this study, it is necessary to define inservice education as "planned activities for the instructional improvement of professional staff members."[45]

Inservice teacher education, as used in this study, includes school, system, or district-sponsored and planned activities for improvement of instruction by teachers. Throughout the literature on inservice teacher education, the following terms are used frequently and interchangeably when referring to inservice teacher education activities of professional school personnel: inservice education, inservice training, growth inservice activity, and staff development. Due to historical significance of remedial improvement, the terms "training" and "institute" often imply negative connotations of inservice education.

Ben Harris and Wailand Bessent define inservice education as:

> . . . being directed toward the improvement of instructional staff members. Inservice education is a goal-directed activity concerned with changes in individuals and organizational systems and achieved through changes in people, rather than in rules, structures, function, or physical environment (although these may be associated changes); and accomplished through training, rather than replacement or reassignment.[46]

Harris and Bessent explain this definition within a conceptualized framework of the nature and function of inservice education; whereby, inservice is sharply defined, the unique contribution of inservice to the operation of education needs is specified, and the purposes of inservice are placed in the total perspective of other organizational processes. Harris and Bessent develop the conceptual framework from four propositions:

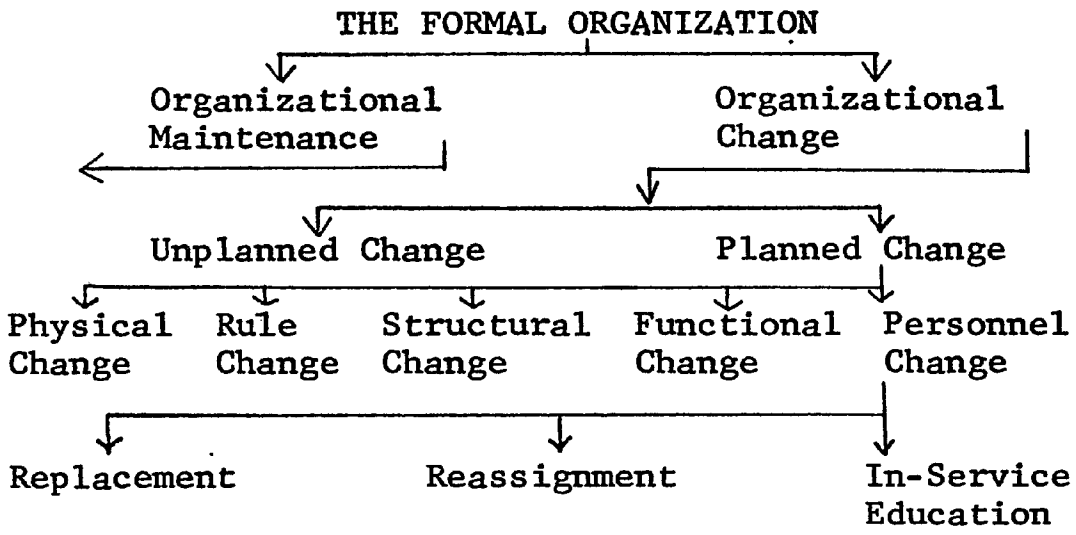
1. In-service education is a process for change.[47]

2. Changes through in-service education take place in an organizational context.

3. In-service education is a process for planned change.

4. In-service education is one of several organizational changes and takes place through personnel development.

The conceptual framework for inservice education is schematically diagrammed as The Organizational Context for In-Service:[48]



Using the diagram from the bottom up, inservice education, according to Bessent and Harris is:

> . . . one of several means for bringing about personnel changes. Personnel change is only one of the several classes of planned change in organizations. Changes may be unplanned as well as planned, and formal organizations such as school districts have both maintenance and change operations. In-service education, then, is defined as being for both change and maintenance; planned and goal-directed rather than unplanned; achieved through personnel changes, not changes in procedures and rules, structure, function, or physical environment; and accomplished through retraining, not replacement or reassignment.[49]

Hass reinforces Bessent and Harris' definition of inservice education when discussing the purpose of inservice.

> The major purpose for in-service education is to promote the continuous improvement of the total professional staff of the school system. All teachers, administrators, and supervisors must constantly study in order to keep up with advances in subject matter and in the theory and practice of teaching. Continuous in-service education is needed to keep the profession abreast of new know-

ledge and to release creative abilities.[50]

Finch comments from the teacher's perspective:

> These then are some of the purposes of the teacher as he engages in inservice education activities; he wants to become more skillful in the management of people (his students), the management of learning (his primary tasks), and the management and advancement of his profession.[51]

Smith and others, comment further on the teacher's purposes in inservice education.

> The purpose of perennial education of teachers is to increase the proficiency of teachers now employed. The roles of teachers, their prior preparation, and their career aspirations vary so greatly that a program of perennial education must serve a number of specific needs and goals. Among other goals, the program should: remedy the teacher's deficiencies arising out of defects in his initial teacher-training preparation, advance the teacher's skills and pedagogical knowledge required for new teaching roles, advance and update the teacher's knowledge of subject matter, and train the teacher for non-tutorial positions.[52]

Harris and Bessent's conceptual framework of inservice and Hass, Finch, and Smith's purpose statements indicate inservice education is a continual process of change, hopefully, initiating positive change in teacher behavior. The ultimate goal of inservice education; however, is positive change in pupil behavior through constructive alteration of teacher behavior.[53] Rubin writes:

> The only true "index of the programs" quality lies in the teacher's classroom performance and ultimately in the students' learning. Surely the ultimate objective is to improve the student's learning, but

> there are intermediate objectives at which in-service education can be aimed. The alteration of teacher behavior can be considered as a legitimate objective in and of itself. It is essential, in the final analysis, to link teacher behavior to changes in pupil behavior, but there are intermediate stages in which it is not necessary to apply this full link.[54]

While change in pupil behavior is essential, an intermediate objective of inservice education is modified teacher behavior through school, system, or district planned activities of inservice education

Governance of Inservice Education

The problem area recognized by most writers as the basis for much of the present criticism of inservice education is the area of governance. In the past, administration of inservice education has been a function of various roles, predominantly, university personnel and school administrators. Presently, both of these groups are losing this function and administrative control of inservice is becoming a function of the teacher's role through the negotiation process. This trend to governance by teachers in inservice is a reflection of the total education picture. An anonymous article in Today's Education entitled, "What Does Governance Mean?," states the following:

> In the past, almost everybody but the teacher has called the tune in education. Teachers have traditionally taken direction from others--local and state school boards, legislators, parents, powerful community leaders. Because most teachers are paid from public funds, many think of them as public servants, and, as such, subject in all matters to the whims of the taxpayers.
>
> That concept is changing. With the increased public demand that teachers be accountable for the learning of children, the entire teaching profession is taking a new look at what is needed to improve teaching and learning. And some members of the profession (among them leaders of NEA) are concluding that teachers are not able to teach as well as they know how to teach because they unfortunately have little control over their profession.
>
> Practitioners, therefore, are actively seeking more responsibility for professional matters. They maintain it is neither feasible nor fair for them to be held accountable for whether or not Johnny and Jane and Hector and Paula learn to read or to understand math concepts or whatever until teachers also have the responsibility for making decisions about how reading teachers, math teachers, and other teachers should be trained, in what institutions they should study, who should be licensed to teach, and how teachers' skills can be kept up to date.[55]

It is necessary to examine the present roles and expectations of all levels having influence on leadership roles of inservice education: government, school administrators, teachers and teacher organizations.

The Role of the Federal Government

The federal government does not directly govern or support inservice education; however, through such acts as the Elementary and Secondary Education Act, the

1968 Amendments to the Vocational Education Act, and the Education Professions Development Act, support is provided for instructional staff improvement including inservice education. While these acts are one of the major funding sources of professional development, their use is limited. Pat Dolan, in an MEA Paper, "Issues in Professional Development of Concern to Teacher Organizations," states:

> National funding of education has been limited in past years to categorical programs, many of which incorporate in-service as essential ingredients. Funds, however, have been extremely sparce and during the Nixon administration have been relegated almost exclusively to accountability related projects. The National Institute of Education, which is funded by the congress as a center for the allocation of research grants, has not been favorably disposed to providing funds to meet needs as seen by teachers, but rather to perpetuate and extend the "results oriented" approach of the current administration. The national congress is perhaps the greatest potential source of new funding for the schools, yet year after year education monies seem to be diverted to other programs.[56]

Government funding usually implies an accountability approach with controls attached to the funding. Many educators, including B. Othanel Smith, foresee the federal government as assuming a larger support role in the future of inservice education.

> It is unrealistic to assume that local and state institutions and agencies can or should bear the major brunt for long-range planning and develop-

> ment of training programs to meet national needs. Particularly at a time when comprehensive and systematic approaches to teacher training are so desperately needed, there is a strong case for the federal government to assume part of the burden of long-range planning in cooperation with state and local institutions. Given the objective of an open society, it is essential that national revenues be made available for the initiation and continued support of such national teacher education projects as manpower recruitment, training programs, and materials development.[57]

An unresolved question emerges as to what is the appropriate governance role of inservice attached to future fund allocations by the federal government.

The Role of the State Government

By the nation's Constitution, the control of education is delegated to state government. Smith comments:

> The people have delegated the primary control of education to state legislatures and state departments of education. Local boards have been delegated certain parallel and specific powers. But the right to educate, certify teachers, and accredit teacher training institutions rests with the state government. It is important to remember here that local school boards are also the creations of the state government.[58]

The role of the state government in governance of inservice education is similar to the federal government: financial support. Since 1960 both state and federal governments have become active in teacher education through financial controls in universities and school districts. The future role of the state

government in governance of inservice education is viewed by many educators as becoming intrusive and highly visible. Atkin writes:

> Regardless, during the next decade major governmental effect on teacher education is likely to be observed at the state level. If the various state legislatures do not mount planning and monitoring capabilities to match those of the various governors, then state-wide centralization is likely to accelerate. Predicting the future is hardly a science, but it is my view that legislative leaders in the states will begin to gain some ground in their competition with the state governors for power. The deficiencies of social planning and centralized management are beginning to be discussed widely. The future of teacher education will more than likely be determined by negotiation of competing interests among university groups, the organized profession, and the public, with executive-level governmental roles less intrusive than they were in the late 1960s. The legislatures are more sensitive to such pressures than governors.[59]

Most writers, including Drummond, invision a different role for state governments.

> In an educational system decisions about schooling should be made as close as possible to the clients of the system. Most of the decisions now being made at the school district level should be either decentralized and given to the staff and faculty of the individual building and their clients or centralized and coordinated by the state department of education. In addition it must provide the financial resources and the technical assistance that the local schools need to do their job. The state must allow and encourage the local school professional staff and their clients to create and carry out their own educational program. If this is to be done, state departments of education must play very different roles from what they have in the past, especially in the areas of curriculum and personnel development.[60]

State governments differ in their approach to inservice education. Dolan comments on the state legislature in Michigan.

> State funding of in-service education is not an established practice in Michigan. A multi-million dollar package of in-service presented to the legislature for consideration in the last session was eventually decreased to $15,000 for a planning grant, and subsequently line item vetoed by the Governor. The legislature has never concerned itself with the identification of in-service needs, nor with the status of existing programs of in-service.[61]

The same unresolved question of federal government control becomes evident at the state level: what is the appropriate governance role of inservice education to be attached to future fund allocations by the state government?

The Role of Intermediate School Districts

It is necessary to discuss the role of the intermediate school districts in a study of inservice education in Michigan, as these school districts are becoming more important as the State Department of Education delegates authority. Dolan comments on the role of intermediate school districts in inservice.

> In many parts of the state, intermediate school districts have taken leadership roles in in-service education. Resources for manpower to administer professional development programs seem to be available within intermediate districts to a larger degree than in other places, perhaps due to the nature

> of funding for intermediate districts. An intermediate district (Wayne) has been awarded a grant to advise the State Board of Education on professional development. Several intermediate offices are involved in needs assessment activities.[62]

Although teacher organizations will be discussed later in Chapter II, it is interesting to note Dolan's comments concerning teacher organization's relationship to the intermediate districts.

> From a teacher organization point of view, the intermediate district is not usually an employer and evades a relationship in terms of collective bargaining. Nor is the intermediate office as subject to the political process as are local boards of education, the state legislature or the SBE. In addition, teachers have very little in terms of economic influence on intermediate district policies. Thus, the organization is relegated to use of its persuasive powers to achieve teacher involvement in this decision making arena -- often an unsatisfactory approach.[63]

The Role of the Local School System

The local school district is responsible for the bureaucratic entity of education. Harris and Bessent comment:

> The school district shares several characteristics that have been termed the bureaucratic form with other large formal organizations. These characteristics determine, in part, the organizational context for all school operations including in-service programs and establish the basis for controlling the behavior of individuals in ways other than professional development through in-service. They are as follows: (1) a hierarchy of authority, (2) reliance on rules and regulations, and (3) functional specialization.[64]

Meade believes the system should identify professional growth goals and teachers should be allowed personal prerogatives for ways to achieve goals.

> The present state of affairs suggests that we have as yet been unable to resolve a crucial issue: should the teacher assume responsibility for his own professional growth or should the system? Although it would be easy to make a case for shared responsibility, the fact remains that if we wish to guarantee quality teaching, the guarantee must be made good by one party or the other. Ultimately, in other words, either the individual must decide for himself whether he has adequate competence and then do what is required to bring himself up to par, or the organization--the school--must judge his competence and provide the necessary corrective measures. My own inclination is to place the charge on the system.[65]

Smith identifies the problem historically, as one of the maturity of the profession of teaching in relation to school boards.

> Education at the elementary and secondary levels was organized before there was any semblance of an education profession. It became customary for lay boards not only to control education but to govern the profession of teaching. There was almost no distinction drawn between them. It is only recently that teachers have moved decisively toward professionalization. Yet in many areas laymen are still, today, having to make decisions of a professional nature. Control of the profession by laymen is so entrenched that it is very difficult to understand the importance of differentiating between control of education and governing of the profession. Acceptance of this difference is essential if the teaching profession is to function in the best interests of society.[66]

Financial support of inservice at the local district level is an indication of the importance of

inservice education. There is no adequate standard established about how much of the district budget should be designated for inservice education. No research studies were found on the issue of local district financial support. Finch relates:

> An informal survey made by the author indicates that less than 1/25th of 1 per cent of their collective budgets was earmarked for in-service education programs. If 80 per cent of a budget is instructional salaries, leaving only 20 per cent about which deliberate decisions can be made, only 1/5th of 1 per cent of that amount is being directed to what is surely one of the institution's most important obligations--the initiation and maintenance of programs designed to insure better instruction.[67]

Whitmore comments on the approval of the board of education for inservice education:

> It is imperative that this commendation be given and financial assistance be available from the general budget if the faculty is to accept the program as an important part of the educational structure.[68]

A recent development influencing local district financial support of inservice education, is teacher organizations and unions, to be discussed later in Chapter II.

The Role of School Administrators

Traditionally, historically, and legally, inservice education has been assigned to school administrators for planning and implementation; however, this kind of lead-

ership is not adequate for present inservice education. The emerging role for school administrators is one involving cooperation with teachers. Some administrators are reluctant to share this control. Hightower comments:

> Functional in-service education will be brought about when the school administrator realizes that the problems analyzed by the process should come from the staff members as a result of felt needs. He should get away from the common practice of selecting and handing down the educational problems for the staff to study.[69]

Arthur Lewis, Assistant Superintendent of schools in Minneapolis, Minnesota, suggests cooperation as a part of the role of administrators.

> The administrator who attempts to develop or modify an organizational plan for in-service by himself is making a mistake. If in-service education is to be based on co-operative group work, the development or modification of this program must be co-operative. Some communities have used system-wide elected committees, composed of teachers, principals, and consultants to plan for an in-service education program.[70]

William Castetter relates, "Chief responsibility of school administration for the in-service program is to create both climate and opportunities for self-improvement."[71] Rubin describes the principal's role in developing a favorable climate.

> The principal who inspires trust, who has the ego strength to concede his own mistakes, and who facilitates the cooperative invention of solutions to common teaching problems generally is able to establish an unrepressed working climate in his school.

> By and large, teachers are a highly committed lot; they are willing to do away with fraudulent ethics and deliberate deception almost as soon as the situation permits openness to be nonthreatening.[72]

Harris and Bessent delineate the administrator's role of establishing the climate by involvement to include participation of administrators in inservice programs.

> The superintendent's or dean's participation in programs on inservice education seems to be a crucial element in their success. When the status leader enters into the activities fully, as a learner and not just as an observer, and when he provides enthusiastic leadership and shows by example that he is serious about setting a climate for self-improvement, the program has a much greater than average chance for success. Where the leader merely tolerates the program or sets it in motion and then remains aloof from it, his subordinates tend to catch the spirit and little is accomplished. Instructional leadership is a team affair.[73]

One of the conflicts in the emerging role of administrators in inservice education is the diminishing supervisory function. Bush comments:

> There is a conflict regarding the place of supervision in current in-service training. The hint that the role of the supervisor is obsolete is probably warranted. The role of the principal as administrative line officer or as supervisor is also clearly in question. It is my view that the old concept of supervision, as implied in the line staff relationship and in the school organization of the past, is rapidly coming to a close. As teachers become better trained and more competent, their need is not for supervision but for a continued opportunity to improve their professional ability.[74]

Finally, the role of administrator in inservice includes the demonstration of the priority of inservice education. Rubin states:

> It is important to observe, in this connection, that the remediation of teaching errors and the mastery of new technical skills are greatly expediated when teachers perceive that their administrators genuinely value--and reward--improved performance. The extent of the administrator's interest in professional growth is reflected in the time and resources he makes available, in his acknowledgement of the improvement that has occurred, and, generally, in the importance he attaches to a continuous struggle for teaching artistry.[75]

The emerging role of administrators in governance of inservice education involves: cooperating in planning, providing unthreatening climates, and creating opportunities for self-improvement; however, this role becomes more difficult with the added conflict of teacher organizations, to be discussed later in Chapter II.

The Role of the Teacher

The teacher is also in an emerging role in governance of inservice education, an increasing role in control and involvement. Harris and Bessent establish involvement of teachers as the most important part of the emerging role of governance.

> One of the few certainties in the field of human endeavor is the relationship between involvement in

> an enterprise and commitment to its goals. From initial planning to final evaluation, the staff members must be intimately involved in the activities of a program in a meaningful way. Involvement is an important key to success. There are others, perhaps, but none so basic nor more important.[76]

The National Education Association comments on involvement as a necessary part of learning.

> Every precept of learning demonstrates that skill improvement, the maturation of concepts, and any significant advance in personal and professional growth arise out of the active and meaningful participation of those to be involved in making decisions about their growth patterns. Lasting and effective professional development therefore requires that teachers have a dominant role in developing processes relating to their own continuing professional development.[77]

An unsigned article in Today's Education develops the concept of involvement in education.

> Governance...self-regulation...autonomy for the teaching profession. By whatever name, the meaning is the same: the fixing of responsibility for professional decisions with the teaching profession.
>
> In the past, almost everybody but the teacher has called the tune in education. Teachers have traditionally taken direction from others--local and state school boards, legislators, parents, powerful community leaders. Because most teachers are paid from public funds, many think of them as public servants, and, as such, subject in all matters to the whims of the taxpayers.
>
> That concept is changing. With the increased public demand that teachers be accountable for the learning of children, the entire teaching profession (among them leaders of NEA) are concluding that teachers are not able to teach as well as they know how to teach because they unfortunately have little control over their profession.[78]

Most educators advocate future governance of inservice education as a cooperative process and agree that all segments of the teaching profession must be involved in planning, carrying out, and evaluating. A few educators advocate governance of inservice by teachers only. Bush advises that inservice governed completely by teachers will provide the open climate teachers need for self-evaluation.

> After a long period of attempting to provide in-service education for teachers, I am convinced that the teacher ought to be the one who takes the initiative, that the teacher ought to select the kind of help, from a wide array of interesting alternatives, which he wishes to avail himself of, and that, in most instances, he needs the help of an impartial outsider to enable him to make a diagnosis and analysis of the situation. For the time being, the program needs to be freed from the formal administrative structure. The evidence is quite conclusive that as now conceived, the administrator is in too strong an authoritative role with his responsibility for rating teachers for dismissal and tenure to also play a role as an impartial, objective expert who can help with the diagnosis of instructional problems. This is a problem most difficult for persons in the administrative staff to accept. They simply fail to believe that teachers' attitudes and perceptions are as they are. It is when teachers are assured anonymity, when they are assured that the results of investigations of classroom work will not be made available to administrative superiors, that they accept eagerly an opportunity to study their own teaching and to improve it. They will reveal data about their teaching which are not available otherwise but which are essential for accurate diagnosis.[79]

The emerging role of governance by teachers requires

involvement with responsibility according to Rubin.

> The demand for more professionalism must be matched with a larger participation in the control of the enterprise. The authentic professional finds it important to involve himself in the formulation of policy, the setting of priorities, the selection of objectives, and so on, since professionalism, by its nature, is based upon conscientious self-discipline and deep involvement.[80]

Jo Kinnick states that involvement in governance increases professionalism:

> The finest testimonial to the effectiveness of strong teacher participation in the identification of school problems and in formulation of plans for problem-solving is the increased professional spirit which such participation fosters.[81]

The emerging teacher's role in governance of inservice education is intermeshed in the recent development of teacher organizations as unions.

The Role of Teacher Organizations

The advent of teachers' associations, unions, and negotiations have had strong influences on total teacher education. Atkins writes:

> When the history of the National Commission on Teacher Education and Professional Standards of the National Education Association is written, it will show a gradual shift in emphasis from attempts at changing teacher education through persuasion and open dialogue among diverse groups to the changing of teacher education through political action and collective bargaining. As associations and unions have become more active politically, they have attempted to control or govern more teacher education. . . Conflict has occurred between

> commissions and state boards and between associations and unions. As unions and associations merge and as the supply of teachers continues to be greater than the demand, pressures by teacher organizations to control preparation and licensure will undoubtedly increase.[82]

The National Education Association cites teachers' professional organizations as the major factor in the emerging role changes of governance in inservice education.

> Teacher involvement in professional development programs will not take place unless this cause is championed and actively pursued by the teachers' professional associations.[83]

Dolan comments on the greater role local teacher associations are assuming in governance of inservice.

> During the past ten years, local teacher groups have devoted their resources primarily to the building of an effective organization for purposes of collective bargaining and political action. They are now beginning to assume greater and greater responsibility for inservice activities, doing needs assessments, and operating workshops, seminars, and conferences. There is, however, considerable conflict within the organization as to what is the appropriate role of the teacher group.[84]

The conflicts apparent since the development of unions; however, are not limited to internal organization conflict. The conflicts of school teachers and school administrators, referred to earlier in Chapter II are monumental barriers to well-defined role establishment in governance of inservice. Ryan and Cooper discuss the realignment of power in governance.

> The day of meek Miss Dove is over. Teachers, through their professional organizations, are demanding both improved benefits for themselves and revised and updated instructional policies for their schools. Teachers are calling for administrators and school boards to relinquish some of their decision-making power to those who they believe are most qualified to make instructional and curricular decisions.
>
> Demands, of course, arouse conflict. As teachers demand higher salaries, more clerical assistance and improved personal benefits, all of which require additional funds, legislators must propose and the public must accept increased taxes. And as teachers demand greater decision-making power, those who now hold such power must be willing to relinquish it.[85]

The development of teachers' organizations and unions has produced a new dimension to professionalism in teaching--a dimension of self-determination and self-regulation. Bush comments,

> In their annual fall roundup of educational events, two of our most distinguished newspapers, the New York Times and the Christian Science Monitor, headlined teacher strikes as signaling that a professional teacher is emerging: better trained, surer of his own professional competence, and unwilling to have it hemmed in by unreasonable restraints and conditions that prohibit him from using his full competence to educate children.[86]

Summary

In reviewing the changing roles of governance through the federal and state government, the intermediate school district, the local system, the school administrators, the teachers and teachers' organizations, it is evident many levels of educational structure and agencies

are involved in the governance of inservice education. Some of these levels and agencies are losing control as teachers are gaining influence through a process of change. Dolan comments, "The question of who will control the various decision making mechanisms is not so much a matter of law as it is a matter of political and economic power."[87]

Delivery Systems of Inservice Education

Because the development of the delivery systems of inservice education has reflected differences in educational programs, groups, and schools, there are hundreds of examples of inservice models. While there are many case studies of isolated models, no effective trend in modeling is apparent in present inservice education programs.

Harris and Bessent have designed a valuable index of analyzing delivery systems through an analysis of activities based on the "experience impact" of the teacher.

> Activities may be arrayed from those with low experience impact to those with high experience impact on the learner. By experience impact we mean that the learner is more likely to interact with the learning situation in such a way that the experience will have some impact that will affect his later behavior.[88]

The authors relate the experience impact to three characteristics of the learning situation.

> The first of these is the extent to which he can control the content of the experience. If he has some influence on the content of what is being presented, there is a greater chance that it can be made relevant to his past experience--an important principle in learning. The second characteristic is whether or not the learning experience is multisensory. Use of multisensory stimuli increases the probability that the learner will become involved in the learning situation. Finally, whether communication is one-way or two-way will influence the accuracy of perception and affect confidence in what has been communicated.[89]

The following diagram suggests several basic activities incorporated in delivery systems of inservice education and illustrates the way in which they are ordered according to their experience impact.[90]

EXPERIENCE IMPACT OF ACTIVITIES

ACTIVITIES	CONTROL OF CONTENT	MULTI-SENSORY	TWO-WAY COMMUNICATION	
Lecture				L.E.I.
Illustrated Lecture		X		
Demonstration		X		
Observation		X		
Interviewing	X		X	
Brainstorming	X		X	
Group Discussions	X		X	
Buzz Sessions	X		X	
Role-playing	X	X	X	
Guided Practice	X	X	X	H.E.I.

L.E.I. = Low Experience Impact
H.E.I. = High Experience Impact

Harris and Bessent use the experience impact framework as a basis for developing activities related to objectives of inservice education illustrated as a "design grid."[91]

IN-SERVICE DESIGN GRID

ACTIVITIES	OBJECTIVES					
	Knowledge	Comprehension	Application	Synthesis	Values & Attitudes	Adjustment
Lecture	Cognitive Objectives					
Illustrated Lecture						
Demonstration						
Observation		Broad-Spectrum Objectives				
Interviewing						
Brainstorming						
Group Discussion						
Buzz Sessions						
Role-Playing				Cognitive Objectives		
Guided Practice						

> The horizontal dimension lists the objectives that might be sought. Beginning at the left are those objectives that lie lowest in the cognitive domain: (1) outcomes that concern recall or recognition (knowledge), (2) outcomes that demand that the learner can relate various knowledges to each other or to possible applications (comprehension), (3) outcomes that demonstrate that the learner will exhibit the desired behavior given the opportunity to do so (application), (4) outcomes that require that the learner demonstrate that he can recognize the appropriate use of the new behavior in relation to the total configuration of the teaching task--that he knows when to use it (synthesis). In the order mentioned, each category of objective is higher in the cognitive domain, with synthesis being the most complex. Although there is not a clear demarcation among the categories, the remaining two classes of objectives lie in what is ordinarily considered to be the affective domain--those that concern the feelings of the learner. These are popularly called attitude and value.

The experience impact chart and design grid indicate that some activities are better for certain inservice purposes than others. For example, to obtain factual content, a low experience impact activity is appropriate. Harris and Bessent state, "In general, those activities that have higher experience impact take more time and skill and require more materials and equipment."[92]

Historically and traditionally, inservice education delivery systems have reflected low experience activity impact; however, recent developments, including teacher demand, have forced development of models approach-

ing the high experience impact for teachers. This emerging condition reflects the facilitating of the learning of teachers in the same context as the learning of students--in an open, experiencing, learning environment. The emerging models of inservice education reflect sound education theory in bringing about conditions, such as these examples which follow: increasing the number of inservice activiy options to meet the individualized needs of teachers, providing opportunities for teachers to teach teachers, and allowing freedom to experiment and self-evaluate.

Harris and Bessent describe the laboratory approach as one design for inservice development with these elements:

1. The participant is actively involved in solving a problem.
2. The problem situation is simulated as realistically as possible.
3. Quantifiable data are produced and recorded to reveal the nature of the response of the participants.
4. Feedback on data is provided to permit each participant to contrast his reactions with those of the larger group or other groups.
5. Data are discussed and analyzed so as to lead to generalizations and implications for practice.

One model based on the laboratory approach is the teacher center concept. Teacher centers have gained

national prominance as a delivery system in inservice education in the past few years. A teacher center is a physical space or place where teachers develop programs for the training and improvement of education personnel. Teachers have an opportunity to receive training specifically related to their most pressing needs. The center can be located within the school or district.

The Teacher Preparation and Professional Development Services of the Michigan Department of Education has published a position paper, A Proposed Statute Authorizing Teacher Centers for Michigan, advocating teacher centers. The purpose of the proposed state-administered teacher centers is the provision of professional development programs as a delivery system of inservice. The proposed statute authorizes the establishment of teacher centers in connection with intermediate school districts. Due to guidelines of governance for teacher centers, controversy exists between various vested-interest groups. Other position papers have been published by the Michigan Education Association and the Michigan Congress of School Administrator Associations.

Teacher centers are one of the models used in the development of the questionnaire for this study. From a list of more than fifty models, eighteen were chosen for inclusion in the questionnaire of this study.

Effect of Perceptual Psychology on Inservice

The review of literature has discussed the history, criticisms, definition, governance and models of inservice; however, the teacher, as a person, is the most important part of the process of inservice education. Inservice education is a process for change; the ultimate goal is positive change in pupil behavior through constructive alteration of teacher behavior. Postman and Weingarten state:

> There can be no significant innovation in education that does not have at its center the attitudes of teachers, and it is an illusion to think otherwise. The beliefs, feelings, and assumptions of teachers are the air of a learning environment; they determine the quality of life within it.[94]

Arthur Combs substantiates Postman and Weingarten:

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

> our schools meet or fail to meet the challenge of our times.[95]

Teacher change is an individual, self-initiated and self-directed process. External forces or factors are not as important in producing affective positive change as internal forces. Combs relates good teaching to self-initiated change in stating, "Good teaching is an intensely personal matter. It is a problem of personal discovery, of learning to use one's self as instrument."[96] Comb's definition of an effective teacher is, "a unique human being who has learned to use himself effectively and efficiently to carry out his own and society's purposes in the education of others."[97] Assuming the self-as-instrument concept of the teacher is valid, then teacher education, including inservice education, should offer programs to develop self-as-instrument teachers. Combs, Avila, and Purkey indicate the need for a "self" psychology.

> To provide the guidelines for such a program we need to know (1) the nature of the self, (2) how it develops, (3) how it may be changed, and (4) what a good teaching self is like; we need a "self" psychology on which to base our operations.[98]

The emergence of a "self" psychology known as Third Force psychology is making an impact in professions having to do with growth, development, and welfare of people--of great importance for education. Third

Force psychology is also referred to as the "humanist movement" and perceptual psychology. Combs, Avila, and Purkey write:

> It is a psychology that is deeply interested in the person's own experience, his internal life. It seeks understanding the nature of people's feelings, attitudes, beliefs, concepts, purposes, desires, loves, hates, and human values.[99]

The basis of perceptual psychology, as Combs, Avila, and Purkey state, is:

> All behavior of a person is the direct result of his field of perceptions at the moment of his behaving. More specifically, his behavior at any instant is the result of (1) how he sees himself, (2) how he sees the situation in which he is involved, and (3) the interrelations of these two.[100]

An acceptance of this basic premise of perceptual psychology indicates that it is not important to change external factors; however, the internal factor of how the external factors are perceived is important. Combs, Avila, and Purkey comment, "To change another person's behavior it is necessary somehow to modify his beliefs or perceptions. When he sees things differently, he will behave differently."[101]

The need to take a perceptual view of inservice as a means of change in teacher behavior is suggested by a number of writers.[102, 103, 104, 105, 106] Earl Kelley, writes:

> We want here to look especially at how the individual sees himself. This is indeed the critical point, because it is how the person sees himself that is enabling or disabling. The crucial matter is not so much what you are, but what you think you are. . . . Perception is the stuff of growth for the psychological self. The perceptive process is the only avenue by which the self can be fed.[107]

Carl Rogers describes the fully functioning person from perceptions to change.

> And as he lives and accepts these widely varied feelings, in all their degrees of intensity, he discovers that he has experienced himself, that he is all these feelings. He finds his behavior changing in constructive fashion in accordance with his newly experienced and newly accepted self.[108]

Arnold Finch comments on change:

> As used here, change means <u>planned change</u>. It does not result from coercion, indoctrination, technological developments, or any other external factors of force. For planned change to occur, a person needs to want to change and then deliberately plan to bring about the change.[109]

Rubin comments on the application of perceptual psychology directly to inservice education.

> The difference between routine teaching and inspired teaching depends to a large degree upon the teacher's own sense of motivation and commitment. The desire to change, if it is to be consequential, must come from within the individual teacher himself.
>
> The way a teacher perceives of himself and his role, his attitude toward education, his belief in the children he teaches, and his basic commitments all influence the quality of his work. Perceptions are often misperceptions. Our attitudes, values, and beliefs can be distorted by defective experiences. Sharpening one's sense of purpose, too, must be a component of continuing education. Real learning causes the learner to alter his behavior. In-service

> education, then, must offer a rich opportunity to acquire personal insights that lead to new ways of behaving in the classroom. In view of the enormous influence our beliefs have on our actions, the scant attention we have given to teachers' values is little short of remarkable.
>
> I believe this is what Jackson has in mind when he urges that we give teachers more time to think about the consequences of what they are doing, for it is the teacher's values that will determine what he will consider as appropriate learning behavior in his students. Values are the stuff that thought is made of. How the teacher feels about something, how strongly, and in what order of importance are tightly interwoven with his view of the educational process. Our values, in effect, are the filters through which we interpret our experiences and process the facts we encounter. As the basis of conscious or unconscious choice, they direct our thoughts into arbitrary patterns. They label, "matters of importance" as opposed to matters of mere occurance by providing an orientation toward perception and knowledge. Values determine whether a thought will be thought, whether an experience will be perceived, and whether the perception itself will be valid or invalid. It follows, therefore, that the agenda for the renewal of the teacher ought rightly to include a clarification of values and beliefs.[110] (Underline mine)

The importance Rubin places on "how the teacher feels about something, how strongly, and in what order of importance" is the basic proposition of this dissertation. Change in inservice education, teacher behavior, and student behavior, will occur as a result of teacher perceptions. What actually exists as inservice education is unimportant; however, what teachers perceive as existing or as needed, is the most important element of change.

Research Studies on Inservice Education

Research efforts in inservice teacher education have been meager, particularly studies using teachers as the population. Most studies have been assessments of case studies of programs.

Cyphert comments on research efforts in the area of teacher education, stating:

> Unfortunately, there is no readily available, current, comprehensive, objective, in-depth analysis of research in teacher education.[111]

After studying eighty-three recent reports of teacher education research gathered by the ERIC Clearinghouse on Teacher Education, Cyphert wrote:

> The plan or design of a modern teacher education program should be based on the answers supplied by research literature to three questions:
>
> What are the behavioral skills a teacher must possess in order to be effective? What are the characteristics a prospective teacher must possess before he can acquire these skills? What are the training experiences that will help him acquire the skills most efficiently?
>
> Unfortunately, at present, research has few useful answers to these questions.[112]

After an in-depth search of the literature on "What Variables Appear Important in Changing Traditional Inservice Training," Francis Sobel wrote:

> When the term "variables" is used, a reader or reviewer assumes that research is involved in the definition of that term. Unfortunately, there is

> little or no educational research bearing on the subject of this review. The reviewer was to search the educational literature and suggest those variables which might be important for further work in the area of changing inservice training programs. The net result of this search is a proposal that the topic be defined more specifically and that systematic research be conducted to document with valid and reliable data the variables which do influence changes in inservice programs. Such documentation does not now exist. Ideas, proposals, needs, and suggested changes exist, but they all lack supporting data.[113]

Sobel further comments that, for lack of research, educators address inservice as "descriptions or prescriptions of the problems and suggested solutions. There is little supporting data for these prescriptions."[114]

Cyphret comments on the lack of research using teachers as subjects.

> In the 1964 study, nearly 30 percent of the research located investigated questions related to student personnel in teacher education; in 1970, however, fewer than 10 percent of the research is concerned with teachers and prospective teachers as people.[115]

This investigator found ten research studies pertinent to this study.

In 1964 an analysis of the performance of teachers in the Los Angeles City School District by Finch[116] noted that inservice education does make a difference in the performance of teachers. Finch reported that teachers who have had the most inservice education are significantly superior to teachers who have had the least

inservice education. One of the conclusions reached by Finch, therefore, is that other factors being reasonably equal, the extent of a teacher's inservice education is the best basis for salary determination and advancement.

Lloyd [117] (1973) studied the effects of a staff development program on teacher performance and student achievement. Using an experimental-control group design, she found that the experimental group (inservice experience) scored significantly higher (.01 level of significance) on observed teacher performance; however, there was no significant difference in student achievement of teachers in the experimental or control group.

Rusk[118] (1973) studied career education attitude change in teachers. Using a pre-test and post-test, he found a significant difference in change of attitude about career education after an inservice education program on career education.

Dushan[119] (1974) compared inservice education perceptions of principals and teachers in the secondary schools of Santa Clara County in California. As a result of the study the following conclusions were drawn:

(1) When considering specific instructional difficulties, significant perceptual differences were found between teachers and principals regarding the value of certain inservice practices. Specifically, when considering the teacher need of methodology, principals placed a significantly higher value than did teachers on teacher-principal conferences and packaged inservice programs. When considering the teacher need of individualization, principals placed a signficantly higher value than did teachers on consultancy services, faculty meetings, teacher-principal conferences, within-school visitations, educational television and packaged inservice programs. When considering the teacher need of student motivation, principals placed a significantly higher value than did teachers on faculty meetings, teacher-principal conferences, teacher-department chairman conferences, laboratory methods, and packaged inservice programs. When considering the teacher need of classroom management, principals placed a significantly higher value than did teachers on faculty meetings, teacher-principal conferences, and within-school visitations.

(2) When analyzing responses by teacher groupings, teachers' perceptions of the appropriateness of inservice education practices tended to be modal in nature with no significant deviation because of experience, sex, or teaching specialization. However, an analysis of the data suggests that teachers' skepticism regarding the value of inservice practices tended to increase with experience.

Six research studies were found having direct implications for planning inservice education programs.

Jaquith[120] (1973) did a comparison study of perceptions of junior high/middle school teachers, principals, and university specialists concerning inservice education. He concludes:

1. Involvement of teachers in the selection of objectives and the organization of methods of inservice education were closely associated with teacher willingness to participate in inservice education.

2. Most teachers and principals perceived inservice education at the local building level as the most preferable method of inservice education.

3. The apparent unwillingness of university specialists to become involved in inservice education and their general preference for developing competencies in on-campus classes suggested that effective consultants for inservice education might be experienced teachers or administrators, and university specialists in specific competency areas.

4. On the basis of perceived importance and willingness for inservice education, the most probable areas for successful inservice education would be in the teaching strategy or diagnostic categories of competencies.

Smith[121] (1971) conducted a teacher assessment of the inservice education program in Huntsville, Alabama schools. The priority needs as indicated by teachers were

1. Provision for the participants affected by the in-service program to have an opportunity to participate in identifying objectives and planning activities.
2. Provision for improvement of instruction in the classroom.
3. Promotion of improvement in staff competency.
4. Provision for meeting the needs and interests of the participants.
5. Provision for encouraging participation in groups.
6. Inclusion of clear and concise communication to avoid misunderstandings and misinterpretations.
7. Inclusion of activities for fulfilling the need of staff members to grow on the job.

Brimm and Tollet[122] conducted a statewide research study on inservice education needs of teachers in Tennessee. Needs identified by 90 percent or better of the teachers were:

1. The teacher should have the opportunity to select the kind of inservice activities which he feels will strengthen his professional competence.
2. Inservice programs should include special orientation activities for the new classroom teacher.

3. The real test of an inservice program is whether it helps the teacher to cope with his professional tasks more successfully.

4. Inservice programs must include activities which allow for the different interests which exist among individual teachers.

5. Teachers need to be involved in the developing of purposes, activities, and methods of evaluation for inservice programs.

6. The primary purpose of inservice education is to upgrade the teacher's classroom performance.

7. Teachers should receive some release time for inservice education activities.

8. One of the most important ways to judge the effectiveness of an inservice program is whether the teacher uses the results of the training in his classroom.

James[123] (1969) had participants evaluate a junior high school inservice program designed to help teachers provide for pupils' individual differences in reading abilities. The conclusions were:

1. Continuous individualized inservice training tends to be effective in improving junior high school

teachers' sensitivities, understandings, abilities, and attitudes about those aspects of instruction for which they perceive support in their institutional setting.

2. Continuous inservice training which utilizes the process of problem-identification and solution in connection with recommended instructional practices tends to have a cumulative positive effect in improving teachers' perceptions about their own and their pupils' needs related to the practices.

3. The implementation of recommended practices at the junior high school level appears to depend more on what the individual teachers see as implications of the recommendations than on the practices themselves.

4. Junior high school subject-matter teachers who study basic reading skill-building principles tend to have difficulty in learning how to apply the principles without extensive practice in incorporating the teaching of the principles into their ongoing instructional program.

5. Improvement of junior high school teachers' abilities to teach reading skills depends in part on the teachers' understandings and abilities to group pupils

within their classes and to incorporate skill-building techniques into their lesson plans.

Turner[124] (1970) did a study of teachers' perceptions of inservice programs in three Maryland counties. The following conclusions were produced:

1. There is no single format for inservice education that is effective for all teachers; however, there are elements which should be incorporated into all programs if teachers are to perceive them as effective. Objectives must be closely related to the reality of the classroom; topics should be limited to those which can be extensively studied during the workshop; skills and information presented should be those which teachers can use immediately in their classrooms; and workshops should be concerned with resolving the kinds of problems which teachers encounter daily.

2. The climate in which inservice is conducted is a major ingredient in teachers' perceptions of effective inservice education. It must be a relaxed, nonthreatening atmosphere in which they can question and express opinions, try new teaching behaviors, share ideas with others, change the direction of the

activities when needed, and evaluate progress daily.

3. Teachers must be actively involved in the learning process--not passive listeners.

4. Teachers want to be shown, through demonstrations with children, what to do and how, to be given an opportunity to practice under the guidance of an expert consultant, and to be provided with follow-up assistance in their classrooms.

5. Teachers will identify factors which contribute to satisfaction with inservice education.

6. Teachers need assistance in identifying specific teaching weaknesses.

Bigelow[125] (1969) used administrator perceptions for a survey and analysis of inservice programs in six midwestern cities. The findings were:

1. Supervision of instruction and curriculum planning are being combined into one unit, the inservice program.

2. Many schools are implementing planned inservice programs executed on a year-around basis.

3. A need exists for more school time in which to plan and implement an inservice program.

4. There is a tendency for school systems to provide

the teachers with an inservice curriculum.

5. The use of college consultants is becoming more prevalent in the public schools.

6. The building principal has a great responsibility in the inservice program.

7. There is a need for more systematic and objective evaluations of inservice education programs.

8. Professional growth for teachers is entering a new era and teacher involvement is becoming an important part of the professional growth pattern.

9. Money budgeted for inservice programs was at a level far below that recommended in the literature.

10. Nearly 90 percent of the coordinators spent less than half-time coordinating the inservice program.

11. A written philosophy is an important aspect of the inservice education program.

Summary

The literature discussed in this chapter was presented for the purpose of giving the reader an appreciation of the development of inservice education as an integral part of education in the United States.

The review of the literature was directed toward an understanding of: the historical development of inservice education in the United States; the definition, purposes, and conceptual framework of inservice education; the governance of inservice education; delivery systems or models for inservice education programs; the relationship of perceptual psychology to inservice education, and the research studies in inservice education pertinent to this study.

This dissertation is another research study in inservice education. The data collected from the inservice questionnaire is presented and analyzed in Chapter III.

FOOTNOTES

[1]Herman G. Richey, "Growth of the Modern Conception of In-Service Education," In-Service Education for Teachers, Supervisors, and Administrators, in Fifty-Sixth Yearbook of the National Society for the Study of Education, (Chicago: The University of Chicago Press, 1957), p. 35.

[2]John Clifton Moffit, In-Service Education for Teachers (Washington, D.C.: Center for Applied Research in Education, Inc., 1965), p. 1.

[3]Anthony C. LaBue, "Teacher Certification in the United States: A Brief History," Journal of Teacher Education 11 (June 1960): 147.

[4]Ellwood P. Cubberly, Public Education in the United States (Boston: Houghton Mifflin Company, 1947), p. 54.

[5]Richey, "Growth of the Modern Conception," p. 37.

[6]Moffit, In-Service Education, p. 2.

[7]Richey, "Growth of the Modern Conception," pp. 36-39.

[8]Ralph W. Tyler, "In-Service Education of Teachers: A Look At the Past and Future," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 8.

[9]Ibid., p. 6.

[10]Myron Brenton, What's Happened to Teacher? (New York: Coward-McCann, 1970), p. 69.

[11]Richey, "Growth of the Modern Conception," p. 42.

[12]Ibid., p. 41.

[13]Ibid., p. 45.

[14]Ibid., p. 56.

[15]Tyler, "In-Service Education," p. 10.

[16]Moffit, "In-Service Education," pp. 3-4.

[17]Richey, "Growth of the Modern Conception," pp. 47-48.

[18]Tyler, "In-Service Education," p. 11.

[19]Ibid., p. 13.

[20]Richey, "Growth of the Modern Conception," p. 53.

[21]Ibid., p. 53.

[22]Ibid., p. 59.

[23]Ibid., p. 66.

[24]Ibid., p. 61.

[25]Ibid., p. 62.

[26]Tyler, "In-Service Education," pp. 13-14.

[27]Arthur W. Combs, Donald L. Avila, and William W. Purkey, Helping Relationships (Boston: Allyn and Bacon, Inc., 1971), pp. 18-19.

[28]Arthur W. Combs, The Professional Education of Teachers (Boston: Allyn and Bacon, Inc., 1965), p. v.

[29]Ibid., p. 11.

[30]Tyler, "In-Service Education," pp. 8-9.

[31]Combs, Avila, and Purkey, Helping Relationships, p. 23.

[32]Robert N. Bush, "Curriculum-Proof Teachers," in Improving In-Service Education, ed. by Louis J. Rubin (Boston: Allyn and Bacon, 1971), pp. 38-39.

[33]National Education Association, "In-Service Education and Teacher Centers," Briefing Memo. Fall 1973. No. 3., p. 1.

[34]Dwight W. Allen, "In-Service Training," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 117.

[35]Ronald Lippitt and Robert Fox, "Development and Maintenance of Effective Classroom Learning," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), pp. 134-135.

[36]Molly Brearley, Nora Goddard, Bill Browse, and Tony Kallet, Educating Teachers (New York: Citation Press, 1972), p. 17.

[37]Louis Fischer, "In-Service Education," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 233.

[38]Louis J. Rubin, "Teacher Growth in Perspective," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 257.

[39]Edward J. Meade, Jr., "No Health In Us," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), pp. 223-224.

[40]Arnold Finch, Growth of In-Service Education Programs That Work (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969), p. 9.

[41]Philip W. Jackson, "Old Dogs and New Tricks," in Improving In-Service Education, ed. Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 28.

[42]Ibid., p. 27.

[43]B. Othanel Smith, Saul B. Cohen, and Arthur Pearl, Teachers for the Real World (Washington, D.C.: American Association of Colleges for Teacher Educators, 1969), p. 151.

[44]Ibid.

[45]Ben M. Harris and Wailand Bessent, In-Service Education: A Guide to Better Practice (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969), p. 2.

[46]Ibid., p. 29.

[47]Ibid., p. 16.

[48]Ibid.

[49]Ibid., pp. 16-17.

[50]C. Glen Hass, "In-Service Today," In-Service Education for Teachers, Supervisors, and Administrators, in Fifty-Sixth Yearbook of the National Society for the Study of Education, (Chicago: The University of Chicago Press, 1957), p. 211.

[51]Finch, Growth of In-Service Education, p. 12.

[52]Smith and others, Teachers for the Real World, p. 152.

[53]Bush, "Curriculum-Proof Teachers," p. 65.

[54]Rubin, "Teacher Growth," p. 258.

[55]"What Does Governance Mean?," Today's Education 60 (December 1971): 20.

[56]Patrick H. Dolan, "Issues in Professional Development of Concern to Teacher Organizations," Michigan Education Association (1974), p. 16. (Mimeographed.)

[57]Smith and others, Teachers for the Real World, p. 173.

[58]Ibid., p. 141.

[59]Myron J. Atkin, "Governmental Roles," in New Perspectives on Teachers Education, ed. Donald J. McCarty (San Francisco: Jossey-Bass, Publ., 1973), pp. 82-83.

[60]William H. Drummond, "Role of State Department of Education," in New Perspectives on Teacher Education, ed. Donald J. McCarty (San Francisco: Jossey-Bass, Publ., 1973), p. 99.

[61]Dolan, "Issues in Professional Development," p. 41.

[62]Ibid., p. 21.

[63]Ibid.

[64]Harris and Bessent, In-Service Education, p. 8.

[65]Meade, "No Health In Us," p. 216.

[66]Smith and others, Teachers for the Real World, p. 137.

[67]Finch, Growth In-Service Education, p. 18.

[68]Richard Frank Whitmore, "Effective Methods for the Orientation and Administration of an In-Service Education Program" (unpublished Ph.D. dissertation, University of Nebraska, 1960), p. 135.

[69]Howard W. Hightower, "In-Service Education" Educational Administration and Supervision 38 (1952): 243-244.

[70]Arthur Lewis, "The Role of the Administration in In-Service Education," In-Service Education for Teachers, Supervisors, and Administrators, in Fifty-Sixth Yearbook of the National Society for the Study of Education, (Chicago: The University of Chicago Press, 1957), p. 158.

[71]William B. Castetter, Administering the School Personnel Program (New York: The Macmillan Company, 1962), p. 258.

[72]Louis Rubin, "The Self-Evolving Teacher," in Improving In-Service Education, ed. by Louis J. Rubin (Boston: Allyn and Bacon, 1971), p. 273.

[73]Harris and Bessent, In-Service Education, p. 9.

[74]Bush, "Curriculum-Proof Teachers," p. 60.

[75]Rubin, "The Self-Evolving Teacher," p. 269.

[76]Harris and Bessent, In-Service Education, p. 9.

[77]National Education Association, "Teacher Centered Professional Development," Washington, D.C., 1972, p. 33. (Mimeographed.)

[78]"What Does Governance Mean?" pp. 20-21.

[79]Bush, "Curriculum-Proof Teachers," pp. 57-58.

[80]Rubin, "The Self-Evolving Teacher," p. 274.

[81]Jo Kinnick, "The Teachers and the In-Service Program," In-Service Education for Teachers, Supervisors, and Administrators, in Fifty-Sixth Yearbook of the National Society for the Study of Education, (Chicago: The University of Chicago Press, 1957), p. 136.

[82]Atkin, "Governmental Roles," p. 90.

[83]National Education Association, "Teacher Centered Professional Development," p. 36.

[84]Dolan, "Issues in Professional Development," pp. 11-12.

[85]Kevin Ryan and James M. Cooper, Those Who Can, Teach (Boston: Houghton Mifflan Co., 1972), p. 409.

[86]Bush, "Curriculum-Proof Teachers," p. 39.

[87]Dolan, "Issues in Professional Development," p. 22.

[88]Harris and Bessent, In-Service Education, p. 34.

[89]Ibid.

[90]Ibid., p. 35.

[91]Ibid., pp. 36-37.

[92]Ibid., p. 36.

[93]Ibid., p. 45.

[94]Neil Postman and Charles Weingarten, Teaching As a Subversive Activity (New York: Dell Publishing Co., 1969), p. 30.

[95]Combs, The Professional Education of Teachers, p. v.

[96]Ibid., p. 25.

[97]Ibid., p. 9.

[98]Combs and others, Helping Relationships, p. 10.

[99]Ibid., p. 12.

[100]Ibid., p. 13.

[101]Ibid.

[102]W. R. Dixon and W. C. Morse, "The Prediction of Teaching Performance: Empathic Potential," Journal of Teacher Education 12 (1961): 322-329.

[103]Margaret Lindsey, New Horizons for the Teaching Profession (Washinton, D.C.: National Commission on Teacher Education and Professional Standards, 1961), p. 3.

[104]P. E. McClendon, "Teacher Perception and Working Climate," Education Leadership 20 (1962): 104-109.

[105]C. P. Ramsey, "Leadership Preparation," Education Leadership 20 (1962): 151-154.

[106]D. G. Ryans, Characteristics of Teachers (Washington, D.C.: American Council on Education, 1960), p. 2.

[107]Earl C. Kelley, "The Fully Functioning Self," Perceiving Behaving Becoming, in 1962 Yearbook of the Association for Supervision and Curriculum Development, (Washington, D.C.: National Education Association, 1962), pp. 9-14.

[108]Carl R. Rodgers, "Toward Becoming a Fully Functioning Person," Perceiving Behaving Becoming, in 1962 Yearbook of the Association for Supervision and Curriculum Development, (Washington, D.C.: National Education Association, 1962), p. 22.

[109]Finch, Growth of In-Service Education, p. 28.

[110]Rubin, "Teacher Growth in Perspective," pp. 251-252.

[111]Frederick R. Cyphret, "An Analysis of Research in Teacher Education," Journal of Teacher Education 23 (Summer 1972): 145.

[112]Ibid., p. 151.

[113]Francis Thomas Sobol, What Variables Appear Important in Changing Traditional Inservice Training Procedures (Washington, D.C.: Division of Assessment and Coordination, 1971), p. 1.

[114]Ibid., p. 4.

[115]Cyphret, "An Analysis of Research," p. 148.

[116]Arnold E. Finch, "The Relationship of In-Service Education to Competence of Selected Teachers of the Los Angeles City School Districts" (unpublished Ph.D. dissertation, University of California, 1964).

[117]Dorothy Marie Lloyd, "The Effects of a Staff Development In-Service Program on Teacher Performance and Student Achievement" (unpublished Ed.D. dissertation, University of California, 1973).

[118]Glenn Dennis Rusk, "The Identification of Teacher Attitudes Related to Career Education and Attitudinal Change as a Result of In-Service Education" (unpublished Ph.D. dissertation, Kansas State University, 1973).

[119]Dushan Angius, "The Appropriateness of Selected Inservice Education Practices as Perceived by Secondary School Educators" (unpublished Ed.D. dissertation, University of the Pacific, 1974).

[120]Charles Ervan Jaquith, "An Analysis of Perceptions of Junior High/Middle School Teachers, Principals, and University Specialists Concerning Inservice Education" (unpublished Ph.D. dissertation, University of Michigan, 1973).

[121]John Carlton Smith, "An Assessment of the In-Service Education Program in Huntsville, Alabama Schools" (unpublished Ed.D. dissertation, University of Alabama, 1971).

[122]Jack L. Brimm and Daniel J. Tollett, "How Do Teachers Feel About In-Service Education?" Educational Leadership 31 (March 1974): 523.

[123]H. J. James, "Evaluation of a Junior High School In-Service Program Designed to Help Teachers Provide for Pupils' Individual Differences in Reading Abilities" (unpublished dissertation, University of Miami, 1969).

[124]I. S. Turner, "A Study of Teachers' Perceptions of an In-Service Program in Three Southern Maryland Counties" (unpublished dissertation, The George Washington University, 1970).

[125]E. B. Bigelow, "A Survey, Analysis, and Proposed Program of In-Service Education in Selected School Districts in Six Midwestern States" (unpublished dissertation, University of South Dakota, 1969).

CHAPTER III

THE PRESENTATION AND ANALYSIS OF DATA

The analysis of the data collected through the administration of the questionnaire is presented in this chapter. The data will be presented and analyzed in the following order:

1. Process-need identification of inservice education (Proposition Statement 1)
   Analysis of Hypothesis I.
2. Identification of desired alternative delivery systems of inservice education (Proposition Statement 2)
   Analysis of Hypothesis II.
3. Present process-need practices in inservice education (Proposition Statement 3)
   Analysis of Hypothesis III.
4. Present alternative delivery system practices in inservice education (Proposition Statement 4)
   Analysis of Hypothesis IV.

5. Inservice education priority identification (Proposition Statement 5)
6. Content need identification of inservice education (Proposition Statement 6)

Application of the Questionnaire

The questionnaire on inservice education was mailed to 300 teachers: 150 in Marquette-Alger Intermediate District and 150 in Genesee Intermediate School District. A total of 208 questionnaires were returned: 117 from teachers in Marquette-Alger Intermediate School District and 91 from teachers in Genesee Intermediate School District.

The results of each returned questionnaire were placed on data cards, and all statistical analyses were performed at The University of Michigan-Flint Computer Center with consultive services provided by the Center and the Horace Rackham Statistical Laboratory.

Characteristics of the Population

Data on the total group and subgroup participants pertaining to degree status, grade level assignments, and years of teaching experience are presented in table 1. In the Degree Status category both subgroups include

TABLE 1

DEMOGRAPHIC CHARACTERISTICS OF TOTAL SAMPLE AND SUB-GROUPS: MARQUETTE-ALGER AND GENESEE INTERMEDIATE SCHOOL DISTRICTS

Category	Total Group N=208		Marquette-Alger N=117		Genesee N=91	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Degree Status						
No degree	0	0.0	0	0.0	0	0.0
B.S./B.A.	127	61.0	60	65.9	67	57.2
M.S./M.A.	77	37.0	29	31.9	48	41.0
Educ. Spec.	4	1.9	2	2.2	2	1.7
Doctorate	0	0.0	0	0.0	0	0.0
Grade Level Assignment						
K-5 (Elementary)	85	40.9	28	30.8	57	48.7
6-8 (Middle	47	22.6	22	24.2	25	21.4
9-12 (Senior)	76	35.5	41	45.1	35	29.9
Years of Teaching Experience						
0-1 Years	0	0.0	0	0.0	0	0.0
2-4 Years	59	28.4	31	34.1	28	23.9
5-9 Years	66	31.7	25	27.5	41	35.0
10+ Years	83	39.9	35	38.5	48	41.0

more bachelor than master degrees, two education specialist degrees, and no doctoral degrees. In Grade Level Assignment category, Marquette-Alger Intermediate School District includes a larger number of 9-12 grade level teachers, while Genesee Intermediate School District includes a larger number of K-5 grade level teachers; total group figures contain more K-5 teachers than any other grade level. In the Years of Teaching Experience category, both subgroups include more teachers in the 10+ years group than in any other group. Marquette-Alger Intermediate School District includes a larger number of 2-4 year teachers while Genesee Intermediate includes more 5-9 year teachers. The total group figures reflect fewer 2-4 year teachers.

Before presenting an analysis of the data, information is necessary concerning an operational task of this study. The first step in computational analysis in this study was to determine if teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District were statistically significant in differences of identification of process-needs, desired alternative delivery systems and present practices of inservice. If the sub-samples of districts had been significantly

different, it would be necessary to report all findings separately for the districts. In essence, two studies would have developed. In this study, however, comparisons of teachers in the two districts were not significant to warrant separate data analysis. Throughout Chapter III, the sample population refers to the total sample population in this study unless otherwise stated.

Process-Need Identification in Inservice Education (Proposition Statement 1)

Of the thirty-four process-needs on the questionnaire, thirty-one are identified at an agreement level of 70 per cent or better of the sample population who responded to each need with responses of "highly desired" or "desired". The thirty-one needs range closely from an agreement level of 97.6 per cent to 77.4 per cent (see table 2).

A large majority, 97.6 per cent of the respondents, indicated inservice education needs to allow for activities to be planned based on an assessment of needs perceived by teachers. Relative to this same characteristic, 97.1 per cent indicate teachers desire to have a voice in the decision making process of inservice. The sample population

TABLE 2

PROCESS-NEED IDENTIFICATION IN INSERVICE EDUCATION OF TOTAL GROUP

*Rank Order	Per Cent Responses 1 & 2	Need	**Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	97.6	Allows for activities to be planned based on an assessment of needs perceived by teachers	140	67.3	63	30.3	4	1.9	1	.5
2	97.1	Provides for teachers to have a voice in the decision making process of inservice education	130	62.5	72	34.6	6	2.9	0	0.0
3	96.2	Assists the teacher in improving the teaching and learning situations in the classroom and school environment	125	60.1	75	36.1	8	3.8	0	0.0
4	96.1	Provides opportunities to become acquainted with new teaching practices and/or curriculum	133	63.9	67	32.2	8	3.8	0	0.0
5	95.6	Involves teachers and administrators in decisions pertaining to inservice education	128	61.5	71	34.1	9	4.3	0	0.0

*Rank Order determined by largest per cent in response columns 1 and 2; when total per cent is the same, Rank Order determined by largest per cent in response column 1.

**Response 1: highly desired, Response 2: desired, Response 3: slightly desired, Response 4: not desired.

TABLE 2 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
6	95.2	Relates directly to the problems of daily classroom life and school operation	134	64.4	64	30.8	10	4.8	0	0.0
7	95.2	Allows for participants to be actively involved in learning experiences	97	46.6	101	48.6	9	4.3	1	.5
8	94.7	Provides an atmosphere encouraging teachers to express feelings and opinions, ask questions, offer comments, exchange ideas	130	62.5	67	32.2	11	5.3	0	0.0
9	90.4	Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	105	50.5	83	39.9	16	7.7	4	1.9
10	89.4	Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	99	47.6	87	41.8	21	10.1	1	.5

TABLE 2 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
11	88.9	Contains released teaching time for the total staff for scheduled inservice programs	109	52.4	76	36.5	17	8.2	6	2.9
12	88.4	Permits local schools to plan, organize, and conduct inservice programs	86	41.3	98	47.1	20	9.6	4	1.9
13	88.0	Permits small groups of teachers to be released occassionally during the regularly scheduled school day to participate in group activity sponsored by the school	70	33.7	113	54.3	22	10.6	3	1.4
14	87.9	Contributes to satisfactory orientation of new teaching personnel.	97	46.6	86	41.3	19	9.1	6	2.9
15	87.9	Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience	91	43.7	92	44.2	18	8.7	7	3.4

TABLE 2 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
16	87.9	Provides continuity of professional growth by providing a sequence of activities at inservice	90	43.0	93	44.9	18	8.7	7	3.4
17	87.5	Includes special orientation for the new classroom teachers	101	48.6	81	38.9	23	11.1	3	1.4
18	86.5	Allows activities which include small group formations of teachers to work together in a problem or goal area	71	34.1	109	52.4	21	10.1	7	3.4
19	85.6	Permits teachers to visit activities and observe classes occassionally within their school or in other schools	98	47.1	80	38.5	24	11.5	6	2.9
20	85.6	Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance to teachers	89	42.8	89	42.8	30	14.4	0	0.0

TABLE 2 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
21	85.1	Includes different activities which allows for individual differences which exist among teachers	99	47.6	78	37.5	24	11.5	7	3.4
22	84.6	Provides for evaluation of the efforts to utilize what has been learned in inservice education	74	35.6	102	49.0	27	13.0	5	2.4
23	84.1	Allows for adequate follow-up by teachers to determine the effects of inservice activities	82	39.4	93	44.7	30	14.4	3	1.4
24	83.7	Includes activities which allow for differing attitudes, values, and beliefs that influence the individual teacher's behavior	74	35.6	100	48.1	28	13.5	6	2.9
25	83.6	Allows teachers to experience small group activities at scheduled inservice programs	65	31.2	109	52.4	26	12.5	8	3.8

TABLE 2 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
26	83.2	Provides activities which are planned and conducted in local schools	73	35.1	100	48.1	28	13.5	7	3.4
27	82.7	Allows and encouraged intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors and peers	71	34.1	101	48.6	29	13.9	7	3.4
28	80.3	Requires attendance by teachers at scheduled inservice programs	75	36.1	92	44.2	25	12.0	16	7.7
29	79.3	Requires attendance by administrators at scheduled inservice programs	84	40.4	81	38.9	31	14.9	12	5.8
30	78.8	Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more.	83	39.9	81	38.9	30	14.4	14	6.7

TABLE 2 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
31	77.4	Allows for one or more extrinsic incentives, such as: credit toward salary increment, university or college credit, etc.	91	43.7	70	33.7	30	14.4	17	8.2
32	50.5	Allows voluntary attendance by teachers at inservice programs	41	19.7	64	30.8	43	20.7	60	28.8
33	49.1	Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	22	10.6	80	38.5	72	34.6	34	16.3
34	49.0	Allows voluntary attendance by administrators at scheduled inservice programs	31	14.9	71	34.1	46	22.1	60	28.8

identified these two needs as first and second on the questionnaire suggesting the need for teacher input into inservice educational decision-making.

The third identified need, at the 96.2 per cent level, is to develop inservice which assists the teacher in improving the teaching and learning situation in the classroom and social operation. Relative to the same characteristic, the sixth identified need, at the 95.2 per cent level, indicates inservice should be related directly to the problems of daily classroom life and school operation. The sample population identified these two needs as third and sixth on the questionnaire suggesting the need for relevant inservice for classroom application.

The fourth identified need, at the 96.1 per cent level, is to provide inservice opportunities to become acquainted with new teaching practices and/or curriculum. Relative to the same characteristic, the tenth identified need, at the 89.4 per cent level, indicates teachers should be encouraged to engage in testing new ideas in education with support and guidance of trained specialists. The sample population identified these two needs as fourth and tenth on the questionnaire suggesting the need for

the introduction of new teaching methods and the opportunity to experiment in the classroom.

The fifth identified need, at the 95.6 per cent level, is to involve teachers and administrators in decisions pertaining to inservice education. Relative to the same characteristic, the ninth identified need, at the 90.4 per cent level, indicates inservice should foster situations where teachers and administrators work as friends and equals in developing inservice programs. The sample population identified these two needs as fifth and ninth on the questionnaire suggesting the need for cooperative planning and programming for teachers and administrators.

The seventh identified need, at the 95.2 per cent level, is to allow for participants in inservice programs to be actively involved in learning experiences. Relative to the same characteristic, the eighth identified need, at the 94.7 per cent level, indicates inservice should provide an atmosphere encouraging teachers to express feelings and opinions, ask questions, offer comments, and exchange ideas. The sample population identified these two needs as sixth and eighth on the questionnaire suggesting the need for an open atmosphere

for learning in inservice education.

The questionnaire consisted of two similar process-need statements on seventeen need areas, as outlined on page 28. It is important to note that the first ten identified process-need statements were inclusive of five need areas. This suggests strongly that teachers desire: input into decision making of inservice education, relevant inservice for classroom use, introduction of and opportunity to use new methods, cooperative plannig and programming by administrators and teachers, and an open atmosphere for learning in inservice education.

The remainder of the twenty-one identified needs above the 70 per cent level are listed in table 2.

The eleventh identified need, at the 88.9 per cent level, is to allow released time from teaching for the total staff for scheduled inservice programs. Relative to the same characteristic, the thirtieth identified need, at the 78.8 per cent level, indicates inservice should contain released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more. The sample population identified these two needs as eleventh and thirtieth, suggesting released time

for total staff with a minimum of one-half day per month.

The twelfth identified need, at the 88.4 per cent level, is to permit local schools to plan, organize, and conduct inservice programs. Relative to the same characteristic, the twenty-sixth identified need, at the 83.2 per cent level, is to provide activities which are planned and conducted in local schools. The sample population identified these two needs as twelfth and twenty-sixth, suggesting inservice education should include local school options.

The thirteenth identified need, at the 88.0 per cent level, is to permit small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school. Relative to the same characteristic, the nineteenth identified need, at the 85.6 per cent level, is to permit teachers to observe classes and visit activities occasionally within their school or in other schools. The sample population identified these two needs as thirteenth and nineteenth, suggesting the need for released time for inservice education.

The fourteenth identified need, at the 87.9 per

cent level, is to have inservice contribute to satisfactory orientation of new teaching personnel. Relative to the same characteristic, the seventeenth identified need, at the 87.5 per cent level, is to include special orientation for the new classroom teachers. The sample population identified these two needs as fourteenth and seventeenth, suggesting special inservice for new teaching personnel.

The fifteenth identified need, at the 87.9 per cent level, is to offer activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience. Relative to the same characteristic, the twentieth identified need, at the 85.6 per cent level, is to offer activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance to teachers. The sample population identified these needs as fourteenth and nineteenth, suggesting the desire for university-school cooperative efforts.

The sixteenth identified need, at the 87.9 per cent level, is to provide continuity of professional growth by providing a sequence of activities at inservice.

Relative to the same characteristic, an unacceptable need, the thirty-third identified item, at the 49.1 per cent level, is worded "to provide numerous 'one-shot' exposures by outside consultants to a variety of problem and goal areas." The wording of the item and the low per cent of acceptance supports the fourteenth identified need suggesting teachers prefer the opportunities for sequence activities in inservice education.

The eighteenth identified need, at the 86.5 per cent level, is to allow activities which include small group formations of teachers to work together in a problem or goal area. Relative to the same characteristic, the twenty-fifth identified need, at the 83.6 per cent level, is to allow teachers to experience small group activities at scheduled inservice programs. The sample population identified these two needs as eighteenth and twenty-fifth, suggesting the need for small group opportunities in inservice education.

The twenty-first identified need, at the 85.1 per cent level, is to include different activities which allow for individual differences which exist among teachers. Relative to the same characteristic, the twenty-fourth identified need, at the 83.7 per cent level, is to in-

clude different activities which allow for differing attitudes, values, and beliefs that influence the individual teacher's behavior. The sample population identified these two needs as twenty-first and twenty-fourth, suggesting the need for inservice to recognize individual differences in teachers.

The twenty-second identified need, at the 84.6 per cent level, is to provide for evaluation of the efforts to utilize what has been learned in inservice education. Relative to the same characteristic, the twenty-third identified need, at the 84.1 per cent level, is to allow for adequate follow-up by teachers to determine the effects of inservice activities. The sample population identified these two needs as twenty-second and twenty-third, suggesting the need for adequate evaluation of inservice education.

The twenty-seventh identified need, at the 82.7 per cent level, is to allow and encourage intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers, etc. Relative to the same characteristic, the thirty-first identified need, at the 77.4 per cent level, is to allow for one or more extrinsic incentives, such as: credit

toward salary increment, university or college credit, etc. The sample population identified these two needs as twenty-seventh and thirty-first, suggesting the need for intrinsic and extrinsic motivation in inservice education.

The twenty-eighth identified need, at the 80.3 per cent level, is to require attendance by teachers at scheduled inservice programs. Relative to the same characteristic, an unacceptable need, the thirty-second identified item, at the 50.5 per cent level, is worded, "allows voluntary attendance by teachers at inservice programs." The wording of this item and the lower per cent of acceptance supports the twenty-eighth identified need, suggesting teachers prefer required attendance of teachers at inservice education.

The twenty-ninth identified need, at the 79.3 per cent level, is to require attendance by administrators at scheduled inservice programs. Relative to the same characteristic, an unacceptable need, the thirty-fourth identified item, at the 49.0 per cent level, is worded, "allows voluntary attendance by administrators at scheduled inservice education." The wording of this item and the lower per cent of acceptance support the twenty-

ninth identified need, suggesting teachers prefer required attendance by administrators at inservice education.

Tables of process-need identification in inservice education of Marquette-Alger and Genesee Intermediate School District teachers are in Appendix B, page 258.

Hypothesis I

Hypothesis I states that no significant differences will be found in process-need identification in inservice education between population subgroups:

A. Teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District.

B. Teachers in Elementary (K-5), Middle (6-8), and Senior (9-12) grade assignments.

C. Teachers with teaching experience of: 1 year or less, 2-4 years, 5-9 years, 10 and over.

D. Teachers with: B.S. or B.A. degrees, M.S. or M.A. degrees, Ed. Spec. degrees, Ph.D. or Ed.D. degrees.

Sub-Hypothesis A

Sub-hypothesis A states that no significant differences will be found in process-need identification in

inservice education between teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District.

The thirty-four process-needs on the questionnaire were tested using chi-square. The total N of the sample is sufficient for chi-square; however, occasional cells have expected frequencies of five or smaller. The number of cells in each chi-square test is large, therefore, modification is unnecessary in this study. Blalock states:

> If the number of cells is relatively large and if only one or two cells have expected frequencies of 5 or less, then it is generally advisable to go ahead with chi-square tests without worrying about such correction.[1]

The results of the chi-square tests failed to establish significance at the .05 level on thirty-two of the thirty-four process-needs; therefore, the null hypothesis cannot be rejected on these thirty-two process-needs. A table of the chi-square results for process-needs of Marquette-Alger Intermediate School District and Genesee Intermediate School District teachers is in Appendix C, page 273.

The two process-needs identified as statistically significant at the .05 level (see table 3) are:

1. To allow for one or more extrinsic incentives,

TABLE 3

SIGNIFICANT CHI-SQUARE RESULTS FOR PROCESS-NEEDS OF MARQUETTE-ALGER INTERMEDIATE SCHOOL DISTRICT AND GENESEE INTERMEDIATE SCHOOL DISTRICT TEACHERS

Need: Allows for one or more extrinsic incentives, such as: credit toward salary increment, university or college credit, etc.

		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Marquette-Alger	(N=117)	59	50.4	40	34.2	12	10.3	6	5.1
Genesee	(N=91)	32	35.2	30	33.0	18	19.8	11	12.1
Total Sample	(N=208)								

Degrees of Freedom = 3
*Chi-square = 8.994
Level of Significance = .05

Need: Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas.

		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Marquette-Alger	(N=117)	18	15.4	40	34.2	37	31.6	22	18.8
Genesee	(N=91)	4	4.4	40	44.0	35	38.5	12	13.2
Total Sample	(N=208)								

Degrees of Freedom = 3
*Chi-square = 8.792
Level of Significance = .05

*A chi-square of 7.815 or larger is necessary at the .05 level with 3 degrees of freedom.

such as: credit toward salary increment, university or college credit, etc.. The teachers in Marquette-Alger Intermediate School District indicated this need to a higher degree than teachers in Genesee Intermediate School District;

2. To provide numerous "one-shot" exposures, by outside consultants, to a variety of problem and goal areas. The teachers in Marquette-Alger Intermediate School District had a higher per cent of respondents in the first and last categories, "highly desired" and "not desired", than Genesee Intermediate School District teachers.

On the basis of the statistically signficant results reported at the .05 level, the null hypothesis as it pertains to differences between subgroups of teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District (sub-hypothesis A) is accepted with the qualifications that two of thirty-four process-needs are statistically significant. The two process-needs are: allowing for one or more extrinsic incentives, and providing numerous "one-shot" exposures.

Sub-Hypothesis B

Sub-hypothesis B states that no significant differences will be found in process-need identification between teachers in elementary (K-5), middle (6-8), and senior (9-12) grade assignments.

The chi-square results failed to establish significance at the .05 level on thirty-two of the process-needs; therefore, on these thirty-two process-needs, the null hypothesis is not rejected. A table of the chi-square results for process-needs of grade assignments is in Appendix C, page 277.

The two process-needs identified as statistically significant at the .05 level or better (see table 4) are:

1. To offer activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance to teachers (.02 level). Teachers with K-5 grade assignments indicated this need to a higher degree with more responses in the "highly desired" column than teachers with 6-8 or 9-12 grade assignments.

2. To allow activities which include small group formations of teachers to work together in a problem or goal area (.05 level). Teachers with 9-12 grade assignments

TABLE 4

SIGNIFICANT CHI-SQUARE RESULTS FOR PROCESS-NEEDS OF GRADE ASSIGNMENTS

Need: Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Elementary (K-5)	(N=85)	46	54.1	24	28.2	15	17.6	0	0.0
Middle (6-8)	(N=47)	17	36.2	23	48.9	7	14.9	0	0.0
Senior (9-12)	(N=76)	26	34.2	42	55.3	8	10.5	0	0.0
Total Sample	(N=208)								

Degrees of Freedom = 4
*Chi-square = 13.144
Level of Significance = .02

Need: Allows activities which include small group formations of teachers to work together in a problem or goal area		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Elementary (K-5)	(N=85)	25	29.4	44	51.8	13	15.3	3	3.5
Middle (6-8)	(N=47)	12	25.5	32	68.1	3	6.4	0	0.0
Senior (9-12)	(N=76)	34	44.7	33	43.4	5	6.6	4	5.3
Total Sample	(N=208)								

Degrees of Freedom = 6
*Chi-square = 13.709
Level of Significance = .05

*A chi-square of 11.668 or larger is necessary at the .02 level with 4 degrees of freedom, a chi-square of 12.592 or larger is necessary at the .05 level with 6 degrees of freedom.

indicated this need to a higher degree with more responses in the "highly desired" column than teachers with K-5 or 6-8 grade assignments.

On the basis of the statistically significant results reported at the .05 level or better, the null hypothesis as it pertains to differences between subgroups of teachers in elementary, middle, and senior grade assignments (sub-hypothesis B) is accepted with the qualifications that two of thirty-four process-needs are statistically significant. The two process-needs are: offering activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance to teachers; and allowing activities which include small group formations of teachers to work together on a problem or goal area.

Sub-Hypothesis C

Sub-hypothesis C states that no significant differences will be found in process-need identification in inservice education between teachers with teaching experience of: 1 year or less, 2 to 4 years, 5 to 9 years, 10 and over years. (There were no teachers in the sample with 1 year

or less experience.)

The chi-square results failed to establish significance at the .05 level on thirty-two of the process-needs; therefore, on these thirty-two process-needs, the null hypothesis is not rejected. A table of the chi-square results for process-needs of years of teaching experience is in Appendix C, page 280.

The two process-needs identified as significant at the .05 level or better (see table 5) are:

1. To allow voluntary attendance by teachers at inservice programs (.02 level). Teachers with 2 to 4 years experience indicated this need to a higher degree with more responses in the "highly desired" column than teachers with 5-9 or 10 and over years of experience.

2. To allow activities which include small group formations of teachers to work together in a problem or goal area (.05 level). Teachers with 2 to 4 years experience placed less importance on the need with more responses in the "not desired" column than teachers with 5-9 or 10 and over years of experience.

On the basis of the statistically significant results reported at the .05 level or better, the null hypothesis as it pertains to differences between subgroups

TABLE 5

SIGNIFICANT CHI-SQUARE RESULTS FOR PROCESS-NEEDS OF YEARS OF EXPERIENCE

Need: Allows voluntary attendance by teachers at inservice programs

		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
2 - 4 years	(N=59)	20	33.9	10	16.9	12	20.3	17	28.8
5 - 9 years	(N=66)	10	15.2	20	30.3	15	22.7	21	31.8
10+ years	(N=83)	11	13.3	34	41.0	16	19.3	22	26.5
Total Sample	(N=208)								

Degrees of Freedom = 6
*Chi-square = 15.523
Level of Significance = .02

Need: Allows activities which include small group formations of teachers to work together in a problem or goal area.

		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
2 - 4 years	(N=59)	23	39.0	26	44.1	4	6.8	6	10.2
5 - 9 years	(N=66)	21	31.8	38	57.6	6	9.1	1	1.5
10+ years	(N=83)	27	32.5	45	54.2	11	13.3	0	0.0
Total Sample	(N=208)								

Degrees of Freedom = 6
*Chi-square = 14.853
Level of Significance = .05

*A chi-square of 15.033 or larger is necessary at the .02 level with 6 degrees of freedom, a chi-square of 12.592 or larger is necessary at the .05 level with 6 degrees of freedom.

of teachers based on years of experience (sub-hypothesis C) is accepted with the qualifications that two of the thirty-four process-needs are statistically signficant. The two process-needs are: allowing voluntary attendance by teachers, and including small group formations of teachers to work together in a problem or goal area.

Sub-Hypothesis D

Sub-hypothesis D states that no significant differences will be found in process-need identification in inservice education between teachers with: B.S. or B.A. degrees, M.S. or M.A. degrees, Ed. Spec. degrees, Ph.D. or Ed.D. degrees. (There were only four teachers in the sample with Ed. Spec. degrees and none with Ph.D. or Ed.D. degrees; therefore, these areas were not included in the statistical analysis.)

The chi-square results failed to establish significance at the .05 level on thirty-three of the process-needs; therefore, for these thirty-three process-needs, the null hypothesis is not rejected. A table of the chi-square results for educational degrees is in Appendix C, page 283.

The process-need identified as significant at the .05 level (see table 6) is to provide for evaluation of

TABLE 6

SIGNIFICANT CHI-SQUARE RESULTS FOR PROCESS-NEEDS OF EDUCATIONAL DEGREES

Need: Provides for evaluation of the efforts to utilize what has been learned in inservice education.

		Responses							
		+1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
BS or BA degrees	(N=127)	40	31.5	69	54.3	13	10.2	5	3.9
MS or MA degrees	(N=77)	32	41.6	31	40.3	14	18.2	0	0.0
Total Sample	(N=204)								

Degrees of Freedom = 3
*Chi-square = 8.629
Level of Significance = .05

*A chi-square of 7.815 or larger is necessary at the .05 level with 3 degrees of freedom.

the efforts to utilize what has been learned in inservice education. Teachers holding M.A. or M.S. degrees indicated this need to a higher degree with more responses in the "highly desired" column than teachers holding other degrees.

On the basis of the statistically significant results reported at the .05 level, the null hypothesis as it pertains to differences between subgroups of teachers based on education degree status (sub-hypothesis D) is accepted with the qualification that one of thirty-four process-needs is statistically significant. The process-need is to provide for evaluation of the efforts to utilize what has been learned in inservice education.

The testing of hypothesis I according to subparts indicated that: two process-needs correlating Marquette-Alger Intermediate School District teachers and Genesee Intermediate School District teachers have statistically significant results at the .05 level; two process-needs correlating grade assignments have statistically significant results at the .05 level or better; two process-needs correlating years of teaching experience have statistically significant results at the .05 level or

better; and one process-need concerning education degrees has statistically significant results at the .05 level. The null hypothesis is rejected in each of these instances; however, the remainder of the thirty-four process-needs in each subgroup analysis lacked significance at the .05 level and it is not possible to reject the null hypothesis for each of these factors. In summary, the null hypothesis I is accepted with the qualifications that seven of one-hundred and thirty-six process-needs pertaining to subgroups are statistically signficant.

Alternative Delivery Systems of Inservice Education (Proposition Statement 2)

Of the eighteen alternative delivery systems listed on the questionnaire, eight are identified at an agreement level of 70 per cent or better of the sample population by tallying the responses for the categories of "highly desired" or "desired". The eight desired delivery systems range from an agreement level of 90.4 per cent to 74.1 per cent (see table 7).

The eight acceptable alternative delivery systems, identified at 70 per cent level or better, are: professional activity leaves (90.4 per cent); clinic workshops (86.0 per cent); sabbatical leave with compensation (82.2 per cent);

TABLE 7

ALTERNATIVE DELIVERY SYSTEMS IDENTIFICATION OF INSERVICE EDUCATION

*Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	90.4	PROFESSIONAL ACTIVITY LEAVE - A one to ten day leave allowing a teacher to engage in a professional activity such as: convention attendance	118	56.7	70	33.7	17	8.2	3	1.4
2	86.0	CLINIC WORKSHOP - A one day session attended by total staff. Several clinics are planned and offered at the same time enabling each teacher a choice of activities	103	49.5	76	36.5	23	11.1	6	2.9
3	82.2	SABBATICAL LEAVE WITH COMPENSATION A year leave granted after a minimm requirement of years teaching within a system. Teacher is compensated with tuition stipend and/or salary percentage	119	57.2	52	25.0	19	9.1	18	8.7
4	81.8	OBSERVATION OR VISITATION LEAVE - An hour or day period of released teaching time enabling a teacher to visit in other classrooms	85	40.9	85	40.9	31	14.9	7	3.4

*Rank Order determined by largest per cent in response columns 1 and 2; when total per cent is the same, Rank Order determined by largest per cent in response column 1.

**Response 1: highly desired, Response 2: desired, Response 3: slightly desired, Response 4: not desired.

TABLE 7 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
5	80.8	HELPING OR SUPERVISORY TEACHER First year teachers are assigned a veteran teacher to give special support in such areas as: school policy, procedures	84	40.4	84	40.4	29	13.9	11	5.3
6	77.0	SUMMER WORK SESSIONS - Scheduled time for intensive work by curriculum committees or other action-research staff groups. Teachers are reimbursed financially and/or receive higher education credit	90	43.3	70	33.7	29	13.9	19	9.1
7	74.1	PARTICIPATION WORKSHOP - A one day session attended by total staff. The workshop is planned to cover one content area. Outside or inside resource consultants facilitate participation sessions.	64	30.8	90	43.3	39	18.7	15	7.2
8	74.1	SELECTED GROUP INSERVICE - A segment of the teaching staff have released time to meet regularly to work in a problem or goal area	59	28.4	95	45.7	38	18.3	16	7.7

TABLE 7 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
9	69.7	SCHOOL BUILDING FACULTY MEETINGS Within scheduled meetings brief, focused inservice education projects on professional problems are injected	50	24.0	95	45.7	44	21.2	19	9.1
10	68.3	TEACHER CENTER - A physical space or place where teachers develop programs for the training and improvement of education personnel. Teachers have an opportunity to receive training specifically related to their most pressing needs. The center can be located within the school or district	54	26.0	88	42.3	49	23.6	17	8.2
11	65.4	DEVELOPMENT TEAM PROBLEM SOLVING DESIGN - A total staff identifies problem or goal areas, after which individual staff members explore a problem or goal area of their choice with colleagues having similar interests	49	23.6	87	41.8	54	26.0	18	8.7

TABLE 7 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
12	63.0	USE OF WITHIN SCHOOL INSERVICE CONSULTANT - Through special training, a teacher within a school becomes an 'inservice consultant'. The consultant has a daily period of released time to perform this function	47	22.6	84	40.4	48	23.1	29	13.9
13	63.0	CONSORTIUM PROGRAM - University based resource consultants, and an equal number of teachers and student teachers are involved in a program enabling teachers and student teachers to have scheduled released time to attend workshops or classes offered within the school building by university professors or consultants	42	20.2	89	42.8	56	26.9	21	10.1
14	60.1	PROFESSIONAL GROWTH PROGRAMS - Teacher teams are organized to accurately assess the quality of teaching performance through processes of clinical observation, video taping, etc.	41	19.7	84	40.4	57	27.4	26	12.5
15	60.1	OVER-STAFFING FOR INSERVICE - Additional certified personnel for teaching are hired enabling assigned teachers to have released time.	36	17.3	89	42.8	56	26.9	27	13.0

TABLE 7 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
16	57.7	UNIVERSITY BASED RESOURCE PERSONS A university staff member has a periodic assignment to a school for consultation, demonstration teaching, program planning with individual teachers	50	24.0	70	33.7	62	29.8	26	12.5
17	52.9	SABBATICAL LEAVE WITHOUT COMPENSATION - A year leave granted after a minimum requirement of years teaching within a school system. This leave enables a teacher to obtain higher education or work experience at the teacher's expense	61	29.3	49	23.6	37	17.8	61	29.3
18	32.3	LECTURE INSTITUTE - A one day session attended by total staff. The institute is planned to cover one content area. An outside resource consultant uses 'lecture' as the method of presentation. The teacher is essentially passive as a participant	18	8.7	49	23.6	72	34.6	69	33.2

observation or visitation leave (81.8 per cent); helping or supervisory teachers (80.8 per cent); summer work sessions (77.0 per cent); participation workshops (74.1 per cent); and selected group inservice (74.1 per cent).

The following alternative delivery systems unacceptable at a 70 per cent level or lower were: school building faculty meetings (69.7 per cent); teacher centers 68.3 per cent); development team problem-solving design (65.4 per cent); school inservice consultant (63.0 per cent); consortium program (63.0 per cent); professional growth programs (60.1 per cent); university-based resource persons (57.7 per cent); sabbatical leave without compensation (52.9 per cent); and lecture institute (32.3 per cent).

Tables of alternative delivery systems identified by Marquette-Alger Intermediate School District teachers and by Genesee Intermediate School District teachers are in Appendix D, page 289.

Hypothesis II

Hypothesis II states that no significant differences will be found in identification of desired alternative delivery systemsof inservice education between population

subgroups:

A. Teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District.

B. Teachers in Elementary (K-5), Middle (6-8), and Senior (9-12) grade assignments.

C. Teachers with teaching experiences of: 1 year or less, 2-4 years, 5-9 years, 10 and over.

D. Teachers with: B.S. or B.A. degrees, M.S. or M.A. degrees, Ed. Spec. degrees, Ph.D. or Ed.D. degrees.

Sub-Hypothesis A

Sub-hypothesis A states that no significant differences will be found in identification of desired alternative delivery systems of inservice education between teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District.

The chi-square results failed to establish significance at the .05 level on seventeen of the alternative delivery systems; therefore, on these seventeen systems, the null hypothesis is not rejected. A table of the chi-square results for teachers in Marquette-Alger Intermediate School

District and Genesee Intermediate School District is in Appendix E, page 295.

The alternative delivery system identified as statistically significant at the .05 level (see table 8) is the participation workshop. The Marquette-Alger Intermediate School District teachers indicated this system as desired to a higher degree with more responses in the "highly desired" column than teacher in Genesee Intermediate School District.

On the basis of the statistically significant results reported at the .05 level, the null hypothesis as it pertains to differences between subgroups of teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District (sub-hypothesis A) is accepted with the qualification that one of thirty-four alternative delivery systems is statistically significant. The system is participation workshop.

Sub-Hypothesis B

Sub-hypothesis B states that no significant differences will be found in identification of desired alternative delivery systems of inservice education between teachers in elementary (K-5), middle (6-8), and senior

TABLE 8

SIGNIFICANT CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF MARQUETTE-ALGER INTERMEDIATE SCHOOL DISTRICT AND GENESEE INTERMEDIATE SCHOOL DISTRICT TEACHERS

Alternative Delivery System: PARTICIPATION WORKSHOP		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Marquette-Alger	(N=117)	45	38.5	48	41.0	17	14.5	7	6.0
Genesee	(N=91)	19	20.9	42	46.2	22	24.2	8	8.8
Total Sample	(N=208)								

Degrees of Freedom = 3
*Chi-square = 8.569
Level of Significance = .05

*A chi-square of 7.815 or larger is necessary at the .05 level with 3 degrees of freedom.

(9-12) grade assignments.

The chi-square results failed to establish significance at the .05 level on sixteen of the alternative delivery systems; therefore, on these sixteen alternative delivery systems, the null hypothesis is not rejected. A table of chi-square results for grade assignments is in Appendix E, page 297.

The two alternative delivery systems identified as significant at the .05 level or better (see table 9) are:

1. School building faculty meetings (.02 level). Teachers with 6-8 and 9-12 grade assignments indicated this system as desired to a higher degree with more responses in the "highly desired" column than teachers with K-5 grade assignments;

2. Development team problem solving design (.05 level). Teachers with K-5 grade assignments indicated a larger per cent of responses in the "slightly desired" column than teachers in 6-8 or 9-12 grade assignments. Also, teachers with 6-8 grade assignments indicated a larger per cent of responses in the "desired" column than teachers in K-5 or 9-12 grade assignments.

TABLE 9

SIGNIFICANT CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF GRADE ASSIGNMENTS

Alternative Delivery System: SCHOOL BUILDING FACULTY MEETINGS

		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Elementary (K-5)	(N=85)	14	16.5	34	40.0	28	32.9	9	10.6
Middle (6-8)	(N=47)	12	25.5	27	57.4	4	8.5	4	8.5
Senior (9-12)	(N=76)	24	31.6	34	44.7	12	15.8	6	7.9
Total Sample	(N=208)								

Degrees of Freedom = 6
*Chi-square = 16.419
Level of Significance = .02

Alternative Delivery System: DEVELOPMENT TEAM PROBLEM SOLVING DESIGN

		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Elementary (K-5)	(N=85)	17	20.0	33	38.8	32	37.6	3	3.5
Middle (6-8)	(N=47)	10	21.3	24	51.1	8	17.0	5	10.6
Senior (9-12)	(N=76)	22	28.9	30	39.5	14	18.4	10	13.2
Total Sample	(N=208)								

Degrees of Freedom = 6
*Chi-square = 14.897
Level of Significance = .05

*A chi-square of 15.033 or larger is necessary at the .02 level with 6 degrees of freedom, a chi-square of 12.592 or larger is necessary at the .05 level with 6 degrees of freedom.

On the basis of the statistically significant results reported at the .05 level or better, the null hypothesis as it pertains to differences between subgroups of teachers based on elementary, middle, or senior grade assignments (sub-hypothesis B) is accepted with the qualifications that two of thirty-four alternative delivery systems are statistically significant. The two systems are school building faculty meetings and developmental team problem-solving design.

Sub-Hypothesis C

Sub-hypothesis C states that no significant differences will be found in identification of desired alternative delivery systems of inservice education between teachers with teaching experience of: 1 year or less, 2 to 4 years, 5 to 9 years, and 10 and over years. (There were no teachers in the sample with one year or less.)

The chi-square results failed to establish significance at the .05 level for fifteen of the alternative delivery systems; therefore, for the fifteen alternative delivery systems, the null hypothesis is not rejected. A table of chi-square results for years of teaching

experience is in Appendix E, page 299.

The three alternative delivery systems identified as statistically significant at the .05 level or better (see table 10) are:

1. Lecture-institute (.05 level). Teachers with 2 to 4 years experience indicated more responses to both columns "highly desired" and "not desired" than teachers with 5 to 9 or 10 and more years of experience;

2. University-based resource persons (.05 level). Teachers with 2 to 4 years experience indicated this system as desired to a higher degree with more responses in the "highly desired" column than teachers with 5 to 9 or 10 and more years of experience;

3. School building faculty meetings (.01 level). Teachers with 2 to 4 years of experience indicated this system as desired to a higher degree with more responses in the "highly desired" column than teachers with 5 to 9 or 10 and more years of experience.

On the basis of the statistically significant results reported at the .05 level or better, the null hypothesis as it pertains to differences between subgroups of teachers with varied years of experience (sub-hypothesis C) is accepted with the qualifications that three of thirty-

TABLE 10

SIGNIFICANT CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF YEARS OF EXPERIENCE

Alternative Delivery System: LECTURE INSTITUTE

		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
2 - 4 years	(N=59)	9	15.3	13	22.0	12	20.3	25	42.4
5 - 9 years	(N=66)	3	4.5	16	24.2	30	45.5	17	25.8
10+ years	(N=83)	6	7.2	20	24.1	30	36.1	27	32.5
Total Sample	(N=208)								

Degrees of Freedom = 6
*Chi-square = 12.914
Level of Significance = .05

Alternative Delivery System: UNIVERSITY BASED RESOURCE PERSON

		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
2 - 4 years	(N=59)	21	35.6	23	39.0	9	15.3	6	10.2
5 - 9 years	(N=66)	14	21.2	22	33.3	20	30.3	10	15.2
10+ years	(N=83)	15	18.1	25	30.1	33	39.8	10	12.0
Total Sample	(N=208)								

Degrees of Freedom = 6
*Chi-square = 13.129
Level of Significance = .05

*A chi-square of 12.592 or larger is necessary at the .05 level with 6 degrees of freedom.

TABLE 10 -- CONTINUED

Alternative Delivery System: SCHOOL BUILDING FACULTY MEETINGS		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
2 - 4 years	(N=59)	24	40.7	24	40.7	6	10.2	5	8.5
5 - 9 years	(N=66)	11	16.7	33	50.0	14	21.2	8	12.1
10+ years	(N=83)	15	18.1	38	45.8	24	28.9	6	7.2
Total Sample	(N=208)								

Degrees of Freedom = 6
*Chi-square = 16.841
Level of Significance = .01

*A chi=square of 16.812 or larger is necessary at the .01 level with 6 degrees of freedom.

four alternative delivery systems are statistically significant. The three systems are lecture-institute, university-based resource persons, and school building faculty meetings.

Sub-Hypothesis D

Sub-hypothesis D states that no significant differences will be found in identification of desired alternative delivery systems of inservice education between teachers with: B.S. or B.A. degrees, M.S. or M.A. degrees, Ed. Spec. degrees, and Ph.D. or Ed.D. degrees. (There were only four teachers in the sample with Educ. Spec. degrees and none with Ph.D. or Ed.D. degrees; therefore, these areas were not included in the statistical analysis.)

The chi-square results failed to establish significance at the .05 level for seventeen of the alternative delivery systems; therefore, for the seventeen alternative delivery systems, the null hypothesis is not rejected. A table of chi-square results for education degrees is in Appendix E, page 301.

The alternative delivery system identified as statistically significant at the .05 level (see table 11)

TABLE 11

SIGNIFICANT CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF EDUCATIONAL DEGREES

Alternative Delivery System: PARTICIPATION WORKSHOP		Responses +1		2		3		4-	
		No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
BS or BA degrees	(N=127)	34	26.8	51	40.2	31	24.4	11	8.7
MS or MA degrees	(N=77)	30	39.0	36	46.8	7	9.1	4	5.2
Total Sample	(N=204)								

Degrees of Freedom = 3
*Chi-square = 9.581
Level of Significance = .05

*A chi-square of 7.815 or larger is necessary at the .05 level with 3 degrees of freedom.

is the participation workshop. Teachers with M.S. or M.A. degrees indicated this system as desired to a higher degree with more responses in the "highly desired" column than teachers with other degrees.

On the basis of the statistically significant results reported at the .05 level, the null hypothesis as it pertains to differences between subgroups of teachers based on education degree status (sub-hypothesis D) is accepted with the qualification that one of the thirty-four alternative delivery systems is statistically significant. The system is the particpation workshop.

The testing of hypothesis II, according to subparts indicated that: one system correlating Marquette-Alger Intermediate School District teachers and Genesee Intermediate School District teachers has statistically significant results at the .05 level; two systems correlating grade assignments have statistically signficant results at the .05 level; three systems correlating years of teaching experience have statistically significant results at the .05 level or better; and one system correlating education degree status has statistically significant results at the .05 level. The null hypothesis is rejected

in each of these instances; however, the remainder of the eighteen alternative delivery systems in each subgroup analysis lacked significance at the .05 level and it is not possible to reject the null hypothesis for each of these factors. In summary, the null hypothesis II is accepted with the qualifications that seven of seventy-two alternative delivery systems pertaining to subgroups are statistically significant.

Present Process-Need Practices in Inservice Education (Proposition Statement 3)

On the thirty-four process-need statements listed on the questionnaire, only one was identified as presently practiced at an agreement level of 70 per cent or better of the sample population by tallying the responses for the categories of "high degree" or "acceptable degree" to which the practice is presently followed in inservice education (see table 12). Required attendance by teachers at scheduled inservice programs was identified as a present practice at the 79.8 per cent level.

Hypothesis III

Hypothesis III states that the extent to which an inservice education process-need is desired is not related

TABLE 12

PRESENT PROCESS-NEED PRACTICES IN INSERVICE EDUCATION

*Rank Order	Per Cent Responses 1 & 2	Need	**Responses +1		2		3		4	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
1	79.8	Requires attendance by teachers at scheduled inservice programs	114	54.8	52	25.0	30	14.4	12	5.8
2	56.8	Contains released teaching time for the total staff for scheduled inservice programs	70	33.7	48	23.1	51	24.5	39	18.7
3	55.8	Requires attendance by administrators at scheduled inservice	47	22.6	69	33.2	56	26.9	36	17.3
4	55.3	Provides activities which are planned and conducted in local schools	30	14.4	85	40.9	63	30.3	30	14.4
5	54.8	Provides an atmosphere encouraging teachers to express feelings and opinions, ask questions, etc.	41	19.7	73	35.1	74	35.6	20	9.6
6	52.4	Allows for activities to be planned based on an assessment of needs perceived by teachers	29	13.9	80	38.5	76	36.5	23	11.1
7	51.4	Permits local schools to plan, organize, and conduct programs	34	16.3	73	35.1	75	36.1	26	12.5
8	47.6	Allows teachers to experience small group activities at scheduled inservice programs	26	12.5	73	35.1	77	37.0	32	15.4

*Rank Order determined by largest per cent in response columns 1 and 2; when total per cent is the same, Rank Order determined by largest per cent in response column 1.

**Response 1: high degree of practice, Response 2: acceptable degree of practice, Response 3: limited degree of practice, Response 4: not practiced at all.

TABLE 12 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
9	46.1	Involves teachers and administrators in decisions pertaining to inservice education	39	18.7	57	27.4	90	43.3	22	10.6
10	46.1	Provides opportunities to become acquainted with new teaching practices and/or curriculum	25	12.0	71	34.1	87	41.8	25	12.0
11	45.2	Allows for participants to be actively involved in learning experiences	19	9.1	75	36.1	86	41.3	28	13.5
12	44.3	Allows activities which include small group formations of teachers to work together in a problem or goal area	18	8.7	74	35.6	80	38.5	36	17.3
13	43.7	Provides for teachers to have a voice in the decision making process of inservice education	30	14.4	61	29.3	92	44.2	25	12.0
14	43.3	Allows voluntary attendance by administrators at scheduled inservice	31	14.9	59	28.4	54	26.0	64	30.8
15	42.3	Offers activitities utilizing people within the local system, district consultants, and university personnel in a collaborative effort	34	16.3	54	26.0	88	42.3	32	15.4

TABLE 12 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
16	39.4	Contributes to satisfactory orientation of new teaching personnel	21	10.1	61	29.3	81	38.9	45	21.6
17	39.4	Relates directly to the problems of daily classroom life and school operation	17	8.2	65	31.2	103	49.5	23	11.1
18	37.9	Includes special orientation for the new classroom teachers	19	9.1	60	28.8	72	34.6	57	27.4
19	34.1	Includes different activities which allows for individual differences which exist among teachers	20	9.6	51	24.5	76	36.5	61	29.3
20	34.1	Fosters situations where teachers and administrators work as friends and equals in developing programs	14	6.7	57	27.4	86	41.3	51	24.5
21	33.2	Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	27	13.0	42	20.2	89	42.8	50	24.0
22	32.7	Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school	10	4.8	58	27.9	83	39.9	57	27.4

TABLE 12 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
23	32.3	Offers activities conducted by consultants from both within & without the school environment-consultants with recent classroom experience	18	8.7	49	23.6	104	50.0	37	17.8
24	31.7	Allows and encourages intrinsic incentives, such as: increased self-confidence, etc.	4	1.9	62	29.8	85	40.9	57	27.4
25	30.3	Assists the teacher in improving the teaching and learning situation in the classroom and school operation	6	2.9	57	27.4	111	53.4	34	16.3
26	29.8	Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	10	4.8	52	25.0	95	45.7	51	24.5
27	27.8	Provides for evaluation of the efforts to utilize what has been learned in inservice education	8	3.8	50	24.0	93	44.7	57	27.4
28	27.5	Provides continuity of professional growth by providing a sequence of activities	10	4.8	47	22.7	87	42.0	63	30.4

TABLE 12 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
29	27.4	Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more	24	11.5	33	15.9	45	21.6	106	51.0
30	26.4	Includes different activities which allow for differing attitudes, values, and beliefs that influence the individual teacher's behavior	10	4.8	45	21.6	97	46.6	56	26.9
31	23.5	Allows for one or more extrinsic incentives, such as: credit toward salary increment, university or college credit, etc.	15	7.2	34	16.3	33	15.9	126	60.6
32	19.7	Permits teachers to visit activities and observe classes occasionally within their school or in other schools	8	3.8	33	15.9	88	42.3	79	38.0
33	18.2	Allows voluntary attendance by teachers at inservice programs	14	6.7	24	11.5	53	25.5	117	56.2

TABLE 12 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
34	17.8	Allows for adequate follow-up by teachers to determine the effects of inservice activities	9	4.3	28	13.5	102	49.0	69	33.2

to the extent to which the process-need is practiced.

The chi-square testing of hypotheses III and IV revealed numerous cells with expected frequencies of five (5) or less. Cells with raw scores of zero (0) and less than five (5) expected frequency will tend to inflate the chi-square. Modification for low expected frequencies can be compensated by: (1) combining two or more columns and/or rows, or (2) accepting a more significant level of chi-square. In this study, any combination of columns and/or rows would result in a loss of necessary information; therefore, the second alternative was used for chi-square modification. Rejection of the null hypothesis is determined at the .01 level of significance in place of the .05 level of significance used throughout this study.[2] The number of small cells also generates problems with the interpretation of the data pertaining to desired process-needs and present practices; therefore, the reader is cautioned with these limitations for hypothesis III and IV.

The chi-square tests failed to establish significance at the .01 level for eighteen of the thirty-four process-needs; therefore, the null hypothesis is not rejected on the eighteen process-needs. A table of the

chi-square results for process-needs and practices is in Appendix C, page 286.

The sixteen process-need and practice statements identified as significant at the .01 level or better (see table 13) are:

1. To require attendance by teachers at scheduled inservice programs (.001 level). Teachers indicating this as a "highly desired" or "desired" need also indicated it is more often practiced to a "high" or "acceptable" degree;

2. To offer activities utilizing persons within the local system, district consultants, and university personnel in a collaborative effort for teachers (.01 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to a "limited" degree;

3. To have inservice contribute to satisfactory orientation of new teaching personnel (.01 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to a "limited" degree;

4. To provide continuity of professional growth by providing a sequence of activities in inservice

TABLE 13

SIGNIFICANT CHI-SQUARE RESULTS FOR PROCESS-NEEDS AND PRACTICES

Need: Requires attendance by teachers at scheduled inservice programs

*Responses (Practices)	**Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	53	70.7	45	48.9	7	28.0	9	56.3
2	15	20.0	31	33.7	6	24.0	0	0.0
3	4	5.4	14	15.2	7	28.0	5	31.3
4	3	4.0	2	2.2	5	20.0	2	12.5

(N=208)

Degrees of Freedom = 9

***Chi-square = 38.025

Level of Significance = .001

*Response (Practices) 1: high degree of practice, Response 2: acceptable degree of practice, Response 3: limited degree of practice, Response 4: not practiced at all.

**Response (Needs) 1: highly desired, Response 2: desired, Response 3: slightly desired, Response 4: not desired.

***A chi-square of 12.592 or larger is necessary at the .05 level, 15.033 or larger at the .02 level, 16.812 or larger at the .01 level, 22.457 or larger at the .001 level with 6 degrees of freedom. A chi-square of 16.919 or larger is necessary at the .05 level, 19.679 or larger at the .02 level, 21.666 or larger at the .01 level, 27.877 or larger at the .001 level with 9 degrees of freedom.

TABLE 13 -- CONTINUED

Need: Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort for teachers

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	24	27.0	8	9.0	2	6.7	0	0.0
2	16	18.0	32	36.0	6	20.0	0	0.0
3	36	40.4	35	39.3	17	56.7	0	0.0
4	13	14.6	14	15.7	5	16.7	0	0.0

(N=208)

Degrees of Freedom = 6
Chi-square = 18.623
Level of Significance = .01

Need: Contributes to satisfactory orientation of new teaching personnel

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	17	17.5	3	3.5	1	5.3	0	0.0
2	21	21.6	34	39.5	5	26.3	1	16.7
3	37	38.1	34	39.5	9	47.4	1	16.7
4	22	22.7	15	17.4	4	21.1	4	66.7

(N=208)

Degrees of Freedom = 9
Chi-square = 22.969
Level of Significance = .01

TABLE 13 -- CONTINUED

Need: Provides continuity of professional growth by providing a sequency of activities at inservice education

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	9	10.1	0	0.0	1	5.6	0	0.0
2	17	19.1	25	26.9	5	27.8	0	0.0
3	34	38.2	46	49.5	7	38.9	0	0.0
4	29	32.6	22	23.7	5	27.8	7	100.0

(N=207)

Degrees of Freedom = 9
Chi-square = 30.235
Level of Significance = .001

Need: Allows teachers to experience small group activities at scheduled inservice programs

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	12	18.5	6	5.5	4	15.4	4	50.0
2	21	32.3	48	44.0	4	15.4	0	0.0
3	19	29.2	46	42.2	11	42.3	1	12.5
4	13	20.0	9	8.3	7	26.9	3	37.5

(N=208)

Degrees of Freedom = 9
Chi-square = 36.245
Level of Significance = .001

TABLE 13 -- CONTINUED

Need: Contains released teaching time for the total staff for scheduled inservice programs

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	50	45.9	13	17.1	2	11.8	5	83.3
2	16	14.7	27	35.5	5	29.4	0	0.0
3	26	23.9	20	26.3	5	29.4	0	0.0
4	17	15.6	16	21.1	5	29.4	1	16.7

(N=208)

Degrees of Freedom = 9
Chi-square = 31.550
Level of Significance = .001

Need: Includes different activities which allows for individual differences which exist among teachers

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	15	14.2	5	6.4	0	0.0	0	0.0
2	18	18.2	24	30.8	8	33.3	1	14.3
3	34	34.3	33	42.3	9	37.5	0	0.0
4	32	32.3	16	20.5	7	29.2	6	85.7

(N=208)

Degrees of Freedom = 9
Chi-square = 24.257
Level of Significance = .01

TABLE 13 -- CONTINUED

Need: Provides activities which are planned and conducted in local schools

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	19	26.0	7	7.0	4	14.3	0	0.0
2	29	39.7	45	45.0	11	39.3	0	0.0
3	15	20.5	35	35.0	10	35.7	3	42.9
4	10	13.7	13	13.0	3	10.7	4	57.1

(N=208)

Degrees of Freedom = 9
Chi-square = 27.913
Level of Significance = .001

Need: Provides for teachers to have a voice in the decision-making process of inservice education

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	25	19.2	3	4.2	2	33.3	0	0.0
2	33	25.4	27	37.5	1	16.7	0	0.0
3	50	38.5	40	55.6	2	33.3	0	0.0
4	22	16.9	2	2.8	1	16.7	0	0.0

(N=208)

Degrees of Freedom = 6
Chi-square = 22.531
Level of Significance = .001

TABLE 13 -- CONTINUED

Need: Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	13	14.3	3	3.3	0	0.0	2	28.6
2	18	19.8	28	30.4	3	16.7	0	0.0
3	44	48.4	46	50.0	13	72.2	1	14.3
4	16	17.6	15	16.3	2	11.1	4	57.1

(N=208)

Degrees of Freedom = 9
Chi-square = 25.879
Level of Significance = .01

Need: Allows voluntary attendance by administrators at scheduled inservice programs

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	7	22.6	8	11.3	4	8.7	12	20.0
2	9	29.0	35	49.3	11	23.9	4	6.7
3	9	29.0	12	16.9	15	32.6	18	30.0
4	6	19.4	16	22.5	16	34.8	26	43.3

(N=208)

Degrees of Freedom = 9
Chi-square = 35.055
Level of Significance = .001

TABLE 13 -- CONTINUED

Need: Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	3	13.6	4	5.0	9	12.5	11	32.4
2	7	31.8	21	26.2	11	15.3	3	8.8
3	2	9.1	38	47.5	39	54.2	10	29.4
4	10	45.5	17	21.2	13	18.1	10	29.4
(N=208)								

Degrees of Freedom = 9
Chi-square = 35.530
Level of Significance = .001

Need: Allows activities which include small group formations of teachers to work together in a problem or goal area

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	13	18.3	2	1.8	1	4.8	2	28.6
2	21	29.6	46	42.2	6	28.6	1	14.3
3	24	33.8	44	40.4	10	47.6	2	28.6
4	13	18.3	17	15.6	4	19.0	2	28.6
(N=208)								

Degrees of Freedom = 9
Chi-square = 22.243
Level of Significance = .01

TABLE 13 -- CONTINUED

Need: Includes different activities which allows for differing attitudes, values, and beliefs that influence the individual teacher's behavior

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	6	8.1	3	3.0	1	3.6	0	0.0
2	13	17.6	31	31.0	0	0.0	1	16.7
3	29	29.2	51	51.0	15	53.6	2	33.3
4	26	35.1	15	15.0	12	42.9	3	50.0

(N=208)

Degrees of Freedom = 9
Chi-square = 26.246
Level of Significance = .01

Need: Permits local schools to plan, organize, and conduct in-service programs

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	22	25.6	6	6.1	4	20.0	2	50.0
2	25	29.1	42	42.9	6	30.0	0	0.0
3	28	32.6	39	39.8	8	40.0	0	0.0
4	11	12.8	11	11.2	2	10.0	2	50.0

(N=208)

Degrees of Freedom = 9
Chi-square = 24.746
Level of Significance = .01

TABLE 13 -- CONTINUED

Need: Provides for evaluation of the efforts to utilize what has been learned in inservice education

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	8	10.8	0	0.0	0	0.0	0	0.0
2	12	16.2	31	30.4	7	25.9	0	0.0
3	28	37.8	54	52.9	11	40.7	0	0.0
4	26	35.1	17	16.7	9	33.3	5	100.0
(N=208)								

Degrees of Freedom = 9
Chi-square = 39.850
Level of Significance = .001

education (.001 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to a "limited" degree;

5. To allow teachers to experience small group activities at scheduled inservice programs (.001 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to an "acceptable" or "limited" degree;

6. To have inservice contain released teaching time for the total staff for scheduled inservice programs (.001 level). Teachers who indicated this as a "highly desired" need also indicated it is more often practiced to a "high" degree; however, those teachers who indicated this as a "desired" need, indicated it is practiced to an "acceptable" degree;

7. To include different activities which allow for individual differences which exist among teachers (.01 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to an "acceptable" or "limited" degree;

8. To provide activities which are planned and conducted in local schools (.001 level). Teachers who indicated this as a "highly desired" or "desired" need

also indicated it is more often practiced to an "acceptable" degree;

9. To provide for teachers to have a voice in the decision-making process of inservice education (.001 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to a "limited" degree.

10. To offer activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience (.01 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to a "limited" degree.

11. To allow voluntary attendance by administrators at scheduled inservice programs (.001 level). Teachers who indicated this as a "highly desired" need also indicated it is more often practiced to an "acceptable" or "limited" degree. Those teachers who indicated this as a "desired" need also indicated it is more often practiced to an "acceptable" degree or "not at all".

12. To provide numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas (.001 level). Teachers who indicated this as a "highly

desired" need also indicated it is more often practiced to an "acceptable" degree or "not at all". Teachers indicating this as a "desired" need also indicated it is more often practiced to an "acceptable" or "limited" degree.

13. To allow activities which include small group formations of teachers to work together on a problem or goal area (.01 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to an "acceptable" or "limited" degree.

14. To include different activities which allow for differing attitudes, values, and beliefs that influence the individual teacher's behavior (.01 level). Teachers who indicated this as a "highly desired" need also indicated it is more often practiced to a "limited" degree or "not at all". Teachers who indicated this as a "desired" need also indicated it is more often practiced to an "acceptable" or "limited" degree.

15. To permit local schools to plan, organize, and conduct inservice programs (.01 level). Teachers who indicated this as a "highly desired" or "desired" need also indicated it is more often practiced to an "acceptable" or

"limited" degree.

16. To provide for evaluation of the efforts to utilize what has been learned in inservice education (.001 level). Teachers who indicated this as a "highly desired" need also indicated it is more often practiced to a "limited" degree or "not at all". Teachers who indicated this as a "desired" need also indicated it is more often practiced to an "acceptable" or "limited" degree.

As previously discussed, sixteen inservice process-need and practice statements have statistically significant results at the .01 level or better. The null hypothesis is rejected in each of these instances; however, the remainder of the thirty-four process-needs (eighteen) lacked significance at the .01 level; therefore, it is not possible to reject the null hypothesis for each of these statements. In summary, there is lack of conclusive acceptance or rejection of hypothesis III.

Present Alternative Delivery Systems in Inservice Education (Proposition Statement 4)

None of the eighteen alternative delivery systems on the questionnaire were identified at an agreement level

of 70 per cent or better of the sample population when responding to each delivery system with responses of "high degree" or "acceptable degree" to which the practice is presently followed in inservice education (see table 14). All of the eighteen alternative delivery systems were identified at unacceptable levels of 33.2 per cent to 3.8 per cent.

Hypothesis IV

Hypothesis IV states that the extent to which an inservice education alternative delivery system is desired is not related to the extent to which the system is practiced.

As indicated on page 172, cells with raw scores of zero (0) and less than five (5) expected frequencies tend to inflate the chi-square; therefore, rejection of the null hypothesis is determined at the .01 level of significance. In addition, the number of small cells generates problems with the interpretation of the data; therefore, the interpretation is subject to limitations.

The chi-square tests failed to establish significance at the .01 level for nine of the eighteen delivery systems; therefore, the null hypothesis is not rejected

TABLE 14

PRESENT ALTERNATIVE DELIVERY SYSTEMS IN INSERVICE EDUCATION

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	*Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
1	33.2	SABBATICAL LEAVE WITHOUT COMPENSATION	22	10.6	47	22.6	63	30.3	76	36.5
2	32.7	SCHOOL BUILDING FACULTY MEETINGS	17	8.2	51	24.5	80	38.5	60	28.8
3	30.3	PROFESSIONAL ACTIVITY LEAVE	18	8.7	45	21.6	87	41.8	58	27.9
4	29.8	PARTICIPATION WORKSHOP	11	5.3	51	24.5	75	36.1	71	34.1
5	28.4	HELPING OR SUPERVISORY TEACHER	18	8.7	41	19.7	58	27.9	91	43.7
6	25.5	CLINIC WORKSHOP	11	5.3	42	20.2	71	34.1	84	40.4
7	25.4	LECTURE INSTITUTE	19	9.1	34	16.3	68	32.7	87	41.8
8	24.0	SABBATICAL LEAVE WITH COMPENSATION	8	3.8	42	20.2	37	17.8	121	58.2
9	21.2	OBSERVATION OR VISITATION LEAVE	6	2.9	38	18.3	76	36.5	88	42.3
10	15.4	DEVELOPMENT TEAM PROBLEM SOLVING DESIGN	2	1.0	30	14.4	67	32.2	109	52.4
11	14.9	SUMMER WORK SESSIONS	7	3.4	24	11.5	70	33.7	107	51.4
12	14.0	SELECTED GROUP INSERVICE	6	2.9	23	11.1	77	37.0	102	49.0

*Response 1: high degree of practice, Response 2: acceptable degree of practice, Response 3: limited degree of practice, Response 4: not practiced at all.

TABLE 14 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
13	12.0	PROFESSIONAL GROWTH PROGRAMS	0	0.0	25	12.0	59	28.4	124	59.6
14	11.6	USE OF WITHIN SCHOOL INSERVICE CONSULTANT	1	.5	23	11.1	48	23.1	136	65.4
15	8.6	UNIVERSITY BASED RESOURCE PERSONS	3	1.4	15	7.2	49	23.6	141	67.8
16	8.2	CONSORTIUM PROGRAM	2	1.0	15	7.2	58	27.9	133	63.9
17	7.7	TEACHER CENTER	1	.5	15	7.2	55	26.4	137	65.9
18	3.8	OVER-STAFFING FOR INSERVICE	0	0.0	8	3.8	47	22.6	153	73.6

on the nine delivery systems. A table of the chi-square results for alternative delivery systems and practices can be found in Appendix D, page 303.

The remaining nine alternative delivery system and practice statements identified as significant at the .01 level or better (see table 15) are:

1. Participation workshop (.001 level). Teachers who indicated this as a "highly desired" delivery system also indicated it is more often practiced to a "limited" degree or "not at all". Teachers who indicated this as a "desired" delivery system also indicated it is more often practiced to an "acceptable" or "limited" degree;

2. Sabbatical leave without compensation (.001 level). Teachers who indicated this as a "highly desired" delivery system also indicated the practice runs the gamut of all four responses in equal proportion. Teachers who indicated this as a "desired" delivery system also indicated it is practiced more often at an "acceptable" or "limited" degree;

3. Sabbatical leave with compensation (.001 level). Teachers who indicated this as a "highly desired" delivery system also indicated it is more often practiced "not at all". Teachers who indicated this as a "desired" delivery

TABLE 15

SIGNIFICANT CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF NEEDS AND PRACTICES

Alternative Delivery System:
PARTICIPATION WORKSHOP

*Responses (Practices)	**Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	7	10.9	1	1.1	1	2.6	2	13.3
2	14	21.9	32	35.6	4	10.3	1	6.7
3	23	35.9	33	36.7	17	43.6	2	13.3
4	20	31.3	24	26.7	17	43.6	10	66.7

(N=208)

Degrees of Freedom = 9
***Chi-square = 29.123
Level of Significance = .001

*Response (Practices) 1: high degree of practice, Response 2: acceptable degree of practice, Response 3: limited degree of practice, Response 4: not practiced at all.
**Response (Needs) 1: highly desired, Response 2: desired, Response 3: slightly desired, Response 4: not desired.
***A chi-square of 16.812 or larger is necessary at the .01 level, 22.457 or larger at the .001 level with 6 degrees of freedom. A chi-square of 21.666 or larger is necessary at the .01 level, 27.877 or larger at the .001 level with 9 degrees of freedom.

TABLE 15 -- CONTINUED

Alternative Delivery System: SABBATICAL LEAVE WITHOUT COMPENSATION

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	16	26.2	3	6.1	2	5.4	1	1.6
2	14	23.0	15	30.6	11	29.7	7	11.5
3	16	26.2	23	46.9	11	29.7	13	21.3
4	15	24.6	8	16.3	13	35.1	40	65.6

(N=208)

Degrees of Freedom = 9
Chi-square = 54.560
Level of Significance = .001

Alternative Delivery System: SABBATICAL LEAVE WITH COMPENSATION

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	7	5.9	0	0.0	1	5.3	0	0.0
2	19	16.0	18	34.6	5	26.3	0	0.0
3	20	16.8	9	17.3	8	42.1	0	0.0
4	73	61.3	25	48.1	5	26.3	18	100.0

)N+208)

Degrees of Freedom = 9
Chi-square = 33.905
Level of Significance = .001

TABLE 15 -- CONTINUED

Alternative Delivery System:
PROFESSIONAL GROWTH PROGRAMS

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	0	0.0	0	0.0	0	0.0	0	0.0
2	5	12.2	17	20.2	2	3.5	1	3.8
3	8	19.5	29	34.5	21	36.8	1	3.8
4	28	68.3	38	45.2	34	59.6	24	92.3

(N=208)

Degrees of Freedom = 6
Chi-square = 26.904
Level of Significance = .001

Alternative Delivery System:
SELECTED GROUP INSERVICE

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	4	6.8	2	2.1	0	0.0	0	0.0
2	2	3.4	16	16.8	4	10.5	1	6.3
3	19	32.2	44	46.3	11	28.9	3	18.8
4	34	57.6	33	34.7	23	60.5	12	75.0

(N=208)

Degrees of Freedom = 9
Chi-square = 23.987
Level of Significance = .01

TABLE 15 -- CONTINUED

Alternative Delivery System: SCHOOL BUILDING FACULTY MEETINGS

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	10	20.0	5	5.3	0	0.0	2	10.5
2	10	20.0	33	34.7	8	18.2	0	0.0
3	13	26.0	33	34.7	25	56.8	9	47.4
4	17	34.0	24	25.3	11	25.0	8	42.1

(N=208)

Degrees of Freedom = 9
Chi-square = 31.982
Level of Significance = .001

Alternative Delivery System: HELPING OR SUPERVISORY TEACHER

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	13	15.5	5	6.0	0	0.0	0	0.0
2	14	16.7	20	23.8	7	24.1	0	0.0
3	17	20.2	34	40.5	6	20.7	1	9.1
4	40	47.6	25	29.8	16	55.2	10	90.9

(N=208)

Degrees of Freedom = 9
Chi-square = 31.225
Level of Significance = .001

TABLE 15 -- CONTINUED

Alternative Delivery System:
UNIVERSITY BASED RESOURCE PERSONS

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	3	6.0	0	0.0	0	0.0	0	0.0
2	9	18.0	3	4.3	3	4.8	0	0.0
3	9	18.0	21	30.0	18	29.0	1	3.8
4	29	58.0	46	65.7	41	66.1	25	96.2

(N=208)

Degrees of Freedom = 9
Chi-square = 31.568
Level of Significance = .001

Alternative Delivery System:
CONSORTIUM PROGRAM

Responses (Practices)	Responses (Needs) +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	1	2.4	0	0.0	0	0.0	1	4.8
2	3	7.1	11	12.4	1	1.8	0	0.0
3	8	19.0	27	30.3	22	39.3	1	4.8
4	30	71.4	51	57.3	33	58.9	19	90.5

(N=208)

Degrees of Freedom = 9
Chi-square = 24.019
Level of Significance = .01

system also indicated it is more often practiced to an "acceptable" degree or "not at all";

4. Professional growth programs (.001 level). Teachers who indicated this as a "highly desired" delivery system also indicated it is more often practiced "not at all". Teachers who indicated this as a "desired" delivery system also indicated it is more often practiced to a "limited" degree or "not at all";

5. Selected group inservice (.01 level). Teachers who indicated this as a "highly desired" delivery system also indicated it is more often practiced "not at all". Teachers who indicated this as a "desired" delivery system also indicated it is more often practiced to a "limited" degree;

6. School building faculty meetings (.001 level). Teachers who indicated this as a "highly desired" delivery system indicated it is more often practiced "not at all". Teachers who indicated this as a "desired" delivery system also indicated it is more often practiced to an "acceptable" or "limited" degree;

7. Helping or supervisory teacher (.001 level). Teachers who indicated this as a "highly desired" delivery system also indicated it is more often practiced "not at

all";

9. Consortium program (.01 level). Teachers who indicated this as a "highly desired" and "desired" delivery system also indicated it is more often practiced "not at all".

As previously discussed, nine alternative delivery system need and practice statements have statistically significant results at the .01 level or better. The null hypothesis is rejected in each of these instances; however, the remainder of the eighteen alternative delivery systems (nine) lacked significance at the .01 level; therefore, it is not possible to reject the null hypothesis for each of these factors. In summary, there is lack of conclusive acceptance or rejection of the hypothesis IV.

Inservice Priority Identification
(Proposition Statement 5)

An additional task on the questionnaire pertained to priority ranking of inservice education in relation to other identified education needs. The identified education needs used for priority ranking on the questionnaire were: protection of teacher rights, teacher salary increase and/or fringe benefits, adoption of an accountability system for teachers and administrators, and inservice

education. Respondents were asked to divide "N" (N=10) amount to provide for the four identified education needs.

In Marquette-Alger Intermediate School District, 113 teachers responded to the item. In Genesee Intermediate School District, 85 teachers responded, providing a total sample population of 198.

This item was included in the total questionnaire as an indicator of inservice priorities. The form and mechanics of the item were not developed for statistical research analysis. The results were investigated using two methods: (1) to establish priority by summing the raw scores for each item, and (2) to establish priority by weighting individual raw order choices and determine group frequencies of order.

Using the first method, the total group identified inservice education as a third priority among other identified education needs (see table 16). The teachers indicated teacher salaries and/or fringe benefits were the first priority, protection of teacher rights as a second priority, with inservice the third priority; however, there is only a ten point difference between the second and third priority in the total group sample.

TABLE 16

INSERVICE PRIORITY (RAW SCORES SUMMED)

ITEM	TOTAL GROUP		MARQUETTE-ALGER		GENESEE	
	Rank Order	Summed Raw Scores	Rank Order	Summed Raw Scores	Rank Order	Summed Raw Scores
TEACHER SALARY INCREASE AND/OR FRINGE BENEFITS	1	657	1	368	1	289
PROTECTION OF TEACHER RIGHTS	2	497	3	277	2	220
INSERVICE EDUCATION	3	487	2	291	3	196
ACCOUNTABILITY SYSTEM FOR TEACHERS AND ADMINISTRATORS	4	339	4	194	4	145

Adoption of an accountability system is the fourth priority.

While Marquette-Alger Intermediate School District teachers indicated teacher salaries and/or fringe benefits as first priority, the second priority was inservice education followed by protection of teacher rights and adoption of an accountability system. The Genesee Intermediate School District teacher subgroup sample reflects the priority order of the total sample.

A second method to determine inservice priority among other identified education needs was investigated. Individual rank order choices were weighted with first choice weighted - 1, second - 2, third - 3, and fourth - 4. For example:

	Respondent's Raw Score	Weighted Score
1. Teacher Rights	4	2
2. Teacher Salary, etc.	5	1
3. Accountability System	0	4
4. Inservice Education	1	3

The weighted scores were summed and priority of inservice was established (see table 17). Because the value of first priority is 1 and lesser priorities are 2, 3, 4, the smallest sum represents first priority.

TABLE 17

INSERVICE PRIORITY (WEIGHTED SCORES SUMMED)

ITEM	TOTAL GROUP		MARQUETTE-ALGER		GENESEE	
	Rank Order	Summed Weighted Scores	Rank Order	Summed Weighted Scores	Rank Order	Summed Weighted Scores
TEACHER SALARY INCREASE AND/OR FRINGE BENEFITS	1	398.0	1	230.5	1	167.5
PROTECTION OF TEACHER RIGHTS	2	480.0	2	278.0	2	202.0
INSERVICE EDUCATION	3	497.0	3	278.5	3	218.5
ACCOUNTABILITY SYSTEM FOR TEACHERS AND ADMINISTRATORS	4	605.0	4	343.0	4	262.0

In the second method of analyzation the total group sample, as well as the subsamples of Marquette-Alger Intermediate School District teachers and Genesee Intermediate School District teachers, established inservice education as a third priority.

Content-Need Identification of Inservice Education (Proposition Statement 6)

An additional task on the questionnaire was a request to list three content or subject areas for topics at inservice education programs. This item was included as an open-ended question designed to stimulate creative, unforced answers. Many respondents chose not to answer this request or answered in a limited way (see table 18).

TABLE 18

CONTENT-NEED IDENTIFICATION OF INSERVICE EDUCATION RESPONDENTS

Sample Group	Number of Responses 3	2	1	0
Total Group Sample	138	20	17	33
Marquette-Alger Sample	78	12	6	21
Genesee Sample	60	8	11	12

The content-need topics are listed for Marquette-Alger Intermediate School District and Genesee Intermediate School District (see table 19). Liberty was taken by the writer to assume that similar topics existed. For example, values, valuing, and value clarification are listed under value clarification.

Chapter III presented and analyzed the data received on 208 returned questionnaires from 117 teachers in Marquette-Alger Intermediate School District and 91 teachers in Genesee Intermediate School District. Chapter IV will present the summary of the findings, conclusions, implications and recommendations of this study.

TABLE 19

CONTENT-NEED IDENTIFICATION OF INSERVICE EDUCATION

TOPIC	Frequency of Mention MARQUETTE-ALGER	GENESEE
I. Workshops as Subject Areas		
Reading	25	17
Mathematics	22	6
Metric System	19	7
Science	19	7
Career Education	11	4
Social Studies	9	5
Language Arts	8	6
Music and Art	8	3
English	4	4
Outdoor Education	1	2
Physical Education		3
Drugs		3
Vocational Education	2	
Consumer Education	1	
Industrial Education		1
Foreign Language		1
School Publications		1
II. Human Relations		
Student Discipline	14	8
Values Clarification	10	10
Parent-teacher Relations	8	6
Student Motivation	10	3
Student Problems	3	4
Administrator-teacher Relations		6
Student Rights		2
Student Evaluation & Grading		2
Student-teacher Relations		1
Student Involvement		1
Interpersonal Relations		1
III. New Techniques in Teaching		
Learning Disibilities	15	20
Curriculum Development	7	14

TABLE 19 -- CONTINUED

TOPIC	Frequency of Mention MARQUETTE-ALGER	GENESEE
Open Classroom	14	6
Audio Visual	4	8
Make and Take Workshop	4	6
Learning Centers	3	1
IV. Teacher Centered Activities		
Teacher Evaluation/Accountability	12	9
Visitations	4	8
Education Funding	3	3
Work in Own Room	2	1
Teacher Rights	1	
Retirement		1
Recruitment		1
V. Miscellaneous		
Community-school Relations		5
School Policies and Goals	4	1
Schools and the Law	3	1
Publisher's Exhibit	2	2
Visit Local Industry (Mining)	3	
Bicentennial Plans	3	
Racism in Schools		2
Sexism in Schools		2
Training Aides	2	
NEA, MEA Report		1
Test Construction		1
Graduate Programs		1
Research Developments		1
After School Activities		1
Adult Education		1
45-15 Program		1
Tracking Students	1	
Talent Exploration	1	
Computer Use	1	

FOOTNOTES

[1]Hubert M. Blalock, Jr., Social Statistics (New York: McGraw-Hill Book Co., 1960), p. 286.

[2]M. Clement Johnson, University of Michigan, private interview held February, 1975.

CHAPTER IV

SUMMARY, FINDINGS, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

In this final chapter a brief summary of the problem and methodology is presented followed by findings, conclusions and implications pertaining to identified process-needs and alternative delivery systems of inservice education. Recommendations for further study and practice are developed. Alternative approaches for organizing and implementing inservice education are suggested.

Summary

Summary of the Problem

Inservice education is a process for change; the ultimate goal is positive change in pupil behavior through constructive alteration of teacher behavior.[1] While change in pupil behavior is essential, an intermediate objective of inservice education is modified teacher behavior through teacher education.

Inservice education has long been recognized as a vital part of the continuing educational process of teachers; however, widespread criticism of inservice education is forcing new directions and concerns on inservice education. Central to the necessary changes in inservice education is the teacher.

> There can be no significant innovation in education that does not have at its center the attitudes of teachers, and it is an illusions to think otherwise.[2]

Few research studies have been undertaken to determine the needs and types of inservice programs which would be most beneficial to teachers from their perspectives.

The purpose of this study is to examine teachers' perceptions of: present inservice education practices; identification of inservice education process and content needs; alternative delivery systems of inservice education; and the priority of inservice education in relation to other identified education needs.

Summary of Methodology

A questionnaire containing pertinent and discriminatory items relating to the desired areas of investigation was developed. On the questionnaire, thirty-four

process-needs were listed consisting of two similar questions on seventeen areas. In addition, eighteen items were included on the questionnaire describing alternative delivery systems or models of inservice education. For each process-need and alternative delivery system, the respondents indicated the degree to which the practice is desired (need) with responses: highly desired, desired, slightly desired, not desired. Also, for each process-need and alternative delivery system, the respondents indicated the degree to which the practice was followed in the present school environment with responses: high degree, acceptable degree, limited degree, not at all. An additional task on the questionnaire pertained to priority ranking of inservice with other identified education needs. The respondents were also asked to list three content or subject areas for topics at inservice education programs.

The questionnaire on inservice education was mailed to 300 teachers: 150 in Marquette-Alger Intermediate School District and 150 in Genesee Intermediate School District. (Teachers in the Flint Community Public Schools were excluded from this study.) A total of 208 questionnaires were returned: 117 from teachers in Mar-

quette-Alger Intermediate School District and 91 from teachers in Genesee Intermediate School District.

Identified process-needs and desired alternative delivery systems were determined using percentages of responses in categories; whereby, an agreement level of 70 per cent or better of the population responding "highly desired" and/or "desired" indicated an identified process-need or desired alternative delivery system.

Comparisons of independent samples within the sample population on process-needs and delivery systems identification were investigated using chi-square. Independent samples pertained to teachers in: two districts, Marquette-Alger Intermediate School District and Genesee Intermediate School District; different grade assignments; varied years of teaching experience, and consecutive educational degrees. A chi-square analysis was also used to determine if there was a relationship between perceived desire for process-needs and alternative delivery systems and present practices.

Findings, Conclusions and Implications

Process-Need Identification (Proposition Statement 1)

Thirty-four process-need statements on the question-

naire refer to those needs concerned with the planning, implementation, and evaluation tasks of inservice education.

Findings. Of the thirty-four process-needs on the questionnaire, thirty-one are identified at an agreement level of 70 per cent or better of the sample population by responding to each need with answers of "highly desired" or "desired". Five major need areas, which were identified by summing the per cent of responses to two similar questions used on the questionnaire (see table 20) are: teacher input into decision making (194.7 per cent), relevant inservice for classroom application (191.4 per cent), open atmosphere for learning (189.9), cooperative planning and programming for teachers and administrators (186.0 per cent), and introduction and opportunity to use new methods (185.5 per cent).

Conclusions. The results suggest strongly that teachers desire: input into decision-making in inservice education, relevant inservice for classroom application, an open atmosphere in inservice programs for learning, cooperative inservice planning and programming for teachers and administrators, and introduction and opportunity to use new methods. Consideration should

TABLE 20

INSERVICE EDUCATION NEED AREAS AND IDENTIFIED STATEMENTS

Rank Order	Need Areas and Identified Statements	Total Per Cent *Responses 1 & 2
1	TEACHER INPUT INTO DECISION MAKING	194.7
	Allows for activities to be planned based on an assessment of needs perceived by teachers	97.6
	Provides for teachers to have a voice in the decision making process of inservice education	97.1
2	RELEVANT INSERVICE FOR CLASSROOM APPLICATION	191.4
	Assists the teacher in improving the teaching and learning enviroment in the classroom and school	96.2
	Relates directly to the problems of daily classroom life and school operation	95.2
3	OPEN ATMOSPHERE FOR LEARNING	189.9
	Allows for participants to be actively involved in learning experiences	95.2
	Provides an atmosphere encouraging teachers to express feelings and opinions, ask questions, offer comments	94.7
4	COOPERATIVE PLANNING AND PROGRAMMING FOR TEACHERS AND ADMINISTRATORS	186.0
	Involves teachers and administrators in decisions pertaining to inservice education	95.6
	Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	90.4

*Response 1: highly desired, Response 2: desired

TABLE 20 -- CONTINUED

Rank Order	Need Areas and Identified Statements	Total Per Cent Responses 1 & 2
5	INTRODUCTION AND OPPORTUNITY TO USE NEW METHODS	185.5
	Provides opportunities to become acquainted with new teaching practices and/or curriculum	96.1
	Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	89.4

also be given to other identified needs.

Implications. School systems, if not already in the process, should initiate inservice opportunities which allow teachers and administrators to cooperatively plan, implement, and assess inservice education. The traditional administrator-planned and directed inservice program is a diminishing trend and teachers should assume a larger role and the responsibility; however, "cooperative" directions are central to any emerging patterns of inservice.

Inservice opportunities should be relevant for use in the classroom situation whereby the teacher can improve the learning environment in the classroom through inservice opportunities which relate directly to the problems of daily classroom operation. Teachers should be introduced to new teaching practices and ideas and provided an encouraging environment and support by administrators and staff peers to test and to experiment with innovative practices. Even more basic, the inservice environment, itself, should be conducive to encouraging teachers to express feelings and opinions, to ask questions, to offer comments, and to exchange ideas.

Other concerns to be considered in emerging inservice education opportunities are: released time for staff with a minimum of not less than one-half day per month; options for local school planning and programming; special orientation for new teachers; small group experiences on problem or goal areas; recognition of individual differences in teachers; and intrinsic and extrinsic motivation.

Present attendance patterns of inservice indicate attendance is required of teachers, not administrators. Teachers in this study indicated that emerging patterns of inservice education should require attendance of total administrative and teaching staff.

Hypothesis I

Hypothesis I stated that no significant differences will be found in process-need identification in inservice education between population subgroups:

A. Teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District

B. Teachers in Elementary (K-5), Middle (6-8), and Senior (9-12) grade assignments

C. Teachers with teaching experience of: 1 year or less, 2-4 years, 5-9 years, 10 and over

D. Teachers with: B.S. or B.A. degrees, M.S. or M.A. degrees, Ed. Spec. degrees, Ph.D. or Ed.D. degrees

Findings. The findings indicate that:

A. Two of thirty-four process-needs correlating teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District are statistically significant: to allow for one or more extrinsic incentives (.05 level); to provide numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas (.05 level).

B. Two of thirty-four process-needs correlating grade assignments of teachers are statistically significant: to offer activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance to teachers (.02 level); to allow activities which include small group formations of teachers to work together in a problem or goal area (.05 level).

C. Two of thirty-four process-needs correlating years of experience in teaching are statistically significant:

to allow voluntary attendance by teachers at inservice programs (.02 level); to allow activities which include small group formations of teachers to work together in a problem or goal area (.05 level).

D. One of thirty-four process-needs correlating education degree status of teachers is statistically significant: to provide for evaluation of the efforts to utilize what has been learned in inservice education (.05 level).

Conclusions. The null hypothesis is rejected in each of the seven instances mentioned in the findings; however, the remainder of the thirty-four process-needs in each subgroup analysis lacked significance at the .05 level and the null hypothesis is not rejected for each of these one-hundred and twenty-nine instances. The null hypothesis I is accepted with the qualifications that seven of one-hundred and thirty-six process-needs pertaining to subgroups are statistically significant.

Implications. Teachers indicate inservice should recognize individual differences in teachers; however, the differences between teachers of different grade assignments, years of experience, and/or education degree status in process-need identification are not distinct

enough for consideration in inservice planning and implementation.

Alternative Delivery System Identification (Proposition Statement 2)

Eighteen alternative delivery systems statements on the questionnaire refer to described models of inservice education.

Findings. Of the eighteen alternative delivery systems on the questionnaire, eight are identified at an agreement level of 70 per cent or better of the sample population who answered with responses of "highly desired" or "desired".

Conclusions. Teachers identified the following alternative delivery systems as desired: professional activity leave, clinic workshop, sabbatical leave with compensation, observation or visitation leave, helping or supervisory teacher, summer work sessions, participation workshop, and selected group inservice.

It is important to note that several of the desired alternative delivery systems complement identified process-needs listed earlier in this chapter. For example, several desired alternative delivery systems allow for individual differences which do exist among teachers:

professional activity leave, clinic workshop, sabbatical leave with compensation, observation or visitation leave, helping or supervisory teacher, and selected group inservice. In the other direction, the process-need statement suggesting "one-shot" programs in inservice education was an unacceptable process-need. Relative to this process-need was the alternative delivery system identified as lecture-institute which was an unacceptable alternative delivery system.

Implications. The emerging models of inservice education should offer many alternative inservice opportunities. Teachers should have several choices of experiences. Teachers are indicating a desire to "leave" the classroom occasionally to attend professional activities, such as conventions, or to observe or visit peer teachers. The emerging models should consider the teacher as in active participant in the learning environment, not a passive listener.

Emerging models of inservice education should consider creative input from teachers and administrators to develop completely new, as yet undeveloped experiences in inservice education.

Hypothesis II

Hypothesis II stated that no significant differences will be found in identification of desired alternative delivery sytems of inservice education between population subgroups:

A. Teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District

B. Teachers in Elementary (K-5), Middle (6-8), and Senior (9-12) grade assignments

C. Teachers with teaching experience of: 1 year or less, 2-4 years, 5-9 years, 10 and over

D. Teachers with: B.S. or B.A. degrees, M.S. or M.A. degrees, Ed. Spec. degrees, Ph.D. or Ed.D. degrees

Findings. The findings are that:

A. One of eighteen alternative delivery systems correlating teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District is statistically significant: participation workshop (.05 level).

B. Two of eighteen alternative delivery systems correlating grade assignments of teachers are statistically

significant: school building faculty meetings (.02 level); development team problem solving design (.05 level).

C. Three of eighteen alternative delivery systems correlating years of teaching experience are statistically significant: lecture institute (.05 level); university-based resource persons (.05 level); school building faculty meetings (.01 level).

D. One of eighteen alternative delivery systems correlating education degree status of teachers is statistically significant: participation workshop (.05 level).

Conclusions. The null hypothesis is rejected in each of the seven instances mentioned in the findings; however, the remainder of the eighteen alternative delivery systems in each subgroup analysis lacked significant results at the .05 level and the null hypothesis is not rejected for these sixty-five instances. The null hypothesis II is accepted with the qualifications that seven of seventy-two alternative delivery systems pertaining to subgroups are statistically significant.

Implications. A variety of alternative delivery systems in inservice education are emerging; however,

the differences between teachers of different grade assignments, years of teaching experience, and/or education degree status in alternative delivery system identification are not sufficient for consideration in alternative delivery system planning and implementation when considering the data from this study.

Present Process-Need Practices (Proposition Statement 3)

Present process-need practices were established for the thirty-four process-need statements on the questionnaire.

Findings. Of the thirty-four process-need statements on the questionnaire, only one was identified as presently practiced at an agreement level of 70 per cent or better of the sample population who answered with responses of "high" or "acceptable" degree to which the practice is presently followed in inservice education.

Conclusions. Required attendance by teachers at scheduled inservice programs was identified as a present practice. The remainder of the process-need practices on the questionnaire were identified at an unacceptable level. It should not be inferred from these results that

this is the only process-need in present practice.

Implications. Present inservice practices are not answering many of the process-needs identified in this study on inservice education.

Hypothesis III

Hypothesis III states that the extent to which an inservice education process-need is desired is not related to the extent to which the process-need is practiced.

Findings. Sixteen of thirty-four process-need and practice tests have statistically significant results at the .01 level or better. (See table 13, page 174.)

Conclusions. The null hypothesis is rejected in each of the sixteen instances with a significant chi-square; however, the remainder of the thirty-four process-needs (eighteen) lacked significance at the .01 level and the null hypothesis is not rejected for each of these factors. There is a lack of conclusive rejection or acceptance of hypothesis III.

The more significant level of .01 was adopted for hypothesis III because of the number of cells with raw scores of zero (0) or expected frequencies of five (5) or less. In addition, the number of small cells generates problems with the interpretation of the

data; therefore, interpretation is subject to limitations.

Implications. Due to problems with the interpretation of the data, no implications are stated.

Present Alternative Delivery System Practices (Proposition Statement 4)

Present alternative delivery system practices were established for the eighteen alternative delivery systems identified on the questionnaire.

Findings. None of the eighteen alternative delivery systems on the questionnaire was practiced at an agreement level of 70 per cent or better of the sample population who answered with responses of "high" or "acceptable" degree to which the practice is presently followed in inservice education.

Conclusions. No alternative delivery system on the questionnaire was identified as a practice at an acceptable degree. It should not be inferred from these results that there are not alternative delivery systems or models present in existance. There are many models; however, of those described on the questionnaire, none are presently practiced to an acceptable degree in the two intermediate districts in this study.

Implications. Present alternative delivery system practices listed on this questionnaire are not effective models of inservice as perceived by teachers in this study.

Hypothesis IV

Hypothesis IV states that the extent to which an inservice education alternative delivery system is desired is not related to the extent to which the system is practiced.

Findings. Nine inservice alternative delivery system need and practice tests have statistically significant results at the .01 level or better. (See table 15, page 191.)

Conclusions. The null hypothesis is rejected in each of the nine instances with a significant chi-square; however, the remainder of the eighteen alternative delivery systems (nine) lacked significance at the .01 level and the null hypothesis is not rejected for each of these systems. There is a lack of conclusive acceptance or rejection of hypothesis IV.

The more significant level of .01 was adopted for hypothesis IV as with hypothesis III. Again the reader is cautioned in using the data due to problems

of interpretation.

Implications. Due to problems with the interpretation of the data, no implications are stated.

Inservice Priority Identification (Proposition Statement 5)

The identified education needs used for priority ranking for this study are: protection of teacher rights, teacher salary increase and/or fringe benefits, adoption of an accountability system for teachers and administrators, and inservice education.

Findings. The results are investigated using two methods. When establishing priority by total sample point frequencies, the following order was established:

1. Teacher salary increase and/or fringe benefits
2. Protection of teacher rights
3. Inservice education
4. Accountability system for teachers and administrators

When establishing priority by weighting individual rank order choices and establishing group frequencies of order, an identical order was established.

Conclusions. The form and mechanics of this item on the questionnaire were not developed for statistical

research analysis. The results indicate that inservice education is the third priority of the four identified education needs used in this study.

Implications. In the process of teacher's negotiations, bargaining positions of teacher education needs are often based on priorities; therefore, inservice education is frequently used as a "trade-off" item in negotiations. From the results of this section of this study, teachers indicate that this bargaining trend is in line with their priorities.

Content-Need Identification (Proposition Statement 6)

Content-need refers to those needs concerned with the subject or topic area of inservice education programs.

Findings. Many respondents chose not to respond to this request and of those who did respond, many answered to a limited degree by listing one or two topics. Seventeen subject-area topics, such as reading, mathematics, etc., were suggested. Twelve items of human relations interest, such as values and motivation, were suggested. Six items of new techniques in teaching, such as open classrooms and learning centers, were suggested. Seven items of teacher oriented activities, such as evalua-

tion and retirement, were suggested. Nineteen miscellaneous items were suggested. (See table 19, page 204.)

Conclusions. When teachers are presented with a question soliciting an unstructured answer, the responses are numerous and difficult to categorize.

Implications. The large variety of creative, unguided topic or subject-areas listed, supports the process-need of offering alternative inservice opportunities which recognize individual differences in teachers; however, this large variety is difficult to interpret into useful data for planning inservice education.

Additional Conclusions and Implications

It is important to note several additional conclusions and implications from data gathered for this study.

Intrinsic-Extrinsic Motivation. Throughout the literature on inservice education, references are directed toward the intrinsic and extrinsic motivational factors for teachers in relation to inservice education. Most references indicate that extrinsic motivational factors should be a major consideration in the planning and implementation of inservice education. Teachers in

this study indicated that intrinsic and extrinsic motivation are inservice needs; however, this inservice need area was the lowest priority of all the need areas identified by teachers. In addition, extrinsic motivation was the lowest ranked identified process-need in this study. While teachers in this study identified sabbatical leave with compensation as the third acceptable alternative delivery system, they recognized sabbatical leave without compensation as an unacceptable delivery system--ranked seventeenth of eighteen delivery systems. There appears to be a discrepancy in the perceptions of teachers with regard to the importance of extrinsic motivation; however, the need area should be given consideration in planning and implementing inservice education.

Attendance Patterns. Present attendance practices for inservice education indicate that attendance is required for teachers but not for administrators. Throughout the literature on inservice education, references are directed to attendance patterns for inservice education. Most references indicate that several emerging models advocate voluntary attendance, based on the following premise: if the inservice education opportunity is perceived as valuable by the teacher, the teacher will attend.

Teachers in this study indicated a preference for required attendance at inservice by teachers; furthermore, they indicated a preference for required attendance at inservice by administrators. In this context, emerging inservice programs should require attendance of total administrative and teaching staff with teachers and administrators planning and participating cooperatively as equals.

Geographic Patterns. Writers of recent education proposals for teacher centers have assumed universal needs and models of inservice education for teachers. This study compared the process and content needs, alternative delivery systems, practices and priorities of teachers in two intermediate school districts in Michigan: Marquette-Alger Intermediate School District located in the rural upper peninsula, and Genesee Intermediate School District located in a predominantly urban section of the lower peninsula.

While the first eight process-needs were identified by both districts, it is important to note a reversal in priority in each district. While teachers in Genesee Intermediate School District emphasized the needs for teacher input into inservice education and cooperative administrator-teacher planning as the first priority, teachers in Marquette-Alger Intermediate School District

emphasized the process-needs for relevant inservice and an open inservice atmosphere for learning.

There were several differences in process-need identifications. For example, Marquette-Alger Intermediate School District teachers identified the process-need of released time for the total staff for scheduled inservice programs as the ninth process-need; however, Genesee Intermediate School District teachers identified it as eighteenth.

Teachers in the two districts identified the priority of inservice in relation to other education needs differently. Teachers in Marquette-Alger Intermediate School District indicated inservice education as a second priority, following teacher salaries and/or fringe benefits. Genesee Intermediate School District teachers identified inservice education as a third priority following teacher salaries and/or fringe benefits and protection of teacher rights.

In the total sample population, the process-need to permit local schools to plan, organize, and conduct inservice programs was identified as the twelfth process-need, indicating that teachers recognize differences in widely separated geographic locations. The assumption

that geographic locations throughout the state and nation have universal inservice needs and/or that these needs can be implemented through universal models may be an inadequate assumption. While, generally, teachers may have similar perceptions of process-needs, models, and priorities, the essence of this study indicated that local school districts should be heavily involved in planning, directing, and implementing inservice education. State agencies and organizations should consider the options of local school districts when planning statewide inservice opportunities. Teachers and administrators from several localities should be consulted for statewide inservice planning and cooperation at the inception of idea-formation and planning.

In addition, teachers indicate the desire to observe local programs and learn from their peers rather than outside consultants. Local school systems have overlooked the expertise contained "within"; therefore, emerging inservice opportunities need to discover and utilize "within" teachers and administrators for shared experiences.

University Involvement. Four process-needs and seven alternative delivery systems directly or indirectly

inferred university involvement in inservice education. The four process-needs relating to university involvement and five of the alternative delivery systems were of low priority or unacceptable. The delivery systems identified as sabbatical leave with compensation and the summer work sessions which were acceptable systems indirectly implied university involvement.

Even though the role of higher education in public school inservice education has not been clearly defined, it appears that teachers perceive the role as a diminishing one. The direction for emerging inservice patterns suggest that the local school district be instrumental in planning, directing, and implementing inservice.

Teacher Stability. The demographic data analyzed for this study indicates that 71.9 per cent of the sample have been teaching five years or more and 39.9 per cent have been teaching ten or more years. Indications seem to be that teachers who remain in teaching longer will increase teacher stability. Ivan Illich indicates that most of the teachers who will be teaching in 1980 are teaching today.[3]

Skepticism about the value of inservice programs tends to increase with experience; therefore, emerging

inservice opportunities which are planned should recognize the increasing stability of the teaching staff as well as a coinciding increase in skepticism about inservice education.

Cooperative Governance. As found in the review of the literature (Chapter II), writers cited the area of governance as the basis for much of the present criticism of inservice education. In this study two need areas were identified as high priorities relating directly to governance: teacher input into decision-making, and cooperative planning and programming for teachers and administrators.

Persons responsible for emerging inservice opportunities should involve teachers and administrators in: decisions pertaining to inservice education; planning, directing, and implementing the experiences; and in total staff participation at the local school district level.

Although this study did not investigate the changing role of governance at the federal/state level, the higher education university level, or the intermediate school district level, it is apparent thay many levels of educational structure and agencies are involved in the

governance of inservice education. Teachers, on one hand, desire the governance of inservice at the local school district level: on the other hand, state level agencies and organizations desire to maintain or increase their governance role, either through intermediate school districts, education unions, or other means. Institutions of higher education apparently do not have an "intermediary" position regarding their governance role; consequently, their role is diminishing.

Those teachers who continue to oppose mandated governance at federal/state levels or with organizations outside of the local district, will apparently continue to demand a more significant governance role locally. State agencies and organizations and institutions of higher education should accept the condition that teachers' perceptions are central to change and the change is toward planning governance with the local school system.

Although the emerging role of governance of inservice education predicts exclusion of institutions of higher education, new directions for inservice, through creative, cooperative planning with local school systems could emerge. Since changing enrollments and financial conditions seemingly force adaptations in programming at

the university level, one hopes the development of creative, alternative, cooperative inservice opportunities will be encouraged.

The emerging role of the governance of inservice education at the intermediate school district level in Michigan is difficult to describe because of geographic location differences. Intermediate school districts should be able to facilitate cooperative administrative-teacher planning, directing, and implementation of inservice education without assuming a major governance role; however, not all intermediate school districts in Michigan have the staff or expertise to assume the role of "facilitator".

The role of the teacher organizations in governance of inservice education is an increasing role; hopefully, teacher organizations will be instrumental in cooperative administrator-teacher planning, directing, and implementing of inservice education.

The two major implications from this study are:

1. Emerging inservice education opportunities must be planned, directed, and implemented through administrator-teacher cooperation at the local school district

level.

2. An open inservice environment must be established which encourages participation through questionning, commenting, and exchanging ideas.

Recommendations

The recommendations presented for inservice education planning and implementation consider existing parameters such as budgeted monies and time allocated for inservice education. The following recommendations are suggested:

Local school districts. It is recommended that local school districts should consider:

1. Establishing and maintaining an inservice education task force to plan, direct, implement, and assess inservice education for local school districts. Members of the task force should represent administrators and teachers proportionately; for example, an eight member task force could include: one central office administrator, one school board member, two building level administrators, and four teachers. In geographic locations, where possible, additional task force representatives or resource persons from the intermediate school district

and/or from the higher education institutions should be considered. If additional members are added, care should be taken to have equal proportions of administrators and teachers.

2. Developing (through the task force) a statement of purposes and goals of inservice including short-range (1 year) and long-range (5 year) plans to enable inservice education to be established in sequential patterns. The purpose and goals should include provisions for: cooperative administrator-teacher planning and implementation; open, non-threatening inservice learning environments; alternatives for selection of activities; cooperative and required attendance by administrators and teachers at inservice education programs; well-structured, non-threatening assessment techniques for immediate and long-range follow-up of inservice education.

3. Creating and experimenting with alternative delivery systems of inservice education. Teachers in this study perceived the following program suggestions to be desired:

a. Mini-workshops. Several mini-workshops planned and offered, enable each teacher a choice of activities. Mini-workshops should involve

talented, competent local school district teachers and administrators, as well as outside consultants. Mini-workshops could vary in length from hour-long programs offering general exposure on a topic to half or full-day programs offering indepth skill-building on a topic.

b. Mini-leaves. Opportunities for released or exchange teaching and administrative time for a selected number of teachers and administrators should be offered periodically; for example, a one-hour exchange during which an administrator assumes responsibility for the classroom environment while the teacher observe or visits a peer teacher.

c. Peer-teacher. Teachers new to the system should be assigned a veteran teacher who gives special support and reinforcement during the school year.

Intermediate School Districts. Although intermediate school districts differ greatly throughout Michigan in personnel and financial resources, they should consider the following recommendations:

1. Establishing and maintaining contact with those in local school districts responsible for inservice education to facilitate inter and intra-cooperative efforts among

districts. One suggestion would be to form an intermediate school district inservice education committee with one representative from each local school district.

2. Offering services, where possible, as resource persons or programs for local school district inservice.

3. Gaining knowledge of recent state proposals and developments in inservice education and planning for future involvement.

Institutions of Higher Education. It is recommended that institutions of higher education establish and maintain contact with those in local school districts responsible for inservice education in order to offer consultation and to stimulate creative, innovative planning for alternative services.

State Agencies and Organizations. It is recommended that state agencies and organizations should consider:

1. Maintaining contact with those in local school districts responsible for inservice education to insure local input into future statewide inservice education directions.

2. Appropriating sufficient monies to allow local schools systems to experiment with alternative delivery

systems of inservice education. School systems which would match funding and demonstrate planning by cooperative, local task forces of teachers and administrators should be given first consideration.

3. Developing a legal requirement indicating inservice education as a priority in education and allowing local school systems and teachers to develop the alternatives for implementation. The Nebraska State Legislature has enacted a law relative to the provisions of tenure. This law includes the following statement:

> Every 6 years, permanent teachers in cities affected by this act shall give such evidence of professional growth as is approved by the school board in order to remain eligible for the benefits of this act. Educational travel, professional publications, work on education committees, six semesters of college work, or such other activity approved by the school board may be accepted as evidence of "professional growth".[4]

The recommendations for inservice education planning and implementation which have been developed in this chapter were based on existing boundaries within school system functioning; however, it is important to note that the basic proposition of this study is that change in inservice education, teacher behavior, and student

behavior, will occur as a result of teacher perceptions and attitudes. What actually exists as inservice education is unimportant; however, what teachers perceive as existing and the consequent developing attitudes are the most important elements of change. Throughout this study teachers indicated dissatisfaction with present inservice education; they indicated highly desired process-needs and alternative delivery systems; and then, they indicated inservice education was not a high priority among their education needs. "How the teacher feels about something, how strongly, and in what order of importance,"[5] as Louis Rubin states, encapsulates the complete thrust of this study. Teacher perceptions of the existing parameters coupled with their past and present experiences in inservice education will continue to hinder the development of inservice education as a means of positive professional growth experiences.

A final recommendation is offered by this writer. Ignoring the existing parameters within schools, serious consideration should be given to abandoning inservice education as a means of positive professional growth experience. Completely new, as yet undeveloped, creative experiences may be necessary to change attitudes about

the continuing educational process of teachers.

Recommendations for Further Study

The ideas generated by the data examined in this study offer eight suggestions for further study. It is recommended that:

1. Further aspects of process-needs in inservice education, such as kinds of extrinsic motivation, be studied.

2. Further aspects of alternative delivery systems of inservice education, such as teacher centers, be examined.

3. The changing governance roles and patterns of inservice education at the local school district level, be studied.

4. An instrument to determine the priority of inservice education in relation to the many education needs, be developed.

5. Financial resources available for inservice education, be documented.

6. The roles of state departments of education, intermediate school districts, and institutions of higher education in governance and cooperative planning of

inservice, be studied.

7. Studies identifying effective teacher behaviors, be continued.

8. The directions for developing positive attitudes in teachers and administrators, be researched.

FOOTNOTES

[1]Robert N. Bush, "Curriculum-Proof Teachers," in Improving In-Service Education, ed. by Louis J. Rubin (Boston: Allyn and Bacon, 1971), p. 65.

[2]Neil Postman and Charles Weingarten, Teaching As a Subversive Activity (New York: Dell Publishing Co., 1969), p. 33.

[3]Ivan Illich, De-Schooling Society (New York: Harper and Row, 1971), p. 94.

[4]Omaha Public Schools, Staff Development 1974-75 (Omaha, Nebraska, 1974), p. 28.

[5]Louis J. Rubin, "Teacher Growth in Perspective," in Improving In-Service Education, ed. by Louis J. Rubin (Boston: Allyn and Bacon, Inc., 1971), p. 257.

APPENDIXES

APPENDIX A

Questionnaire

The following questionnaire is the basic questionnaire sent to a random sample of three-hundred teachers in Marquette-Alger Intermediate School District and Genesee Intermediate School District.

The first two pages of the questionnaire were on blue paper to distinquish this part from the seven pages of the main questionnaire which were printed on goldtone paper.

INSERVICE EDUCATION has long been an established means of the continuing education of teachers; however, few research efforts have been undertaken to determine the types of inservice programs which would be most beneficial to teachers within existing education parameters. This study is concerned with inservice education experiences planned, implemented and sponsored within your school environment (school, system, or district).

A stamped envelope addressed to the National Center for Community Education in Flint, Michigan has been enclosed for the return of the completed questionnaire. Return all yellow and blue sheets of the questionnaire. If you wish an abstract of the study, please return the enclosed postcard indicating your name and address. Please be assured your name, school, and/or school system will remain anonymous throughout this study.

GENERAL INFORMATION: CHECK ( ) ONE ITEM ONLY IN EACH AREA BELOW:

A. INTERMEDIATE DISTRICT:

1. ( ) Genesee
2. ( ) Marquette-Alger

B. HIGHEST DEGREE HELD:

1. ( ) No degree
2. ( ) BS or BA degree
3. ( ) MS or MA degree
4. ( ) Educ. Spec. degree
5. ( ) Ph.D. or Ed.D degree

C. MAJOR TEACHING ASSIGNMENT OR LEVEL:

1. ( ) K - 5 grade(s)
2. ( ) 6 - 8 grade(s)
3. ( ) 9 - 12 grade(s)

D. TOTAL YEARS TEACHING EXPERIENCE:
(include this year)

1. ( ) 1 year
2. ( ) 2 - 4 years
3. ( ) 5 - 9 years
4. ( ) 10 or more years

I. The following question is intended to determine your perceptions of the importance of inservice education in relation to other identified education needs. School budget expenditures and teacher contract negotiations are factors which influence final appropriations and decisions; however, from your personal perceptions how would you budget or divide "N" amount: (N = 10). Please use whole numbers between 0 - 10 indicating the 'amount' you would provide for each of the four items below:

1.) Items insuring protection of teacher rights N = _____

2.) Items insuring teacher salary increase and/or fringe benefits N = _____

3.) Items insuring the adoption of an accountability system for teachers and administrators N = _____

4.) Items insuring inservice education need fulfillment N = _____

TOTAL: N = 10

II. List three content or subject areas you would like for topics at inservice education programs:

1.)_____

2.)_____

3.)_____

INSTRUCTIONS:

For each of the following items circle the appropriate number on the left of each statement indicating the degree to which you feel the statement is desired in inservice education. On the right, circle the number describing the extent to which you feel the statement on inservice education is practiced in your school environment. For example, circle '1' to the left of the statement if you feel it is highly desired, or '4' if you think it is not desired. On the right, circle '1' if you feel the statement is practiced to a high degree in your school environment or '4' if the practice is not provided at all.

Degree to which practice is desired					Degree to which practice is followed in your school environment			
Highly desired	Desired	Slightly desired	Not desired	INSERVICE EDUCATION:	High Degree	Acceptable degree	Limited degree	Not at all
1	2	3	4	1. Allows for activities to be planned based on an assessment of needs perceived by teachers.	1	2	3	4
1	2	3	4	2. Provides opportunities to become acquainted with new teaching practices and/or curriculum.	1	2	3	4
1	2	3	4	3. Provides an atmosphere encouraging teachers to express feelings and opinions, ask questions, offer comments, exchange ideas.	1	2	3	4
1	2	3	4	4. Involves teachers and administrators in decisions pertaining to inservice education.	1	2	3	4
1	2	3	4	5. Requires attendance by teachers at scheduled inservice programs.	1	2	3	4
1	2	3	4	6. Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance to teachers.	1	2	3	4
1	2	3	4	7. Allows for one or more extrinsic incentives, such as: credit toward salary increment, university or college credit, etc.	1	2	3	4

Degree to which practice is desired					Degree to which practice is followed in your school environment			
Highly desired	Desired	Slightly desired	Not desired	INSERVICE EDUCATION:	High degree	Acceptable degree	Limited degree	Not at all
1	2	3	4	8. Relates directly to the problems of daily classroom life and school operation.	1	2	3	4
1	2	3	4	9. Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school.	1	2	3	4
1	2	3	4	10. Contributes to satisfactory orientation of new teaching personnel.	1	2	3	4
1	2	3	4	11. Requires attendance by administrators at scheduled inservice programs.	1	2	3	4
1	2	3	4	12. Provides continuity of professional growth by providing a sequence of activities at inservice education.	1	2	3	4
1	2	3	4	13. Allows teachers to experience small group activities at scheduled inservice programs.	1	2	3	4
1	2	3	4	14. Contains released teaching time for the total staff for scheduled inservice programs.	1	2	3	4
1	2	3	4	15. Includes different activities which allows for individual differences which exist among teachers.	1	2	3	4
1	2	3	4	16. Provides acitivites which are planned and conducted in local schools.	1	2	3	4
1	2	3	4	17. Allows for adequate follow-up by teachers to determine the effects of inservice activities.	1	2	3	4

Degree to which practice is desired					Degree to which practice is followed in your school environment			
Highly desired	Desired	Slightly desired	Not desired	INSERVICE EDUCATION:	High degree	Acceptable degree	Limited degree	Not at all
1	2	3	4	18. Provides for teachers to have a voice in the decision making process of inservice education.	1	2	3	4
1	2	3	4	19. Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists.	1	2	3	4
1	2	3	4	20. Allows for participants to be actively involved in learning experiences.	1	2	3	4
1	2	3	4	21. Fosters situations where teachers and administrators work as friends and equals in developing inservice programs.	1	2	3	4
1	2	3	4	22. Allows voluntary attendance by teachers at inservice programs.	1	2	3	4
1	2	3	4	23. Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience.	1	2	3	4
1	2	3	4	24. Allows and encourages intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers.	1	2	3	4
1	2	3	4	25. Assists the teacher in improving the teaching and learning situation in the classroom and school operation.	1	2	3	4
1	2	3	4	26. Permits teachers to visit activities and observe classes occassionally within their school or in other schools.	1	2	3	4
1	2	3	4	27. Includes special orientation for the new classroom teachers.	1	2	3	4

Degree to which practice is desired					Degree to which practice is followed in your school environment			
Highly desired	Desired	Slightly desired	Not desired		High degree	Acceptable degree	Limited degree	Not at all
				INSERVICE EDUCATION:				
1	2	3	4	28. Allows voluntary attendance by administrators at scheduled inservice programs.	1	2	3	4
1	2	3	4	29. Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas.	1	2	3	4
1	2	3	4	30. Allows activities which include small group formations of teachers to work together in a problem or goal area.	1	2	3	4
1	2	3	4	31. Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more.	1	2	3	4
1	2	3	4	32. Includes different activities which allow for differing attitudes, values, and beliefs that influence the individual teacher's behavior.	1	2	3	4
1	2	3	4	33. Permits local schools to plan, organize, and conduct inservice programs.	1	2	3	4
1	2	3	4	34. Provides for evaluation of the efforts tc utilize what has been learned in inservice education.	1	2	3	4
				INSERVICE EDUCATION DELIVERY SYSTEMS:				
1	2	3	4	1. SUMMER WORK SESSIONS (Scheduled time for intensive work by curriculum committees or other action-research staff groups. Teachers are reimbursed financially and/or receive higher education credit.)	1	2	3	4

Degree to which practice is desired					Degree to which practice is followed in your school environment			
Highly desired	Desired	Slightly desired	Not desired	INSERVICE EDUCATION DELIVERY SYSTEMS:	High degree	Acceptable degree	Limited degree	Not at all
1	2	3	4	2. LECTURE INSTITUTE (A one day session attended by total staff. The institute is planned to cover one content area. An outside resource consultant uses 'lecture' as the method of presentation. The teacher is essentially passive as a participant.)	1	2	3	4
1	2	3	4	3. PARTICIPATION WORKSHOP (A one day session attended by total staff. The workshop is planned to cover one content area. Outside or inside resource consultants facilitate participation sessions. The teacher is essentially active as a participant.)	1	2	3	4
1	2	3	4	4. CLINIC WORKSHOP (A one day session attended by the total staff. Several clinics are planned and offered at the same time enabling each teacher a choice of activities during the day.)	1	2	3	4
1	2	3	4	5. SABBATICAL LEAVE WITHOUT COMPENSATION (A year leave granted after a minimum requirement of years teaching within a school system. This leave enables a teacher to obtain higher education or work experience at the teacher's expense.)	1	2	3	4
1	2	3	4	6. SABBATICAL LEAVE WITH COMPENSATION (As described in (5) above; however, the teacher is compensated with tuition stipend and/or salary percentage.)	1	2	3	4
1	2	3	4	7. PROFESSIONAL ACTIVITY LEAVE (A one to ten day leave allowing a teacher to engage in a professional activity, such as: convention attendance, on-campus workshops.)	1	2	3	4

Degree to which practice is desired					Degree to which practice is followed in your school environment			
Highly desired	Desired	Slightly desired	Not desired	INSERVICE EDUCATION DELIVERY SYSTEMS:	High Degree	Acceptable degree	Limited degree	Not at all
1	2	3	4	8. OBSERVATION OR VISITATION LEAVE (An hour or day period of released teaching time enabling a teacher to visit in other classrooms or schools.)	1	2	3	4
1	2	3	4	9. PROFESSIONAL GROWTH PROGRAMS (Teacher teams are organized to accurately assess the quality of teaching performance through processes of clinical observation, video taping, evaluation, skill improvement, and implementation of changed teacher behavior.)	1	2	3	4
1	2	3	4	10. OVER-STAFFING FOR INSERVICE (Additional certified personnel for teaching are hired enabling assigned teachers to have some released time to pursue a professional growth plan.)	1	2	3	4
1	2	3	4	11. HELPING OR SUPERVISORY TEACHER (First year teachers are assigned a veteran teacher to give special support in such areas as: school policy, procedures.)	1	2	3	4
1	2	3	4	12. UNIVERSITY BASED RESOURCE PERSONS (A university staff member has a periodic assignment to a school for consultation, demonstration teaching, program planning with individual teachers.)	1	2	3	4
1	2	3	4	13. SELECTED GROUP INSERVICE (A segment of the teaching staff have released time to meet regularly to work in a problem or goal area.)	1	2	3	4
1	2	3	4	14. SCHOOL BUILDING FACULTY MEETINGS (Within scheduled faculty meetings brief, focused inservice education projects on professional problems are injected.)	1	2	3	4

Degree to which practice is desired					Degree to which practice is followed in your school environment			
Highly desired	Desired	Slightly desired	Not desired	INSERVICE EDUCATION DELIVERY SYSTEMS:	High degree	Acceptable degree	Limited degree	Not at all
1	2	3	4	15. USE OF WITHIN SCHOOL INSERVICE CONSULTANT (Through special training, a teacher within a school becomes an 'inservice consultant'. The consultant helps individual teachers or small groups to identify needs, receive direction, and implement change. The consultant has a daily period of released time to perform this function.)	1	2	3	4
1	2	3	4	16. TEACHER CENTER (A physical space or place where teachers develop programs for the training and improvement of education personnel. Teachers have an opportunity to receive training specifically related to their most pressing needs. The center can be located within the school or district.)	1	2	3	4
1	2	3	4	17. DEVELOPMENT TEAM PROBLEM SOLVING DESIGN (A total staff identifies problem or goal areas, after which individual staff members explore a problem or goal area of their choice with colleagues having similar interests.)	1	2	3	4
1	2	3	4	18. CONSORTIUM PROGRAM (University based resource consultants, and an equal number of teachers and student teachers are involved in a program enabling teachers and student teachers to have scheduled released time to attend workshops or classes offered within the school building by university professors or outside consultants.)	1	2	3	4

THANK YOU FOR YOUR PARTICIPATION AND TIME.

APPENDIX B

Process-Need Identification in Inservice Education of Marquette-Alger Intermediate School District and Genesee Intermediate School District Teachers

TABLE 21

PROCESS-NEED IDENTIFICATION IN INSERVICE EDUCATION OF MARQUETTE-ALGER INTERMEDIATE SCHOOL DISTRICT TEACHERS

*Rank Order	Per Cent Responses 1 & 2	Need	**Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
1	99.1	Allows for activities to be planned based on an assessment of needs perceived by teachers	81	69.2	35	29.9	1	.9	0	0.0
2	97.5	Provides opportunities to become acquainted with new teaching practices and/or curriculum	80	68.4	34	29.1	3	2.6	0	0.0
3	96.6	Relates directly to the problems of daily classroom life and school operation	77	65.8	36	30.8	4	3.4	0	0.0
4	96.6	Provides an atmosphere encouraging teachers to express feelings and opinions, ask questions, offer comments, exchange ideas	73	62.4	40	34.2	4	3.4	0	0.0
5	96.5	Assists the teacher in improving the teaching and learning situation in the classroom and school operation.	74	63.2	39	33.3	4	3.4	0	0.0

*Rank Order determined by largest per cent in response columns 1 and 2; when total per cent is the same, Rank Order determined by largest per cent in response column 1.
**Response 1: highly desired, Response 2: desired, Response 3: slightly desired, Response 4: not desired.

TABLE 21 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
6	96.5	Provides for teachers to have a voice in the decision making process of inservice education	72	61.5	41	35.0	4	3.4	0	0.0
7	95.7	Involves teachers and administrators in decisions pertaining to inservice education	72	61.5	40	34.2	5	4.3	0	0.0
8	94.9	Allows for participants to be actively involved in learning experiences	57	48.7	54	46.2	6	5.1	0	0.0
9	91.5	Contains released teaching time for the total staff for scheduled inservice programs	69	59.0	38	32.5	7	6.0	3	2.6
10	91.5	Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	65	55.6	42	35.9	8	6.8	2	1.7

TABLE 21 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
11	89.8	Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school	45	38.5	60	51.3	11	9.4	1	.9
12	88.9	Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	61	52.1	43	36.8	13	11.1	0	0.0
13	88.8	Permits local schools to plan, organize, and conduct inservice programs	52	44.4	52	44.4	11	9.4	2	1.7
14	88.1	Allows activities which include small group formations of teachers to work together in a problem or goal area	45	38.5	58	49.6	10	8.5	4	3.4
15	87.9	Provides continuity of professional growth by providing a sequence of activities at inservice education	55	47.4	47	40.5	11	9.5	3	2.6

TABLE 21 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
16	87.2	Permits teachers to visit activities and observe classes occassionally within their school or in other schools	62	53.0	40	34.2	13	11.1	2	1.7
17	87.2	Contributes to satisfactory orientation of new teaching personnel	55	47.0	47	40.2	12	10.3	3	2.6
18	87.2	Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance to teachers	51	43.6	51	43.6	15	12.8	0	0.0
19	86.4	Allows and encourages intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers	45	38.5	56	47.9	12	10.3	4	3.4
20	86.3	Includes special orientation for the new classroom teachers	60	51.3	41	35.0	15	12.8	1	.9

TABLE 21 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
21	86.3	Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience	53	45.3	48	41.0	13	11.1	3	2.6
22	86.3	Allows teachers to experience small group activities at scheduled inservice programs	42	35.9	59	50.4	13	11.1	3	2.6
23	85.5	Provides for evaluation of the efforts to utilize what has been learned in inservice	45	38.5	55	47.0	15	12.8	2	1.7
24	84.6	Allows for one or more extrinsic incentives, such as: credit toward salary increment, university or college credit, etc.	59	50.4	40	34.2	12	10.3	6	5.1
25	84.6	Allows for adequate follow-up by teachers to determine the effects of inservice activities	48	41.0	51	43.6	16	13.7	2	1.7
26	84.6	Provides activities which are planned and conducted in local schools	48	41.0	51	43.6	15	12.8	3	2.6

TABLE 21 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
27	83.7	Includes different activities which allow for individual differences which exist among teachers	52	44.4	46	39.3	14	12.0	5	4.3
28	83.7	Requires attendance by teachers at scheduled inservice programs	46	39.3	52	44.4	9	7.7	10	8.5
29	79.5	Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more	53	45.3	40	34.2	18	15.4	6	5.1
30	79.5	Requires attendance by administrators at scheduled inservice programs	48	41.0	45	38.5	15	12.8	9	7.7
31	78.7	Includes different activities which allow for differing attitudes, values, and beliefs that influence the individual teacher's behavior.	43	36.8	49	41.9	70	17.1	5	4.3
32	52.2	Allows voluntary attendance by teachers at inservice programs	27	23.1	34	29.1	23	19.7	33	28.2

TABLE 21 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
33	52.0	Allows voluntary attendance by administrators at scheduled inservice programs	20	17.1	41	35.0	28	23.9	28	23.9
34	49.6	Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	18	15.4	40	34.2	37	31.6	22	18.8

TABLE 22

PROCESS-NEED IDENTIFICATION IN INSERVICE EDUCATION OF GENESEE INTERMEDIATE SCHOOL DISTRICT TEACHERS

*Rank Order	Per Cent Responses 1 & 2	Need	**Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
1	97.8	Provides for teachers to have a voice in the decision making process of inservice education	58	63.7	31	34.1	2	2.2	0	0.0
2	95.6	Allows for activities to be planned based on an assessment of needs perceived by teachers	59	64.8	28	30.8	3	3.3	1	1.1
3	95.6	Involves teachers and administrators in decisions pertaining to inservice education	56	61.5	31	34.1	4	4.4	0	0.0
4	95.6	Assists the teacher in improving the teaching and learning situation in the classroom and school operation	51	56.0	36	39.6	4	4.4	0	0.0
5	95.6	Allows for participants to be actively involved in learning experiences	40	44.0	47	51.6	3	3.3	1	1.1
6	94.5	Provides opportunities to become acquainted with new teaching practices and/or curriculum	53	58.2	33	36.3	5	5.5	0	0.0

*Rank Order determined by largest per cent in response columns 1 and 2; when total per cent is the same, Rank Order determined by largest per cent in response column 1.

**Response 1: highly desired, Response 2: desired, Response 3: slightly desired, Response 4: not desired.

TABLE 22 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
7	93.4	Relates directly to the problems of daily classroom life and school operation	57	62.6	28	30.8	6	6.6	0	0.0
8	92.3	Provides an atmosphere encouraging teachers to express feelings and opinions, ask questions, offer comments, exchange ideas	57	62.6	27	29.7	7	7.7	0	0.0
9	90.2	Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	38	41.8	44	48.4	8	8.8	1	1.1
10	90.2	Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience	38	41.8	44	48.4	5	5.5	4	4.4
11	90.1	Includes different activities which allow for differing attitudes, values, and beliefs that influence the individual teacher's behavior	31	34.1	51	56.0	8	8.8	1	1.1
12	89.1	Contributes to satisfactory orientation of new teaching personnel.	42	46.2	39	42.9	7	7.7	3	3.3

TABLE 22 -- CONTINUED

Rank Order	Per Cent Res-pons-s 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
13	89.1	Includes special orientation for the new classroom teachers	41	45.1	40	44.0	8	8.8	2	2.2
14	89.1	Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	40	44.0	41	45.1	8	8.8	2	2.2
15	87.9	Provides continuity of professional growth by providing a sequence of activities at inservice education	34	37.4	46	50.5	9	9.9	2	2.2
16	87.9	Permits local schools to plan, organize, and conduct inservice programs	34	37.4	46	50.5	7	7.7	4	4.4
17	86.8	Includes different activities which allows for individual differences which exist among teachers	47	51.6	32	35.2	10	11.0	2	2.2
18	85.8	Contains released teaching time for the total staff for scheduled in-service programs	40	44.0	38	41.8	10	11.0	3	3.3

TABLE 22 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
19	85.7	Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school	25	27.5	53	58.2	11	12.1	2	2.2
20	84.6	Allows activities which include small group formations of teachers to work together in a problem or goal area	26	28.6	51	56.0	11	12.1	3	3.3
21	83.6	Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort to provide leadership and assistance to teachers	38	41.8	38	41.8	15	16.5	0	0.0
22	83.6	Permits teachers to visit activities and observe classes occasionally within their school or in other schools	36	39.6	40	44.0	11	12.1	4	4.4
23	83.6	Allows for adequate follow-up by teachers to determine the effects of inservice activities	34	37.4	42	46.2	14	15.4	1	1.1

TABLE 22 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Need	Responses +1 No.	+1 Per Cent	2 No.	2 Per Cent	3 No.	3 Per Cent	4- No.	4- Per Cent
24	83.5	Provides for evaluation of the efforts to utilize what has been learned in inservice education	29	31.9	47	51.6	12	13.2	3	3.3
25	81.3	Provides activities which are planned and conducted in local schools	25	27.5	49	53.8	13	14.3	4	4.4
26	80.2	Allows teachers to experience small group activities at scheduled in-service programs	23	25.3	50	54.9	13	14.3	5	5.5
27	79.2	Requires attendance by administrators at scheduled inservice programs	36	39.6	36	39.6	16	17.6	3	3.3
28	78.1	Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more	30	33.0	41	45.1	12	13.2	8	8.8
29	78.1	Allows and encourages intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers	26	28.6	45	49.5	17	18.7	3	3.3

TABLE 22 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2		Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
30	75.9	Requires attendance by teachers at scheduled inservice programs	29	31.9	40	44.0	16	17.6	6	6.6
31	68.2	Allows for one or more extrinsic incentives, such as: credit toward salary increment, university or college credit, etc.	32	35.2	30	33.0	18	19.8	11	12.1
32	48.4	Allows voluntary attendance by teachers at inservice programs	14	15.4	30	33.0	20	22.0	27	29.7
33	48.4	Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	4	4.4	40	44.0	35	38.5	12	13.2
34	45.1	Allows voluntary attendance by administrators at scheduled inservice programs	11	12.1	30	33.0	18	19.8	32	35.2

APPENDIX C

Chi-Square Results for Process-Needs of Both Districts, Grade Assignments, Years of Experience, Education Needs, and Practices

TABLE 23

CHI-SQUARE RESULTS FOR PROCESS-NEEDS OF MARQUETTE-ALGER INTERMEDIATE SCHOOL DISTRICT TEACHERS AND GENESEE INTERMEDIATE SCHOOL DISTRICT TEACHERS

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows for activities to be planned based on an assessment of needs perceived by teachers	3	2.980	NS
Provides opportunities to become acquainted with new teaching practices and/or curriculum	2	2.790	NS
Provides an atmosphere encouraging teachers to express feelings, opinions, ask questions, exchange ideas	2	2.090	NS
Involves teachers and administrators in decisions pertaining to inservice education	2	.001	NS
Requires attendance by teachers at scheduled inservice programs	3	5.200	NS
Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort for teachers	2	.558	NS
Allows for one or more extrinsic incentives, such as: credit toward salary increment, university credit, etc.	3	8.994	.05
Relates directly to the problems of daily classroom life and school operation	2	3.312	NS
Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school	3	3.412	NS

TABLE 23 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Contributes to satisfactory orientation of new teaching personnel	3	.567	NS
Requires attendance by administrators at scheduled in-service programs	3	2.674	NS
Provides continuity of professional growth by providing a sequence of activities at inservice education	3	3.018	NS
Allows teachers to experience small group activities at scheduled inservice programs	3	3.604	NS
Contains released teaching time for the total staff for scheduled inservice programs	3	5.072	NS
Includes different activities which allows for individual differences which exist among teachers	3	1.487	NS
Provides activities which are planned and conducted in local schools	3	4.392	NS
Allows for adequate follow-up by teachers to determine the effects of inservice activities	3	.483	NS
Provides for teachers to have a voice in the decision making process of inservice education	2	.317	NS
Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	3	4.350	NS
Allows for participants to be actively involved in learning experiences	3	2.239	NS

TABLE 23 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	3	2.760	NS
Allows voluntary attendance by teachers at inservice programs	3	1.962	NS
Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience	3	3.204	NS
Allows and encourages intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers	3	4.095	NS
Assists the teacher in improving the teaching and learning situation in the classroom and school operation	2	1.120	NS
Permits teachers to visit activities and observe classes occassionally within their school or in other schools	3	4.554	NS
Includes special orientation for the new classroom teachers	3	2.847	NS
Allows voluntary attendance by administrators at scheduled inservice programs	3	3.560	NS
Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	3	8.792	.05
Allows activities which include small group formations of teachers to work together in a problem or goal area	3	2.508	NS

TABLE 23 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more	3	3.820	NS
Includes different activities which allow for differing attitudes, values, and beliefs that influence the individual teacher's behavior	3	6.649	NS
Permits local schools to plan, organize, and conduct in-service programs	3	1.100	NS
Provides for evaluation of the efforts to utilize what has been learned in inservice education	3	1.387	NS

TABLE 24

CHI-SQUARE RESULTS FOR PROCESS-NEEDS OF GRADE ASSIGNMENTS

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows for activities to be planned based on an assessment of needs perceived by teachers	6	5.306	NS
Provides opportunities to become acquainted with new teaching practices and/or curriculum	4	3.387	NS
Provides an atmosphere encouraging teachers to express feelings, opinions, ask questions, exchange ideas, etc.	4	2.259	NS
Involves teachers and administrators in decisions pertaining to inservice education	4	1.471	NS
Requires attendance by teachers at scheduled inservice programs	6	11.582	NS
Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort for teachers	4	13.144	.02
Allows for one or more extrinsic incentives, such as: credit toward salary increment, university credit, etc.	6	11.084	NS
Relates directly to the problems of daily classroom life and school operation	4	1.019	NS
Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school	6	10.694	NS
Contributes to satisfactory orientation of new teaching personnel	6	6.173	NS
Requires attendance by administrators at scheduled inservice programs	6	4.759	NS

TABLE 24 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Provides continuity of professional growth by providing a sequence of activities at inservice education	6	6.743	NS
Allows teachers to experience small group activities at scheduled inservice programs	6	4.167	NS
Contains released teaching time for the total staff for scheduled inservice programs	6	8.638	NS
Includes different activities which allows for individual differences which exist among teachers	6	6.370	NS
Provides activities which are planned and conducted in local schools	6	7.881	NS
Allows for adequate follow-up by teachers to determine the effects of inservice education	6	4.889	NS
Provides for teachers to have a voice in the decision making process of inservice education	4	3.337	NS
Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	6	8.931	NS
Allows for participants to be actively involved in learning experiences	6	4.824	NS
Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	6	3.357	NS
Allows voluntary attendance by teachers at inservice programs	6	6.479	NS
Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience	6	6.919	NS

TABLE 24 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows and encourages intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers	6	6.479	NS
Assists the teacher in improving the teaching and learning situation in the classroom and school operation	4	3.715	NS
Permits teachers to visit activities and observe classes occasionally within their school or in other schools	6	8.090	NS
Includes special orientation for the new classroom teachers	6	7.914	NS
Allows voluntary attendance by administrators at scheduled inservice programs	6	7.249	NS
Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	6	1.118	NS
Allows activities which include small group formations of teachers to work together in a problem or goal area	6	13.709	.05
Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more	6	3.928	NS
Includes different activities which allow for differing attitudes that influence the individual teacher's behavior	6	1.853	NS
Permits local schools to plan, organize, and conduct inservice programs	6	11.904	NS
Provides for evaluation of the efforts to utilize what has been learned in inservice education	6	10.171	NS

TABLE 25

CHI-SQUARE RESULTS FOR PROCESS-NEEDS OF YEARS OF EXPERIENCE

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows for activities to be planned based on an assessment of needs perceived by teachers	6	6.562	NS
Provides opportunities to become acquainted with new teaching practices and/or curriculum	4	3.321	NS
Provides an atmosphere encouraging teachers to express feelings, opinions, ask questions, exchange ideas, etc.	4	4.753	NS
Involves teachers and administrators in decisions pertaining to inservice education	4	3.017	NS
Requires attendance by teachers at scheduled inservice programs	6	5.690	NS
Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort for teachers	4	4.450	NS
Allows for one or more extrinsic incentives, such as: credit toward salary increment, university credit, etc.	6	7.598	NS
Relates directly to the problems of daily classroom life and school operation	4	7.106	NS
Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school	6	2.944	NS
Contributes to satisfactory orientation of new teaching personnel	6	6.333	NS
Requires attendance by administrators at scheduled inservice programs	6	8.883	NS

TABLE 25 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Provides continuity of professional growth by providing a sequence of activities at inservice education	6	5.845	NS
Allows teachers to experience small group activities at scheduled inservice programs	6	9.191	NS
Contains released teaching time for the total staff for scheduled inservice programs	6	8.126	NS
Includes different activities which allows for individual differences which exist among teachers	6	12.033	NS
Provides activities which are planned and conducted in local schools	6	5.071	NS
Allows for adequate follow-up by teachers to determine the effects of inservice education	6	9.298	NS
Provides for teachers to have a voice in the decision making process of inservice education	4	.860	NS
Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	6	6.505	NS
Allows for participants to be actively involved in learning experiences	6	5.087	NS
Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	6	3.017	NS
Allows voluntary attendance by teachers at inservice programs	6	15.523	.02
Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience	6	9.094	NS

TABLE 25 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows and encourages intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers	6	3.945	NS
Assists the teacher in improving the teaching and learning situation in the classroom and school operation	4	4.889	NS
Permits teachers to visit activities and observe classes occasionally within their school or in other schools	6	9.148	NS
Includes special orientation for the new classroom teachers	6	10.130	NS
Allows voluntary attendance by administrators at scheduled inservice programs	6	6.006	NS
Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	6	6.344	NS
Allows activities which include small group formations of teachers to work together in a problem or goal area	6	14.853	.05
Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more	6	5.333	NS
Includes different activities which allow for differing attitudes that influence the individual teacher's behavior	6	2.523	NS
Permits local schools to plan, organize, and conduct inservice programs	6	12.456	NS
Provides for evaluation of the efforts to utilize what has been learned in inservice education	6	11.872	NS

TABLE 26

CHI-SQUARE RESULTS FOR PROCESS-NEEDS OF EDUCATION DEGREES

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows for activities to be planned based on an assessment of needs perceived by teachers	3	.917	NS
Provides opportunities to become acquainted with new teaching practices and/or curriculum	2	4.308	NS
Provides an atmosphere encouraging teachers to express feelings, opinions, ask questions, exchange ideas, etc.	2	2.387	NS
Involves teachers and administrators in decisions pertaining to inservice education	2	3.864	NS
Requires attendance by teachers at scheduled inservice programs	3	2.322	NS
Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort for teachers	2	4.195	NS
Allows for one or more extrinsic incentives, such as: credit toward salary increment, university credit, etc.	3	.218	NS
Relates directly to the problems of daily classroom life and school operation	2	1.574	NS
Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school	3	1.100	NS
Contributes to satisfactory orientation of new teaching personnel	3	.740	NS
Requires attendance by administrators at scheduled inservice programs	3	1.797	NS

TABLE 26 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Provides continuity of professional growth by providing a sequence of activities at inservice education	3	1.620	NS
Allows teachers to experience small group activities at scheduled inservice programs	3	2.527	NS
Contains released teaching time for the total staff for scheduled inservice programs	3	2.217	NS
Includes different activities which allows for individual differences which exist among teachers	3	1.730	NS
Provides activities which are planned and conducted in local schools	3	3.809	NS
Allows for adequate follow-up by teachers to determine the effects of inservice education	3	3.646	NS
Provides for teachers to have a voice in the decision making process of inservice education	2	.267	NS
Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	3	3.615	NS
Allows for participants to be actively involved in learning experiences	3	2.394	NS
Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	3	2.383	NS
Allows voluntary attendance by teachers at inservice programs	3	4.903	NS
Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience	3	4.395	NS

TABLE 26 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows and encourages intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers	3	2.760	NS
Assists the teacher in improving the teaching and learning situation in the classroom and school operation	2	1.011	NS
Permits teachers to visit activities and observe classes occasionally within their school or in other schools	3	3.099	NS
Includes special orientation for the new classroom teachers	3	1.546	NS
Allows voluntary attendance by administrators at scheduled inservice programs	3	.643	NS
Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	3	1.462	NS
Allows activities which include small group formations of teachers to work together in a problem or goal area	3	2.215	NS
Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more	3	3.673	NS
Includes different activities which allow for differing attitudes that influence the individual teacher's behavior	3	.601	NS
Permits local schools to plan, organize, and conduct inservice programs	3	6.605	NS
Provides for evaluation of the efforts to utilize what has been learned in inservice education	3	8.629	.05

TABLE 27

CHI-SQUARE RESULTS FOR PROCESS-NEEDS AND PRACTICES

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows for activities to be planned based on an assessment of needs perceived by teachers	9	7.238	NS
Provides opportunities to become acquainted with new teaching practices and/or curriculum	6	6.883	NS
Provides an atmosphere encouraging teachers to express feelings, opinions, ask questions, exchange ideas, etc.	6	13.311	NS
Involves teachers and administrators in decisions pertaining to inservice education	6	15.367	NS
Requires attendance by teachers at scheduled inservice programs	9	38.025	.001
Offers activities utilizing people within the local system, district consultants, and university personnel in a collaborative effort for teachers	6	18.623	.01
Allows for one or more extrinsic incentives, such as: credit toward salary increment, university credit, etc.	9	14.378	NS
Relates directly to the problems of daily classroom life and school operation	6	12.800	NS
Permits small groups of teachers to be released occasionally during the regularly scheduled school day to participate in group activity sponsored by the school	9	12.879	NS
Contributes to satisfactory orientation of new teaching personnel	9	22.969	.01
Requires attendance by administrators at scheduled in-service programs	9	12.149	NS

TABLE 27 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Provides continuity of professional growth by providing a sequence of activities at inservice education	9	30.235	.001
Allows teachers to experience small group activities at scheduled inservice programs	9	36.245	.001
Contains released teaching time for the total staff for scheduled inservice programs	9	31.558	.001
Includes different activities which allows for individual differences which exist among teachers	9	24.257	.01
Provides activities which are planned and conducted in local schools	9	27.913	.001
Allows for adequate follow-up by teachers to determine the effects of inservice education	9	12.419	NS
Provides for teachers to have a voice in the decision making process of inservice education	6	22.531	.001
Encourages teachers to engage in testing new ideas in education with support and guidance of trained specialists	9	12.878	NS
Allows for participants to be actively involved in learning experiences	9	14.997	NS
Fosters situations where teachers and administrators work as friends and equals in developing inservice programs	9	24.012	NS
Allows voluntary attendance by teachers at inservice programs	9	12.923	NS
Offers activities conducted by consultants from both within and without the school environment--consultants with recent classroom experience	9	25.879	.01

TABLE 27 -- CONTINUED

NEED	Degrees of Freedom	Chi Square	Level of Significance
Allows and encourages intrinsic incentives, such as: increased self-confidence in teaching abilities, recognition by superiors or peers	9	7.819	NS
Assists the teacher in improving the teaching and learning situation in the classroom and school operation	6	12.160	NS
Permits teachers to visit activities and observe classes occasionally within their school or in other schools	9	6.459	NS
Includes special orientation for the new classroom teachers	9	13.292	NS
Allows voluntary attendance by administrators at scheduled inservice programs	9	35.055	.001
Provides numerous "one-shot" exposures by outside consultants to a variety of problem and goal areas	9	35.530	.001
Allows activities which include small group formations of teachers to work together in a problem or goal area	9	22.243	.01
Contains released teaching time for regularly scheduled inservice programs or activities during the school day averaging a minimum of one-half day per month or more	9	16.790	NS
Includes different activities which allow for differing attitudes that influence the individual teacher's behavior	9	26.246	.01
Permits local schools to plan, organize, and conduct inservice programs	9	24.746	.01
Provides for evaluation of the efforts to utilize what has been learned in inservice education	9	39.850	.001

APPENDIX D

Alternative Delivery System Identification in Inservice Education of Marquette-Alger Intermediate School District and Genesee Intermediate School District Teachers

TABLE 28

ALTERNATIVE DELIVERY SYSTEM IDENTIFICATION IN INSERVICE EDUCATION OF MARQUETTE-ALGER INTERMEDIATE SCHOOL DISTRICT TEACHERS

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	*Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
1	91.5	PROFESSIONAL ACTIVITY LEAVE	71	60.7	36	30.8	8	6.8	2	1.7
2	86.4	CLINIC WORKSHOP	58	49.6	43	36.8	14	12.0	2	1.7
3	81.2	SABBATICAL LEAVE WITH COMPENSATION	66	56.4	29	24.8	12	10.3	10	8.5
4	84.6	OBSERVATION OR VISITATION LEAVE	51	43.6	48	41.0	15	12.8	3	2.6
5	79.5	PARTICIPATION WORKSHOP	45	38.5	48	41.0	17	14.5	7	6.0
6	76.9	SUMMER WORK SESSIONS	53	45.3	37	31.6	17	14.5	10	8.5
7	76.1	HELPING OR SUPERVISORY TEACHER	47	40.2	42	35.9	20	17.1	8	6.8
8	73.5	SCHOOL BUILDING FACULTY MEETING	31	26.5	55	47.0	23	19.7	8	6.8
9	72.6	SELECTED GROUP INSERVICE	33	28.2	52	44.4	25	21.4	7	6.0
10	70.1	TEACHER CENTER	33	28.2	49	41.9	27	23.1	8	6.8
11	64.9	DEVELOPMENT TEAM PROBLEM SOLVING DESIGN	28	23.9	48	41.0	32	27.4	9	7.7
12	61.6	PROFESSIONAL GROWTH PROGRAMS	25	21.4	47	40.2	29	24.8	16	13.7

*Response 1: highly desired, Response 2: desired, Response 3: slightly desired, Response 4: not desired.

TABLE 28 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
13	60.7	USE OF WITHIN SCHOOL INSERVICE CONSULTANT	25	21.4	46	39.3	30	25.6	16	13.7
14	60.7	CONSORTIUM PROGRAM	24	20.5	47	40.2	35	29.9	11	9.4
15	58.2	OVER-STAFFING FOR INSERVICE	23	19.7	45	38.5	32	27.4	17	14.5
16	56.4	UNIVERSITY BASED RESOURCE PERSONS	31	26.5	35	29.9	36	30.8	15	12.8
17	50.5	SABBATICAL LEAVE WITHOUT COMPENSATION	36	30.8	23	19.7	23	19.7	35	29.9
18	33.3	LECTURE INSTITUTE	10	8.5	29	24.8	41	35.0	37	31.6

TABLE 29

ALTERNATIVE DELIVERY SYSTEM IDENTIFICATION IN INSERVICE EDUCATION OF GENESEE INTERMEDIATE SCHOOL DISTRICT TEACHERS

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	*Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
1	89.0	PROFESSIONAL ACTIVITY LEAVE	47	51.6	34	37.4	9	9.9	1	1.1
2	86.9	HELPING OR SUPERVISORY TEACHER	37	40.7	42	46.2	9	9.9	3	3.3
3	85.8	CLINIC WORKSHOP	45	49.5	33	36.3	9	9.9	4	4.4
4	83.5	SABBATICAL LEAVE WITH COMPENSATION	53	58.2	23	25.3	7	7.7	8	8.8
5	78.1	OBSERVATION OR VISITATION LEAVE	34	37.4	37	40.7	16	17.6	4	4.4
6	77.0	SUMMER WORK SESSIONS	37	40.7	33	36.3	12	13.2	9	9.9
7	75.9	SELECTED GROUP INSERVICE	26	28.6	43	47.3	13	14.3	9	9.9
8	67.1	PARTICIPATION WORKSHOP	19	20.9	42	46.2	22	24.2	8	8.8
9	66.0	USE OF WITHIN SCHOOL INSERVICE CONSULTANT	22	24.2	38	41.8	18	19.8	13	14.3
10	66.0	TEACHER CENTER	21	23.1	39	42.9	22	24.2	9	9.9
11	66.0	DEVELOPMENT TEAM PROBLEM SOLVING DESIGN	21	23.1	39	42.9	22	24.2	9	9.9
12	66.0	CONSORTIUM PROGRAM	18	19.8	42	46.2	21	23.1	10	11.0

*Response 1: highly desired, Response 2: desired, Response 3: slightly desired, Response 4: not desired.

TABLE 29 -- CONTINUED

Rank Order	Per Cent Responses 1 & 2	Alternative Delivery System	Responses +1		2		3		4-	
			No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
13	64.9	SCHOOL BUILDING FACULTY MEETINGS	19	20.9	40	44.0	21	23.1	11	12.1
14	62.7	OVER-STAFFING FOR INSERVICE	13	14.3	44	48.4	24	26.4	10	11.0
15	59.4	UNIVERSITY BASED RESOURCE PERSONS	19	20.9	35	38.5	26	28.6	11	12.1
16	58.3	PROFESSIONAL GROWTH PROGRAMS	16	17.6	37	40.7	28	30.8	10	11.0
17	56.1	SABBATICAL LEAVE WITHOUT COMPENSATION	25	27.5	26	28.6	14	15.4	26	28.6
18	30.8	LECTURE INSTITUTE	8	8.8	20	22.0	31	34.1	32	35.2

APPENDIX E

Chi-Square Results for Alternative Delivery Systems of Both Districts, Grade Assignments, Years of Experience, Education Degrees, and Practices

TABLE 30

CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF MARQUETTE-ALGER INTERMEDIATE SCHOOL DISTRICT TEACHERS AND GENESEE INTERMEDIATE SCHOOL DISTRICT TEACHERS

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SUMMER WORK SESSIONS	3	.750	NS
LECTURE INSTITUTE	3	.396	NS
PARTICIPATION WORKSHOP	3	8.569	.05
CLINIC WORKSHOP	3	1.372	NS
SABBATICAL LEAVE WITHOUT COMPENSATION	3	3.853	NS
SABBATICAL LEAVE WITH COMPENSATION	3	.401	NS
PROFESSIONAL ACTIVITY LEAVE	3	2.108	NS
OBSERVATION OR VISITATION LEAVE	3	1.780	NS
PROFESSIONAL GROWTH PROGRAMS	3	1.337	NS
OVER-STAFFING FOR INSERVICE	3	2.533	NS
HELPING OR SUPERVISORY TEACHER	3	4.452	NS
UNIVERSITY BASED RESOURCE PERSONS	3	1.652	NS

TABLE 30 -- CONTINUED

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SELECTED GROUP INSERVICE	3	2.510	NS
SCHOOL BUILDING FACULTY MEETINGS	3	2.607	NS
USE OF WITHIN SCHOOL INSERVICE CONSULTANT	3	.741	NS
TEACHER CENTER	3	1.136	NS
DEVELOPMENT TEAM PROBLEM SOLVING DESIGN	3	.541	NS
CONSORTIUM PROGRAM	3	1.456	NS

TABLE 31

CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF GRADE ASSIGNMENTS

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SUMMER WORK SESSIONS	6	3.749	NS
LECTURE INSTITUTE	6	4.764	NS
PARTICIPATION WORKSHOP	6	1.368	NS
CLINIC WORKSHOP	6	4.621	NS
SABBATICAL LEAVE WITHOUT COMPENSATION	6	2.911	NS
SABBATICAL LEAVE WITH COMPENSATION	6	2.924	NS
PROFESSIONAL ACTIVITY LEAVE	6	4.156	NS
OBSERVATION OR VISITATION LEAVE	6	10.215	NS
PROFESSIONAL GROWTH PROGRAMS	6	11.523	NS
OVER-STAFFING FOR INSERVICE	6	4.239	NS
HELPING OR SUPERVISORY TEACHER	6	7.835	NS
UNIVERSITY BASED RESOURCE PERSONS	6	2.281	NS

TABLE 31 -- CONTINUED

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SELECTED GROUP INSERVICE	6	5.283	NS
SCHOOL BUILDING FACULTY MEETINGS	6	16.419	.02
USE OF WITHIN SCHOOL INSERVICE CONSULTANT	6	6.236	NS
TEACHER CENTER	6	8.983	NS
DEVELOPMENT TEAM PROBLEM SOLVING DESIGN	6	14.897	.05
CONSORTIUM PROGRAM	6	11.578	NS

TABLE 32

CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF YEARS OF EXPERIENCE

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SUMMER WORK SESSIONS	6	6.708	NS
LECTURE INSTITUTE	6	12.914	.05
PARTICIPATION WORKSHOP	6	5.014	NS
CLINIC WORKSHOP	6	4.993	NS
SABBATICAL LEAVE WITHOUT COMPENSATION	6	4.630	NS
SABBATICAL LEAVE WITH COMPENSATION	6	4.748	NS
PROFESSIONAL ACTIVITY LEAVE	6	11.823	NS
OBSERVATION OR VISITATION LEAVE	6	11.815	NS
PROFESSIONAL GROWTH PROGRAMS	6	2.397	NS
OVER-STAFFING FOR INSERVICE	6	2.896	NS
HELPING OR SUPERVISORY TEACHER	6	6.391	NS
UNIVERSITY BASED RESOURCE PERSONS	6	13.129	.05

TABLE 32 -- CONTINUED

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SELECTED GROUP INSERVICE	6	6.389	NS
SCHOOL BUILDING FACULTY MEETINGS	6	16.841	.01
USE OF WITHIN SCHOOL INSERVICE CONSULTANT	6	12.469	NS
TEACHER CENTER	6	5.570	NS
DEVELOPMENT TEAM PROBLEM SOLVING DESIGN	6	8.412	NS
CONSORTIUM PROGRAM	6	8.315	NS

TABLE 33

CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF EDUCATION DEGREES

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SUMMER WORK SESSIONS	3	4.128	NS
LECTURE INSTITUTE	3	1.325	NS
PARTICIPATION WORKSHOP	3	9.581	.05
CLINIC WORKSHOP	3	.262	NS
SABBATICAL LEAVE WITHOUT COMPENSATION	3	.752	NS
SABBATICAL LEAVE WITH COMPENSATION	3	3.574	NS
PROFESSIONAL ACTIVITY LEAVE	3	3.595	NS
OBSERVATION OR VISITATION LEAVE	3	1.556	NS
PROFESSIONAL GROWTH PROGRAMS	3	.242	NS
OVER-STAFFING FOR INSERVICE	3	.233	NS
HELPING OR SUPERVISORY TEACHER	3	.663	NS
UNIVERSITY BASED RESOURCE PERSONS	3	3.373	NS

TABLE 33 -- CONTINUED

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SELECTED GROUP INSERVICE	3	4.179	NS
SCHOOL BUILDING FACULTY MEETINGS	3	1.631	NS
USE OF WITHIN SCHOOL INSERVICE CONSULTANT	3	7.095	NS
TEACHER CENTER	3	.574	NS
DEVELOPMENT TEAM PROBLEM SOLVING DESIGN	3	.834	NS
CONSORTIUM PROGRAM	2	.247	NS

TABLE 34

CHI-SQUARE RESULTS FOR ALTERNATIVE DELIVERY SYSTEMS OF NEEDS AND PRACTICES

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SUMMER WORK SESSIONS	9	17.078	NS
LECTURE INSTITUTE	9	19.101	NS
PARTICIPATION WORKSHOP	9	29.123	.001
CLINIC WORKSHOP	9	11.746	NS
SABBATICAL LEAVE WITHOUT COMPENSATION	9	54.560	.001
SABBATICAL LEAVE WITH COMPENSATION	9	33.905	.001
PROFESSIONAL ACTIVITY LEAVE	9	21.354	NS
OBSERVATION OR VISITATION LEAVE	9	21.029	NS
PROFESSIONAL GROWTH PROGRAMS	6	26.904	.001
OVER-STAFFING FOR INSERVICE	6	12.200	NS
HELPING OR SUPERVISORY TEACHER	9	31.225	.001
UNIVERSITY BASED RESOURCE PERSONS	9	31.568	.001

TABLE 34 -- CONTINUED

ALTERNATIVE DELIVERY SYSTEM	Degrees of Freedom	Chi Square	Level of Significance
SELECTED GROUP INSERVICE	9	23.947	.01
SCHOOL BUILDING FACULTY MEETINGS	9	31.982	.001
USE OF WITHIN SCHOOL INSERVICE CONSULTANT	9	16.310	NS
TEACHER CENTER	9	16.251	NS
DEVELOPMENT TEAM PROBLEM SOLVING DESIGN	9	18.726	NS
CONSORTIUM PROGRAM	9	24.019	.01

BIBLIOGRAPHY

BIBLIOGRAPHY

BOOKS

Allen, Dwight W. "In-Service Training," In Improving In-Service Education. Edited by Louis J. Rubin. Boston: Allyn and Bacon, 1971.

Atkin, J. Myron. "Governmental Roles," In New Perspectives on Teacher Education. Edited by Donald J. McCarty. San Francisco: Jossey-Bass, Publ., 1973.

Blalock, Hubert M. Social Statistics. New York: McGraw-Hill Book Co., 1960.

Brearley, Molly; Goddard, Nora; Browse, Bill; and Kallet, Tony. Educating Teachers. New York: Citation Press, 1972.

Brenton, Myron. What's Happened to Teacher?. New York: Coward-McCann, 1970.

Bush, Robert N. "Curriculum-Proof Teachers," In Improving In-Service Education. Edited by Louis J. Rubin. Boston: Allyn and Bacon, 1971.

Castetter, William B. Administering the School Personnel Program. New York: The Macmillan Company, 1962.

Chandler, B. J., and Petty, Paul V. Personnel Management in School Administration. New York: World Book Company, 1955.

Clabaugh, Ralph E. School Superintendent's Guide: Principles and Practices for Effective Administration. New York: Parker Publ. Co., 1966.

Combs, Arthur W. Educational Accountability. Washington, D.C.: Association for Supervision and Curriculum Development, 1972.

_____. The Professional Education of Teachers. Boston: Allyn and Bacon, 1965.

Combs, Arthur W.; Avila, Donald L.; and Purkey, William W. Helping Relationships. Boston: Allyn and Bacon, Inc., 1971.

Corey, Stephen M. "Introduction." In-Service Education for Teachers, Supervisors, and Administrators, In Fifty-Sixth Yearbook of the National Society for the Study of Education. Chicago: The University of Chicago Press, 1957.

Cubberly, Ellwood P. Public Education in the United States. Boston: Houghton Mifflin Company, 1947.

Drummond, William H. "Role of State Department of Education." In New Perspectives on Teacher Education. Edited by Donald J. McCarty. San Francisco: Jossey-Bass, Publ., 1973.

Finch, Arnold. Growth In-Service Education Programs That Work. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969.

Fischer, Louis. "In-Service Education." In Improving In-Service Education. Edited by Louis J. Rubin. Boston: Allyn and Bacon, 1971.

Harris, Ben M., and Bessent, Wailand. In-Service Education: A Guide to Better Practice. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969.

Hass, C. Glen. "In-Service Today," In-Service Education for Teachers, Supervisors, and Administrators, in Fifty-Sixth Yearbook of the National Society for the Study of Education. Chicago: The University of Chicago Press, 1957.

Henry, Nelson B. In-Service Education for Teachers, Supervisors, and Administrators, In Fifty-Sixth Yearbook of the National Society for the Study of Education. Chicago: The University of Chicago Press, 1957.

Illich, Ivan. De-Schooling Society. New York: Harper and Row, 1971.

Jackson, Philip W. "Old Dogs and New Tricks," In Improving In-Service Education. Edited by Louis J. Rubin. Boston: Allyn and Bacon, 1971.

Kelley, Earl C. "The Fully Functioning Self." Perceiving Behaving Becoming, In 1962 Yearbook of the Association for Supervision and Curriculum Development. Washington, D.C.: National Education Association, 1962.

Kinnock, Jo. "The Teachers and the In-Service Program." In-Service Education for Teachers, Supervisors, and Administrators, In Fifty-Sixth Yearbook of the National Society for the Study of Education. Chicago: The University of Chicago Press, 1957.

Koerner, James D. "Governance of Teacher Education," In New Perspectives on Teacher Education. Edited by Donald J. McCarty. San Francisco: Jossey-Bass, Publ., 1973.

Lewis, Arthur. "The Role of the Administrator in In-Service Education." In-Service Education for Teachers, Supervisors, and Administrators, In Fifty-Sixth Yearbook of the National Society for the Study of Education. Chicago: The University of Chicago Press, 1957.

Lindsey, Margaret. New Horizons for the Teaching Profession. Washington, D.C.: National Commission on Teacher Education and Professional Standards, 1961.

Lippitt, Ronald, and Fox, Robert. "Development and Maintenance of Effective Classroom Learning," In Improving In-Service Education. Edited by Louis J. Rubin. Boston: Allyn and Bacon, 1971.

McCarty, Donald J., ed. New Perspectives on Teacher Education. San Francisco: Jossey-Bass, Publ., 1973.

Meade, Jr., Edward J. "No Health In Us." In Improving In-Service Education. Edited by Louis J. Rubin. Boston: Allyn and Bacon, 1971.

Michigan Education Association. Michigan Education Association Negotiations Handbook. East Lansing, 1970.

Moffitt, John Clifton. In-Service Education for Teachers. Washington, D.C.: Center for Applied Research in Education, Inc., 1963.

Omaha Public Schools. Staff Development 1974-75. Omaha, Nebraska, 1974.

Postman, Neil, and Weingartner, Charles. Teaching As a Subversive Activity. New York: Dell Publ. Co., 1969.

Reeder, Ward G. The Fundamentals of Public School Administration. New York: The Macmillan Co., 1948.

Richey, Herman G. "Growth on the Modern Conception of In-Service Education." In-Service Education for Teachers, Supervisors, and Administrators, In Fifty-Sixth Yearbook of the National Society for the Study of Education. Chicago: The University of Chicago Press, 1957.

Rodgers, Carl R. "Toward Becoming a Fully Functioning Person." Perceiving Behaving Becoming, in 1962 Yearbook of the Association for Supervision and Curriculum Development. Washington, D.C.: National Education Association, 1962.

Rubin, Louis J., ed. Improving In-Service Education. Boston: Allyn and Bacon, 1971.

_____. A Study of the Continuing Education of Teachers. Santa Barbara, California: Center for Coordinated Education, The University of California, 1969.

Ryan, Kevin, and Cooper, James M. Those Who Can, Teach. Boston: Houghton Mifflin Co., 1972.

Ryans, D. G. Characteristics of Teachers. Washington, D.C.: American Council on Education, 1960.

Schaeffer, Robert J. The School As a Center of Inquiry. New York: Harper and Row, Publishers, 1967.

Silberman, Charles E. Crisis in the Classroom. New York: Random House, 1971.

Sizer, Theodore R. "Teacher Education in the 1980s," In New Perspectives on Teacher Education. Edited by Donald J. McCarty. San Francisco: Jossey-Bass, Publ., 1973.

Smith, B. Othanel; Cohen, Saul B.; and Pearl, Arthur. Teachers For the Real World. Washington, D.C.: American Association of Colleges for Teacher Educators, 1969.

Sobol, Francis Thomas. What Variables Appear Important in Changing Traditional Inservice Training Procedures. Washington, D.C.: Division of Assessment and Coordination, 1971.

Tyler, Ralph W. "In-Service Education of Teachers: A Look At the Past and Future.: In Improving In-Service Education. Edited by Louis J. Rubin. Boston: Allyn and Bacon, 1971.

Yeager, William A. Administration and the Teacher. New York: Harper and Brother, 1954.

ARTICLES

Brimm, Jack L., and Tollett, Daniel J. "How Do Teachers Feel About In-Service Education?." Educational Leadership. 31 (March 1974): 521-525.

Cory, Durwood N. "Incentives Used in Motivating Professional Growth of Teachers." North Central Association Quarterly. 27 (April 1953).

Cyphert, Frederick R. "An Analysis of Research in Teacher Education." Journal of Teacher Education. 23 (Summer 1972): 145-150.

Dixon, W. R., and Morse, W. C. "The Prediction of Teaching Performance: Empathic Potential." Journal of Teacher Education. 12 (1961): 322-329.

Edelfelt, Roy A. "The Reform of Education and Teacher Education: A Complex Task." Journal of Teacher Education. 23 (Summer 1972): 117-125.

Edmonds, Fred; Ogletree, James R.; and Ware, Pat W. "In-Service Teacher Education." Bulletin of the Bureau of School Service. Lexington: University of Kentucky (September 1966).

Hightower, Howard W. "In-Service Education." Educational Administration and Supervision. 38 (1952).

LaBue, Anthony C. "Teacher Certification in the United States: A Brief History." Journal of Teacher Education. 11 (June 1960): 147.

McClendon, P. E. "Teacher Perception and Working Climate." Education Leadership. 20 (1962): 104-109.

National Education Association. "In-Service Education and Teacher Centers." Briefing Memo. 3 (Fall 1973): 1-4.

Ramsey, C. P. "Leadership Preparation." Education Leadership. 20 (1962): 151-154.

"Teacher Centers." Journal of Teacher Education. 23 (Winter 1972): 504.

"Teachers Want Greater Control." Journal of Teacher Education. 23 (Winter 1972): 503.

"What Does Governance Mean?." Today's Education. 60 (December 1971): 20-21.

PUBLIC DOCUMENTS

Florida. Florida Teacher Education Center Act, 1973.

Michigan. A Proposed Statute Authorizing Teacher Centers for Michigan. Michigan Department of Education Teacher Preparation and Professional Development Services, December 1973.

UNPUBLISHED MATERIALS

Anguis, Dushan. "The Appropriateness of Selected In-Service Education Practices as Perceived by Secondary School Educators." Ed.D. dissertation, University of the Pacific, 1974.

Bigelow, E. B. "A Survey, Analysis, and Proposed Program of In-Service Education in Selected School Districts in Six Midwestern States." Ph.D. dissertation, University of South Dakota, 1969.

Davies, Don. "Notes and Working Papers Prepared for the Senate Sub-Committee on Education." Washington, D.C., April 1967. (Mimeographed.)

Dolan, Patrick H. "Issues in Professional Development of Concern to Teacher Organizations." Michigan Education Association, 1974. (Mimeographed.)

Edwards, Patsy. "Teacher Center Report." Paper presented to Dr. Frederick Bertolaet, University of Michigan, 1974.

Finch, Arnold E. "The Relationship of In-Service Education to Competence of Selected Teachers of the Los Angeles City School Districts." Ph.D. dissertation, University of California, 1964.

Jaquith, Charles Ervan. "An Analysis of Perceptions of Junior High/Middle School Teachers, Principals, and University Specialists Concerning Inservice Education." Ph.D. dissertation, University of Michigan, 1973

James, H. J. "Evaluation of a Junior High School In-Service Program Designed to Help Teachers Provide for Pupils' Individual Differences in Reading Abilities." Ph.D. dissertation, University of Miami, 1969.

Johnson, M. Clement. University of Michigan. Interview, 17 February 1975.

Lloyd, Dorothy Marie. "The Effects of a Staff Development In-Service Program on Teacher Performance and Student Achievement." Ed.D. dissertation, University of California, 1973.

Michigan Education Association. "A Proposed Statute Establishing Teacher Center in Michigan." East Lansing, Michigan, April 1974. (Mimeographed.)

Michigan Education Association. "Metro Study." Forthcoming Information 1975.

Murphy, Mary Kay. "Dallas: Renewal's in the Wind." Texas, 1972. (Mimeographed.)

National Education Association. "Teacher Centered Professional Development." Washington, D.C., 1972. (Mimeographed.)

Rusk, Glenn Dennis. "The Identification of Teacher Attitudes Related to Career Education and Attitudinal Change as a Result of In-Service Education." Ph.D. dissertation, Kansas State University, 1973.

Smith, John Carlton. "An Assessment of the In-Service Education Program in Huntsville, Alabama Schools." Ed.D. dissertation, University of Alabama, 1971.

Turner, I. S. "A Study of Teachers' Perceptions of an In-Service Program in Three Southern Maryland Counties." Ph.D. dissertation, The George Washington University, 1970.

Wilson, Alfred P. "Individualized In-Service Training." Paper presented at the Association for Supervision and Curriculum Development, St. Louis, Missouri, 5 March 1971.

Whitmore, Richard Frank. "Effective Methods for the Orientation and Administration of an In-Service Education Program." Ph.D. dissertation, University of Nebraska, 1960.