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The Appropriateness Of Selected Inservice Education Practices As Perceived By Secondary School Educators.

Dushan Angius
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THE APPROPRIATENESS OF SELECTED INSERVICE EDUCATION PRACTICES
AS PERCEIVED BY SECONDARY SCHOOL EDUCATORS

A Dissertation Presented to the
Graduate Faculty of the University of the Pacific

In Partial Fulfillment of the Requirements for the Degree
Doctor of Education

Dushan Angius

March, 1974

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THE APPROPRIATENESS OF INSERVICE EDUCATION PRACTICES AS
PERCEIVED BY SECONDARY SCHOOL EDUCATORS

Abstract of the Dissertation

PURPOSE: The purpose of this study was to determine if differences existed between the perceptions of secondary school teachers and the perceptions of principals regarding the appropriateness of selected inservice education practices in the amelioration of specific instructional difficulties. Ancillary purposes of the investigation were to determine if perceptual differences existed among teachers when they were grouped by experience, sex, and teaching assignment.

PROCEDURES: The population for this study was the secondary school educators in the public school systems of Santa Clara County. From this population two sample groups were derived. A five percent random sample of teachers was stratified by 11 departmental areas. The entire population of secondary school principals comprised the principals' group. The total sample of participants for the study was 224 -- 176 teachers and 48 principals.

The questionnaire used in this study, A Rating of Inservice Education Practices, was developed from a review of the literature and included three major dimensions. First, five areas of teacher needs were extracted from the literature as being of central concern to teachers. Twenty inservice education practices were then identified as being appropriate in meeting this range of teacher needs. Finally, a six point Likert-type scale was developed and provided participants with choices of response ranging from "very inappropriate" to "very appropriate."

The questionnaire was validated by a panel of judges and test-retest procedures were used in a pilot study to establish a median reliability coefficient of .63. The questionnaires were distributed and 209 responses were received, a 93 percent return. These data were analyzed through the use of mean scores, Pearson product-moment correlation coefficient procedures, t-test procedures, and analysis of variance procedures.

CONCLUSIONS: 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 significantly 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.

RECOMMENDATIONS: It was recommended that additional research be conducted to: (1) evaluate the effectiveness of current inservice programs at various educational levels; (2) determine to what extent inservice programs are cooperatively developed by teachers and administrators; (3) analyze the viability of the collegial approach to professional growth; (4) further investigate perceptual relationships between teachers and administrators; (5) ascertain the effect of the school's socialization process on the perceptions and attitudes of teachers; (6) analyze in depth the supervisory relationships between teachers and principals.

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CHAPTER I

INTRODUCTION

Though the need for inservice education has been well established (Cahraman, 1966), the current state of teacher professional growth programs is deplorable (Allen, 1971).

What should be a vital component of teacher preparation has been allowed to remain piecemeal and haphazard. What should inspire teachers to maximize their potential is too often regarded by education management as either an onerous burden or an incidental ritual (Meade, 1971, p. 211).

Rubin (1971) emphasizes that the quality of the educational program is a function of staff competency and that an educational imperative is to overcome "whatever is defective and obsolete in teaching (p. 3)." If his thesis is correct, no longer can we permit programs of inservice education to be administered in cavalier fashion, to lack systematic methodology, and to be "managed with astonishing clumsiness (Rubin, 1971, p. 245)." It is vital that our attention be directed to the continued professional growth of the resident faculty, and particularly to the teacher of marginal effectiveness--a possible consequence of years of professional and technical neglect (Lucio & McNeil, 1969).

Whereas the excellent teacher makes a significant contribution to an enlightened and productive citizenry, what of the impact of the

marginal teacher? The harm resulting from poor teaching is many times not immediately apparent nor easily remedied (Howsam, 1960). The identification of specific areas of teacher inadequacies and the application of current research information and skills through the development of appropriate inservice programs is of vital importance (Lucio & McNeil, 1969).

Statement of the Problem

The contemporary model of inservice education requires the involvement of both teachers and administrators in the planning of professional growth programs (Westby-Gibson, 1967). If the cooperative development of effective inservice activities is to be successful it is necessary that each group be knowledgeable of the other's perceptions regarding the value of specific inservice practices. If professional growth activities which fail to relate directly to teacher needs are of little value (Parker, 1957), then the following question must be posed:

When considering specific difficulties associated with the instructional performance of teachers, do teachers and principals differ in their perceptions regarding the appropriateness of inservice education practices and, if so, what are the implications for more effective programs of inservice education?

Rationale of the Study

The increasing concern regarding the quality of the public school system in the United States (Bruener, 1971) and more specifically

the progress made toward the evaluation and improvement of the instructional performance of classroom teachers (Williams, 1972) accentuates a continuing need for inservice education not too disparate from that concern at its conceptual genesis. Although early inservice education of the nineteenth century was remedial in nature (Gerheim, 1959), its concern with the ill-prepared teacher seems somewhat applicable to the contemporary educational scene: an attempt "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 (Tyler, 1971, p. 6)." This definition suggests that because of an accelerating rate of change in the world today there is a continuing need for the school system to be cognizant of and responsive to the societal demands impinging upon it. Campbell (1967) observes that "in the sciences a body of knowledge can become obsolete in ten to fifteen years; in the social sciences and the humanities, the obsolescence rate though lower, still is rapid (p. 63)." In agreement with Campbell is Rubin (1971) who asserts that with his first assignment, the new teacher is "enroute to a state of obsolescence (p. 257)."

Even with skillfully contrived and carefully administered pre-service programs in teacher education, changing demands, deepening understandings of the qualities of learning and of teaching, and constantly enlarging body of materials and instruction require each member of the profession to add continually to his knowledge, his skills, and his understanding (NEA, 1956, p. 12).

Complicating the capacity of the educational system to be truly responsive to accelerating mandates resulting from rapid cultural and technological change are the following:

1. Course content, instructional methodology, and educational materials are being affected exponentially by obsolescence, an obsolescence that is a spinoff of a knowledge explosion which "forces increasing intellectual and vocational specialization in a highly complex society (Neagley & Evans, 1970, p. 3)."

2. The quality and value of the pre-service training of teachers is marginal at best, representing nothing more than an introduction to professional preparation (Harris & Bissent, 1969; Meade, 1971).

3. Teachers of marginal ability who suffer from professional neglect have continued to remain in the profession while performing at an ineffective and unsatisfactory level (Lucio & McNeil, 1969; Williams, 1972).

4. Although there were in excess of 150,000 teaching positions beyond the supply of college graduates in 1965 (NEA, 1966), Cunningham (1972) alludes to the increased responsibilities and expectations of the resident faculty as a consequence of "the phenomenon of emerging teachers . . . fast becoming a thing of the past (p. 485)." He indicates that whereas there were 78,000 new teaching positions in 1969, there were 36,000 in 1970, and only 19,000 in the fall of 1971. The above data can be interpreted to mean that as a result of rapid faculty stabilization, teachers may be expected to accept teaching assignments for which they might have had minimal training or experience in order to merely maintain existing programs within their schools.

These conditions and their educational implications dramatically emphasize the fact that inservice education can no longer tolerate its

"precarious reputation (Harris & Bissent, 1969, p. 4)." The design of more effective programs of professional growth mandates an assessment of existing programs and an acknowledgment of their weaknesses. Harris & Bissent (1969) assert that among the more common deficiencies associated with inservice education are the following:

1. Inappropriate activities--selected without regard for purposes to be achieved.
2. Inappropriate purposes--a failure to relate inservice programs to genuine needs of staff participants.
3. Lack of skills among program planners and directors who design and conduct instructional improvement efforts (p. 15).

With these inadequacies in mind, the investigator attempted to gather information which would contribute to the development of more effective programs of inservice education. This study was generally designed to examine the nature of the instructional needs of teachers and the appropriateness of selected inservice practices available to them as perceived by secondary school teachers and principals. These general objectives have been pursued through the development of, and an analysis of responses to, the study's questionnaire, A Rating of Inservice Education Practices.

Hypotheses of the Study

It has been concluded that inservice education programs have generally been beset with inappropriate planning and implementation (Harris & Bissent, 1969). The primary thesis of this study was that perceptual differences exist between initiator (administrator) and participant (teacher) which tend to impede program planning and detract

from program implementation. This thesis, restated in the form of a central hypothesis, has led to the assertion that there are differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice education practices in the amelioration of specific areas of instructional difficulties. In order to test this theory, five research hypotheses have been developed:

Hypothesis 1: There are significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of subject matter mastery.

Hypothesis 2: There are significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of methodology.

Hypothesis 3: There are significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of individualization.

Hypothesis 4: There are significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of student motivation.

Hypothesis 5: There are significant differences between the perceptions of secondary school teachers and principals regarding the

appropriateness of selected inservice practices in meeting the teacher need of classroom management.

In addition to an investigation of these hypotheses the study also attempted to answer the following ancillary questions:

1. Does a relationship exist between the teacher's years of experience and his perceptions regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties?
2. Do perceptual differences regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties exist between male and female teachers?
3. Do perceptual differences regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties exist between teachers from different areas of teaching specialization?

Purposes of the Study

The central purpose of this investigation was to determine if differences exist between the perceptions of public secondary school teachers and principals in Santa Clara County regarding the appropriateness of selected inservice education practices in the amelioration of specific instructional difficulties. Secondary purposes of the study were: (a) to determine from a review of related research the most common teaching problems as perceived by teachers, (b) to determine from a review of the literature the types and nature of professional growth

practices available to teachers, and (c) to determine if perceptual relationships and/or differences exist between teacher groups regarding the appropriateness of inservice education practices in meeting the instructional needs of teachers; more specifically, between experiential levels of teachers, between male and female teachers, and between teachers from different areas of teaching specialization.

Significance of the Study

This investigation was important for the following reasons:

1. The intended outcomes should provide data which may contribute to a reduction of existing deficiencies of contemporary inservice education programs.

2. The intended outcomes may provide data useful in minimizing discontinuities between the pre-service and inservice training of teachers. The identification of the instructional problems most commonly experienced by teachers, and the subsequent appraisal by educators of selected inservice practices may provide dimensions worthy of consideration in the pre-service training of teachers.

Of considerable significance to the investigator was the development of professional competencies and insights associated with the research. Of particular value was the examination of the spectrum of inservice models and the consequent assimilation of new knowledge regarding the continuing education of teachers.

Investigative Procedures of the Study

Within the framework of descriptive research this study utilized

the sample survey technique to investigate the perceptions of educators in Santa Clara County regarding the appropriateness of selected inservice education practices. The investigation encompassed seven major tasks:

1. A review of the literature pertaining to inservice education was intended to provide a broad perspective relating to the instructional problems of classroom teachers and the types of professional growth activities available to them.

2. The survey instrument, A Rating of Inservice Education Practices, was developed from the review of the literature.

3. The questionnaire was submitted to a panel of judges for review, modification, and validation (Wick & Beggs, 1971).

4. A pilot study was conducted to further validate the survey instrument, to establish instrument reliability through test-retest procedures, and to acquire a working knowledge of procedures, problems, and skills associated with data collection (Fox, 1969).

5. The sample groups were selected and the questionnaires were distributed.

6. The data were collected, analyzed, and interpreted.

7. Findings, conclusions, and recommendations were presented.

Assumptions

Major assumptions upon which this study was based were:

1. that the rate of social, cultural, and technological change will increase;

2. that social, cultural and technological changes mandate

educational change;

3. that there are many dimensions to educational change, e.g., educational aims and objectives, teaching patterns and behavior, and instructional technology and innovation;

4. that a change in teaching behavior can result from effective inservice education programs;

5. that planned professional development must continue throughout a teacher's career.

Limitations

This study was limited to a random sample of public secondary school teachers and principals in Santa Clara County. It was further limited to only those teaching difficulties and inservice practices that were included on the survey instrument.

Limitations normally associated with the use of questionnaires were applicable to this investigation. Common limitations include: (a) an anticipated small return of questionnaires from participants, (b) the inability of the investigator to assess the motivation of the respondents, and (c) the inability of the investigator to check responses to be certain that the questionnaire items were correctly interpreted by the respondent (Fox, 1969; Kerlinger, 1964; Sax, 1968).

Definitions

For the purpose of this study, the following definitions were used:

Inservice Education: Any planned activities that contribute to a teacher's professional growth. In this study inservice education was considered synonymous to and used interchangeably with in-service education, staff development, professional growth, and continuing education. Descriptions of the selected inservice practices used in this study include the following:

1. Formal Academic Study: College course work engaged in by the teacher. For the purpose of this study, formal academic study includes sabbatical leaves for advanced study, summer school, extension courses, and correspondence courses.
2. Institute: A series of lectures, demonstrations, clinics, and discussions designed to provide teachers with as much information as possible in a relatively short period of time. Institutes are usually organized at local, county, or state levels. National Science Foundation Institutes are examples of federally supported programs.
3. Professional Conference: Professional meetings of teachers usually intended to inform teachers of trends and problems in a specific field. Teachers have the opportunity to exchange ideas with persons in positions similar to their own.
4. Workshop: A cooperative approach to the solution of highly individualized problems. Components of most workshops include: (a) a problem-centered format where groups of teachers have the opportunity to work together in areas of common interest, (b) moderate sized groups, (c) a free exchange of ideas among members, and (d) varied activities.
5. Professional Reading: The teacher's access to new knowledge

and trends by keeping abreast of the professional literature in his field of specialization.

6. Consultancy Service: Contracting for the services of a qualified specialist possessing unique competence in a particular area. For the purpose of this study, he is not a regular employee of the school district, but hired for specific purposes on a need basis.

7. Meeting, Faculty: A medium for the exchange of ideas among members of a professional staff. Meetings provide an opportunity for greater growth and understanding of teachers regarding the learning needs and progress of the entire school.

8. Meeting, Departmental: Provides an opportunity for departmental members to exchange ideas and to discuss curriculum, methodology, problems, and needs relating to their area of specialization.

9. Teacher-Principal Conference: Usually scheduled after a classroom visitation by the principal and designed to improve the teaching-learning situation. Mutual understanding and support as well as an informed and constructive exchange of ideas are necessary aspects of this meeting.

10. Teacher-Department Chairman Conference: Usually scheduled after a classroom visitation by the department chairman and designed to improve the teaching-learning situation. Mutual understanding and support as well as an informed and constructive exchange of ideas are necessary aspects of this meeting.

11. Visitation, Within School: An opportunity for teachers to develop new insights in classroom teaching through observing teaching

activities in classrooms other than their own.

12. Visitation, Other School: An opportunity for teachers to develop new insights in classroom teaching through observing the teaching activities in classrooms other than their own and other than those in their own school.

13. Team Teaching: An assignment of two or more teachers to an instructional unit of a school. Such an assignment provides the opportunity for the exchange of ideas, joint planning, discussion of curriculum and methodology, and the observation of instruction by team members.

14. Educational Television: The use of television (open or closed-circuit) to provide teachers with carefully planned and presented examples (live or taped) of real or simulated teaching behavior. More common uses include demonstrations of teaching methods and instructional materials, equipment, and techniques.

15. Video Tape: An inservice approach wherein a teacher records and then plays back his own classroom teaching performance thereby enabling him: (a) to analyze his own teaching, (b) to have others evaluate his teaching with him, or (c) to compare his teaching to that of a master teacher.

16. Laboratory Method: Examples of various designs include role playing, reality simulation, brainstorming, buzz sessions, and group discussions. Group size and time requirements will vary according to the design. This approach usually results in a high level of group involvement in a simulated problem situation.

17. Intensive Group Experience: Examples of various designs

include encounter group, T group, and sensitivity training. The group, usually consisting of 10-15 persons and a group leader, meets in an informal, relatively unstructured atmosphere. Group interaction in a climate of openness, risk-taking, and honesty is intended to provide the opportunity for individuals to come to know themselves and one another more fully than is possible in the usual social or working relationships.

18. Interaction Analysis: A method of analyzing classroom verbal interaction. Through the use of a teacher-observer the instructor is provided instant feedback regarding the nature of verbal interaction between teacher and student. Every three seconds the teacher-observer designates the dialogue as "Teacher Talk" or "Student Talk" by categorizing that portion of the student-teacher dialogue into one of ten categories.

19. Packaged Inservice Program: A systems approach to inservice education. The commercially prepared package usually provides for a self-evaluation by the teacher of his present teaching competencies, a self-diagnosis of areas where development is needed, and a modular approach for developing competencies in specific areas. It is a self-instructional and self-paced learning program using booklet modules.

20. Action Research: A type of classroom research undertaken by teachers to improve instructional practices. As a researcher, the teacher focuses upon problem situations, formulates and tries alternate solutions, and evaluates the success of selected methods.

Principal: Full-time administrative head and professional leader of a school.

Teacher: Full-time certificated member of the classroom instructional staff of a school. This definition is intended to exclude certificated staff members in ancillary assignments such as counselors, librarians, special education teachers, psychologists, and nurses.

Teacher Need: A teaching problem which may impede student progress or detract from the classroom learning environment. In this study teacher need was used interchangeably with instructional difficulty and is to be regarded as a function of teacher competency rather than other learning variables. Descriptions of the teacher needs used in this study include:

1. Subject Matter Mastery: The need to increase knowledge of the subject matter in a specific teaching area.
2. Methodology: The need to gain insights and skills which may lead to more effective utilization of teaching techniques and materials.
3. Individualization: The need to gain insights and skills which may lead to a more personalized approach to classroom instruction.
4. Student Motivation: The need to gain insights and skills which may assist the teacher in increasing student motivation.
5. Classroom Management: The need to gain insights and skills which may lead to improved classroom discipline and a more effective learning environment.

Summary

An introduction to the investigation has been presented in the first chapter. The problem has been identified; the research hypotheses

have been stated; the need for more effective programs of inservice education has been established. Clarifying the nature and scope of the investigation were statements regarding the study's rationale, significance, investigative framework, and basic assumptions.

In Chapter II a review of related literature and research supporting this study is presented. Described in Chapter III are the research design and procedures utilized in the development and validation of the questionnaire and the collection and analysis of data. The data are analyzed and interpreted in Chapter IV, and the conclusions and recommendations are presented in Chapter V.

CHAPTER II

REVIEW OF LITERATURE RELATED TO INSTRUCTIONAL PROBLEMS AND INSERVICE EDUCATION PRACTICES OF CLASSROOM TEACHERS

In order to develop a comprehensive and cogent rationale for the objectives and research categories of this investigation, as well as to build upon the generalizations and data presented in related studies, the literature pertaining to the domain of inservice education was thoroughly researched. Specific goals of this phase of the investigation were to identify the primary instructional problems of classroom teachers and the types of professional growth activities available to them. The pertinent studies and opinions which applied to the achievement of these goals are summarized in this chapter.

A problem encountered in this aspect of the study resulted from the paucity of research pertaining to inservice education. Although much has been written about professional growth activities, actual research focusing on the effectiveness of specific programs is sparse. Much of the discussion regarding inservice practices, therefore, relies heavily on scholarly opinion rather than rigorous investigation.

Similarly, to support the hypothesis that perceptual differences do exist between principals and teachers on effective inservice programs, an attempt was made to build on the findings of related studies. Again, a dearth of research focusing on perceptual similarities and dis-

similarities between teachers and principals handicapped this aspect of the investigation. For this reason major support for the study's central hypothesis was generated from: (a) the opinions and conclusions of scholars who maintain that the most common deficiency of inservice programs is the failure to relate imaginative practices to valid instructional needs of teachers (Harris & Bissent, 1969); (b) the realization that although the contemporary model of inservice planning suggests a cooperative stance between teachers and administrators, typical inservice programs are a result of administrative planning, with minimum teacher involvement (O'Hanlon, 1967); (c) the conclusion resulting from the above considerations that perceptual differences could exist between initiator (administrator) and participant (teacher) which tend to limit program relevance and effectiveness.

Before the summaries of pertinent research and scholarly opinion are presented, it is appropriate to reaffirm the impact that the nature of change brings to bear on program considerations. For example, in stating that "the only stability possible is stability in motion," Gardner (1964, p. 7) alludes to the contemporary and inexorable nature of change which at an exponential rate is affecting virtually every dimension of our culture and society. He writes that

We are witnessing changes so profound and far-reaching that the mind can hardly grasp all the implications. . . . Only the blind and complacent can fail to recognize the great tasks of renewal facing us--in government, in education, in race relations, in urban redevelopment, in international affairs, and most of all in our own minds and hearts (p. xi).

Further,

As the organization or society ages, vitality diminishes, flexibility gives way to rigidity, creativity fades and there is a loss of capacity to meet challenges from unexpected directions (p. 3).

The race to keep up with advances in knowledge and practice never ends (Goodlad, 1968). Wiles (1967) comments that in an era

when knowledge is multiplying, when society is changing at an almost inconceivable rate, when new tools for teaching and learning are being developed, and the schools are attempting to serve an ever increasing range of pupil needs, teachers and administrators need encouragement, support, and assistance in developing new competencies required by the added dimensions of their role (p. 153).

When the magnitude of this change dimension is coupled with new knowledge, and in particular, new insights regarding children and the ways in which they learn, the implications for the continuing education of teachers becomes evident. Springer (1967) has quoted Francis Keeple as saying,

A necessary revolution in American education implies continuing education. No longer can individuals talk of completing their education. For those who move to college and graduate school and into the professions there is a constant need to keep up to date (p. 58).

Cahraman's (1966) multi-dimensional summary suggests that there are many considerations which affect the ultimate design of inservice programs. These dimensions include: (a) the inadequacy of teacher preparation, (b) the knowledge explosion, (c) the development of new instructional structures (e.g., team teaching, flexible scheduling), and (e) the needs of the professional staff according to their professional status--new teacher: help, encouragement, and advice; experienced

teacher: inspiration, stimulation, new ideas; older teacher: stimulation.

The true challenge of inservice education as presented by Bush (1971) is to develop in the teacher "flexibility in teaching style, capacity for self-renewal, and receptivity to change (p. 70)." Meeting this challenge effectively requires an identification of the critical variables and data on how to approach their structuring. The contributions of research in these vital areas are reported in the ensuing pages.

Instructional Problems of Classroom Teachers

The purpose of this chapter was to establish the relationship between the literature and the study's questionnaire. In this section a review of the literature regarding the instructional problems of classroom teachers identifies their more common inservice needs. Selected current and emerging practices of inservice education are then described in the following section.

Voluminous, albeit dated, research exists regarding the instructional problems of classroom teachers. Studies by Barr & Rudisill (1930) and Johnson & Umstatted (1932) are representative of early efforts by researchers to examine the nature of teacher classroom difficulties. These, as well as other studies of that era, sought to determine needs, difficulties, and shortcomings of teachers in order to establish solid foundations for supervisory programs and the continuing education of teachers (Monroe, 1952). A review of these two studies was intended to establish a comparative base for later investigations, as well as to

identify commonalities which tended to persist in the literature of subsequent decades.

The investigation by Barr & Rudisill (1930) sought to identify classroom difficulties experienced by graduates of the University of Wisconsin. Education majors from the classes of 1927 and 1928 were surveyed regarding difficulties encountered during three periods of their experience--during the first two weeks, during the first year, and during the first two years. Table 1 illustrates the difficulties as reported by the 163 teachers who participated in the study for the full two year period. The investigators concluded that the difficulties identified in their study could reasonably be generalized to those encountered in the experiences of beginning teachers.

Johnson & Umstattd (1932) developed from their review of the literature a list of problems which beginning teachers might encounter and submitted it to 372 superintendents in Minnesota. Responses from 119 indicated those areas which the average beginning teacher would most likely experience instructional difficulties. These data were correlated with the responses of 64 superintendents who were attending summer school at selected universities in 1931. Since a coefficient of correlation of .92 was established between the rankings of the two groups, only the ranking of the former is presented in Table 2.

Difficulties by departments were analyzed, and although small differences were discernable, none were of statistical significance. Further analysis of the rankings led the investigators to conclude that the difficulties could be categorized into eight classifications: (a)

Table 1

Percentages of Mention of Instructional Difficulties
as Reported by 163 Teachers

Difficulty	First Two Weeks	Continued First Year	Second Year
Control over pupils	40.5	32.5	16.6
Provision for individual differences	29.1	38.3	51.2
Presentation of subject matter	37.2	17.5	23.3
Motivation	36.5	39.2	25.6
Organization of work and materials	27.0	19.2	25.6
Conditions for work	27.7	20.0	20.9
Measuring achievement	20.9	18.3	2.3
Teacher and pupil participation in the recitation	16.2	11.7	9.3
Making assignments	19.0	6.7	9.3
Adjustment of teacher to classroom situation	29.1	0.8	2.3
Teacher's preparation	6.8	7.5	2.3
Standards: how much to expect of pupils	10.1	2.6	0.0
Teaching pupils how to study	8.1	6.7	11.6
The handling of routine	4.7	9.2	4.7
Classroom procedure	6.1	0.8	0.0
Lesson planning	9.4	1.7	0.0
Administrative details	8.8	0.0	0.0
Personal characteristics of teacher	0.0	0.0	0.0
Appreciating the importance of pupils	0.0	0.0	0.0
Teachers' relations to school and community	0.0	0.0	0.0
Relations with supervisors	2.7	0.8	0.0
Objectives of teaching	0.7	0.0	0.0
Use of instructional materials	0.0	0.0	0.0

Table 2

A Ranking of Anticipated Instructional Difficulties
of Beginning Teachers as Perceived by 119 Superintendents

Item Causing Difficulty	Rank
Remedial Instruction	1
Use of test results	2.5
Diagnostic testing	2.5
Adaptation of subject matter	5
Training in habits of study	5
Supervised or directed study	5
Discipline	7
Classroom management	8
Questioning	9
Motivation procedures	10
Assignment	11.5
Stimulating and utilizing student participation	11.5
Planning instruction	14.5
Use of supplementary materials	14.5
Socialized recitation	14.5
Objective test as a learning device	14.5
Adaptation of subject matter to ability of class	20
Drill	20
Testing	20
Project method	20
Individualized instruction (contract plan)	20
Individualized instruction (other plans)	20
Inadequate knowledge of pupil interests	25.5
Inadequate knowledge of pupil environment	25.5
Marking	25.5
Training in use of library	25.5
Inadequate knowledge of pupil's previous experiences	28.5
Visual instruction	28.5

Table 2 (Continued)

Item Causing Difficulty	Rank
Inadequate knowledge of pupil's mental ability	32
Inadequate knowledge of pupil's personal traits	32
Demonstration	32
Review	32
Project (individual)	32
Deficient general scholarship	37
Adaptation of subject matter to needs of community	37
Use of textbook	37
Formal recitation	37
Deficiency in personality traits	37
Laboratory	40
Inadequate knowledge of pupil's previous record	41.5
Lack of interest in further professional study	41.5
Field trips	44
Use of radio in instruction	44
Lack of interest in teaching	44
Deficient scholarship in field of specialization	46
Inadequate knowledge of pupil's physical condition	47
Poor health	48

inadequate knowledge of student, (b) methodology, (c) subject matter adaptation, (d) classroom management, (e) individualization, (f) inadequate general and special scholarship, (g) inadequate command of the administrative functions of teaching, and (h) deficiencies in personality traits.

In an analysis of 2227 teaching problems identified by 1075 Colorado public school teachers, Davis (1940) determined that motivation was of most concern to secondary school teachers, followed by testing and evaluation, methodology, diagnosing and correcting difficulties, and individual differences of students. Of all the problems cited, 75 percent were categorized in these five areas. In contrast to previously cited studies, difficulties associated with discipline and classroom management were of minor concern, with only 2.7 percent of secondary school teachers considering these to be problem areas.

In an extensive and comprehensive investigation, Hill (1944) reviewed 475 research studies dealing with the instructional problems of teachers. His analysis of the responses of 12,372 teachers is presented in Table 3.

The results of Hill's study correlated closely with the findings of the earlier investigations by Barr & Rudisill (1930) and Johnson & Umstatted (1932). Individualization, methodology, classroom management, and motivation tended to persist as instructional areas of major concern to teachers.

Wey's (1951) investigation of the instructional problems of beginning secondary school teachers in North Carolina generated the following rank order of difficulties: (a) student control and discipline, (b) providing for the individual interests and abilities of pupils, (c) pupil motivation, and (d) teaching technique. The results of his study were not dissimilar from the composite findings of Stout (1952), Miller (1955), Tower (1956), and O'Hanlon & Witter (1967).

Table 3
 Summary of Teaching Difficulties Identified in
 475 Research Studies

Difficulty	Number of studies in which the difficulty was listed among the first six
1. Difficulties in providing for individual differences among pupils	19
2. Difficulties in teaching method	18
3. Difficulties of discipline, control, social development of the pupil	17
4. Difficulties of motivation, getting children interested, getting them to work	12
5. Difficulties in the direction of study	9
6. Difficulties in organizing and administering the classroom	8
7. Difficulties in selecting appropriate subject matter	6
8. Lack of time during the school day for all the things that need to be done	6
9. Difficulties in organization of materials	6
10. Difficulties in planning and making assignments	5
11. Difficulties in grading and promotion of pupils	5
12. Inadequacy of supplies and materials	4
13. Difficulties in testing and evaluating	4
14. Personal difficulties of the teacher	4
15. Difficulties arising from conditions of work	3

Tower (1956) compared the perceptions of 81 teachers and 77 supervisors in Indianapolis regarding the nature of classroom problems experienced by beginning teachers in the Indianapolis Public School System. Principals, consultants, and beginning teachers were asked to indicate the three most pressing problems of beginning teachers during their first year of teaching. Table 4 presents a summary of those problems which were identified.

Table 4

Percentage of Educators who Indicated that Certain Types of Problems Were of Major Concern to Beginning Teachers

Problems	Beginning Teachers	Principals & Consultants
Discipline	40	38
Classroom organization	25	45
Technique of instruction	25	38
Providing for individual differences	25	10
Lack of instructional materials	25	10
Understanding local curriculum, philosophy of education, and standards of instruction	16	18
Records and reports	16	12
Human relations	14	17
Teaching large classes	7	8
Lesson planning	6	21
Understanding child growth and development	4	8
Understanding and assuming professional responsibility (professional attitude, ethics)	0	9

Of those problems relating to the classroom competencies of teachers, both groups were in general agreement regarding the difficulties associated with classroom management, methodology, and providing for individual differences of pupils.

Two hundred sixty-four graduates of San Francisco State University were surveyed by Taylor (1961) in a study designed to determine problems most commonly encountered in teaching. Presented in Table 5 is the rank order of teaching problems generated from an 82.6 percent response.

Table 5

Teaching Problems Ranked According to the Frequency
of Mention by 218 Teachers

Rank	Problem	Frequency
1	Classroom control	34
2	Insufficient time for the job	21
3	Lack of student interest in school work	19
4.5	Heavy clerical responsibilities	13
4.5	Overloaded classes	13
6	Student motivation	11
7.5	Students' lack of skill in the fundamentals	10
7.5	Insufficient knowledge of methodology	10
9	Heavy extra-curricular load	9
10	Planning and preparation of lessons	8
11	Insufficient knowledge of subject field	7
13	Heterogeneous grouping	6
13	Homogeneous grouping	6
13	Inadequate supplies and equipment	6
15	Administrative policies	5

When analyzing only those data pertaining to instructional competencies, they reflect similarities to those generated in later research by Fuog (1962), Dropkin & Taylor (1963), Bond & Smith (1967), and Farrell (1969). An apparent inconsistency in response was noted when teachers were asked to identify those areas in which they felt additional training was needed. Teachers ranked as the highest priority the need for additional knowledge of the subject matter in their teaching field-- a category ranked eleventh in Table 5.

Confirming the prime need by teachers in Taylor's study was a recent National Education Association survey of public school teachers. Of those teachers responding to an inquiry regarding "much or moderate need" for additional help or training, 69.8 percent indicated that there was a need for additional training in their field of specialization (NEA, 1968). The survey also indicated methodology (75.9 percent) and classroom management (52.2 percent) persisted as areas of concern to teachers.

A review of the literature pertaining to the instructional problems of teachers revealed several areas which teachers have identified as being of central concern. The research adds credence to the assertions of Barr (1929) and Williams (1972) who, writing over forty years apart, stated that the characteristic differences between effective and ineffective teaching are a function of the teacher's knowledge of the subject matter and his competency in the areas of teaching methodology and classroom management.

Presented below are the five categories of teaching problems selected from the literature for use in this study. Each category is

documented with pertinent research which has substantiated the problem area.

1. Subject matter mastery: Barr (1929), Cahraman (1966), Ebel (1969), Hill (1944), NEA (1968), Taylor (1961), Wiles (1967), Williams (1972).

2. Methodology: Barr (1929), Barr & Rudisill (1930), Davis (1940), Dropkin & Taylor (1963), Ebel (1969), Hill (1944), Miller (1955), NEA (1968), O'Hanlon & Witters (1967), Tower (1956), Wey (1951), Williams (1972).

3. Individualization: Barr & Rudisill (1930), Davis (1940), Hill (1944), Johnson & Umstattd (1932), Miller (1955), O'Hanlon & Witters (1967), Tower (1956), Wey (1951).

4. Student motivation: Barr & Rudisill (1930), Davis (1940), Hill (1944), Johnson & Umstattd (1932), Miller (1955), O'Hanlon & Witters (1967), Taylor (1961), Wey (1951).

5. Classroom management: Barr (1929), Barr & Rudisill (1930), Dropkin & Taylor (1963), Farrell (1969), Fuog (1962), Hill (1944), Johnson & Umstattd (1932), Miller (1955), NEA (1968, 1971), Stout, (1952), Taylor (1961), Tower (1956), Williams (1972).

Inservice Education Practices

A comprehensive review of current inservice education practices revealed that what once was a field limited to inservice and inspectorial visits (Gerheim, 1959) has become virtually an infinite number of activities designed to promote the professional growth of teachers. In a

recent national survey (NEA, 1965) more than 290 different inservice education programs were described by responding teacher training institutions, state departments of education, and public and private school systems.

Although an in-depth examination of the inservice spectrum was necessary for the conduct of the study, it was determined that its written review would not contribute significantly to the central focus of the investigation. For this reason selected inservice practices were extracted from the literature for general discussion and subsequent utilization in the survey instrument. A modification of Gerheim's (1959) inservice classification model, which groups professional growth activities into five general categories, was used to delimit the review. This review examines one of these classifications--those practices which deal directly with the improvement of the instructional program.

The central criterion governing the selection of each practice was the appropriateness of each relative to the instructional difficulties selected for investigation. To confirm their credibility, they were submitted to a panel of judges for validation.

This review, then, was intended to establish the legitimacy of each practice as a recognized professional growth activity. As a result of examining the domain of inservice education with the foregoing considerations in mind, a listing of twenty selected inservice practices was developed and used in the survey instrument. These practices along with a review of their current status as perceived by interested scholars are described in this section.

Formal Academic Study

School districts are in general agreement regarding the value and necessity of continued academic study by teachers. This inservice mode represents an effective and popular approach to professional improvement (Williams, 1972). This is especially true for those who enter the field of teaching with inadequate preparation and for those who wish to study an extensive body of material with great economy of time (NEA, 1966). A common practice by many school districts is to establish categories within their salary schedules which mandate that a teacher cannot be advanced beyond a certain level unless further academic credit is accumulated (NEA, 1966).

Teachers consider continued academic study to be an important aspect of their individual professional growth programs, as well. In a study of inservice education practices by O'Hanlon (1967), 70 percent of the respondents indicated that they had pursued graduate level work since they began teaching, with 90 percent of that group evaluating the experience as beneficial. However, regardless of its apparent value, Allen (1971) insists that in far too many cases teachers return to college to "pile up units, which will move a teacher horizontally across the pay schedule (p. 109)," rather than to improve their instructional competencies.

Teacher training institutions have reorganized their offerings considerably to accommodate the professional needs of teachers (Burton et al., 1955). They are now able to pursue advanced academic study as full-time students through sabbatical leave policies, or as part-time

students through summer school, extension classes, and correspondence courses (NEA, 1966).

In discussing the advantages and disadvantages of college course work for teachers, Burton & others (1955) state that among the advantages frequently claimed are the following:

1. It provides expert assistance where expert assistance is needed. (The college and university teacher is usually one that has achieved a certain degree of expertness in his chosen field of specialization.)
2. It provides new and better library services than those ordinarily available to the field worker.
3. It provides an opportunity to meet and exchange ideas with persons from other school systems.

The most frequently voiced disadvantages are:

1. The problems and aspects of the subject presented in course work are frequently not those sensed by teachers as most pressing and significant.
2. Instructors seem frequently not to be able to bridge the gap between principles and techniques. General theory courses are sometimes not satisfactory because of their superficiality and neglect of the appropriate aspects of techniques. The two approaches are ordinarily not well integrated.
3. Course work is frequently formal and academic. (p. 161)

Institute

The institute was one of the earliest attempts to improve the competencies of classroom teachers (Gerheim, 1959). Its aim was to improve the effectiveness of ill-prepared teachers, in many cases serving as a substitute for formal college work for teachers who were unable to attend a teacher-training institution (NEA, 1966). Whereas the traditional institute used essentially the lecture in a rather formal and

didactic manner (Tyler, 1971), the contemporary model attempts to present new knowledge to well-prepared teachers by utilizing a variety of modes--lecture, demonstration, clinics, panels, discussion, audio-visual presentations, or any combination thereof (Burton et al., 1955). Its intent remains to provide teachers with information, knowledge, and insights regarding educational trends, problems, and issues in a relatively short period of time (NEA, 1966).

While the traditional institute was usually organized at the county or state level, there has been a significant increase recently in federally supported institutes. The most pronounced increases were evident in those subject areas supported by the National Science Foundation and the National Defense Education Act (Reynard, 1963). A study by Jones & Coxford (1964) revealed that federally supported summer institutes had increased from two in 1953 to 212 in 1960. Over \$249,000,000 was distributed for NSF institutes between 1952 and 1964, and NDEA financial support of language institutes exceeded \$9,500,000 between 1959 and 1961 (NEA, 1966).

Research by Brandt & Perkins (1958), Fowler (1960), and Izzo & Izzo (1964) has confirmed the value of institutes in the professional growth of teachers. Jones & Coxford (1964) found that one of the most common retraining programs for mathematics teachers was institutes sponsored by the NSF. In evaluating five pilot institutes in civics sponsored by the United States Office of Education, Longaker & Cleary (1966) found that the institute format was particularly effective in dealing with subject matter competence and teaching techniques. However,

they cautioned that although the institute was a successful mechanism for providing new learning experiences, it was "unsound if it limits teachers to a limited six weeks. . . . The image of the institute as a one-shot affair should be changed. . . . the institute idea must encompass continuing education (pp. 6-7)."

Williams (1972) alludes to the value of the institute when he states that "Summer institutes, particularly under National Defense Education Act (NDEA) and the National Science Foundation (NSF), have become one of the most potent in-service forces in American Education today (p. 172)." He asserts that of great importance are the indirect values that are derived from teacher participation in the institute experience. These include the possibility of teachers becoming aware of the need for additional formal academic study, and the possibility that the institute may stimulate teachers to develop an individualized program of professional reading.

Professional Conference

There is general agreement that professional conferences can be effective in enhancing teacher growth (Knezevich, 1969). They are generally designed to provide teachers with new knowledge and insights regarding curriculum instruction, and educational trends and issues (Marks et al., 1971). Not only is the conference "a medium for inspiration, cultural training, technical assistance, and the exchange of ideas (Burton et al., 1955, p. 152)," but it also provides teachers with opportunities for professional growth through their involvement in the leadership, planning, and organizational phases of program development (Williams, 1972).

School districts have long realized the benefits which accrue to both the individual teacher and the school system as a result of teacher attendance at professional meetings. Not only does the professional conference provide school districts an economic approach to inservice education, it also provides the "lighthouse" districts with a medium through which they may demonstrate their leadership in educational innovation (Williams, 1972).

A recent study by O'Hanlon (1967) revealed that only 55 percent of the responding teachers indicated that they had participated in a professional conference in their teaching field. Of those attending, 66 percent considered them to be beneficial while 34 percent viewed them as of little or no value. These data seem to be in conflict with the high regard that teachers generally manifest toward the professional meeting (Williams, 1972), as well as the results of a nationwide survey which revealed that over 90 percent of the responding school districts actively encouraged staff participation in professional meetings (NEA, 1962).

Workshop

The modern workshop is a popular and much used inservice practice, utilizing a cooperative approach to highly individualized problems (Cahraman, 1966). Wiles (1967) and Williams (1972) assert that the most effective outcomes result from a problem-centered format where teachers have the opportunity to work together in common interest areas. Commenting on the essential characteristics of workshops, Burton et al. (1955) and Briggs & Justman (1952) are in agreement on certain dimensions: (a)

workshops tend to have clearly recognized and defined purposes which emerge from the teacher's daily work, (b) types of workshops are many and varied, (c) specific problems must be identified and defined, (d) a wide diversity of staff must be utilized in planning and implementation, (e) cooperative and participatory processes must be utilized, (f) extensive resources must be available to participants, (g) workshop sessions must be of adequate length, (h) adequate facilities must be provided to accommodate a variety of experiences, and (i) planning must make provisions for diversity in teachers' interests, needs, and capacities.

The success of the workshop is a function of the extent to which teachers successfully utilize new knowledge and skills in their classrooms (O'Hanlon & Witters, 1967). However, consistent with the general level of research on inservice practices, testimonials rather than controlled investigation abound in the literature regarding the effectiveness of workshops. Further, Burton and others (1955) assert that the concept has been victimized by the profession because it "has suffered from the unhappy tendency in education to seize on a new term and apply it to whatever one is doing (p. 147)."

Mitchell (1954) feels that the concept has been further victimized by workshop organizers. He asserts that prominent among those conditions which tend to limit or detract from workshop success are inadequate planning, preparation, and foresight by those in leadership positions. He further states that too often the organizers are reluctant to provide sufficient leadership and guidance, feeling that democratic and participatory procedures emanate best from unstructured situations. Other

concerns of Mitchell deal with the insensitivity of program planners to the needs of individual teachers, the workshop format wherein informality forsakes social or intellectual activities, and the inability of many workshop formats to stimulate critical thought.

Despite the limitations suggested by Mitchell and others, the workshop remains a viable and popular practice in the inservice spectrum. A CTA survey (1949) of superintendents and teachers' organizations revealed that workshops were considered to be the most effective practice of their respective inservice programs. In a later study, 79.9 percent of all responding school districts indicated that workshops were an integral part of their inservice programs (CTA, 1959). Results of recent NEA research (1966) revealed a 20 percent increase of workshops in responding urban school systems between 1955-56 and 1961-62.

Professional Reading

Williams (1972) states that a much greater emphasis is being placed on the reading habits of teachers as a consequence of the rapidity and magnitude of change in virtually all disciplinary fields. Although seemingly difficult to stay abreast of the developments and innovations in any field, a planned program of professional reading represents access by teachers to new knowledge and trends in their fields of specialization (NEA, 1966). It is widely encouraged by educational specialists--with emphasis not necessarily in a specific field but on various topics by many authors (Marks et al., 1971).

In addition to the teacher's individual collection of resource material and his access to district, public, and university libraries,

much support can be provided him at the school level to stimulate his interest in a planned program of professional reading. These activities and resources include:

1. a professional library where new professional books and journals are displayed and the librarian is assisted by a teacher committee in the selection of titles (Williams, 1972);
2. schoolwide reading-discussion groups (Burton et al., 1955);
3. school bulletins prepared by faculty which present book reviews and summaries of the most current educational thinking and trends (Wiles, 1967);
4. professional literature located in the teachers' lounge or workroom (NEA, 1966).

Consultancy Service

Only recently has the term "educational consultant" become prominent in the literature with the Educational Index first recognizing the title in 1948. However, in a relatively short period of time the concept has grown in stature and use. It has been effectively applied to the solution of school problems related to district reorganization, finance, plant planning, curriculum construction, teacher recruitment and training, public relations, and the improvement of instruction (James & Weber, 1953).

In particular, the use of outside consultants to assist a staff in its continuing education has become a widely accepted practice (Lucio & McNeil, 1969; Wiles, 1967). In a 1959 survey of California inservice education practices it was determined that 71.2 percent of the responding

school districts utilized consultant services (CTA, 1959). However, it should be noted that for the purposes of that investigation the concept included consultancy services provided from within the district as well as from other sources.

There is little doubt that a qualified specialist can be of value in helping teachers diagnose their professional growth needs and assisting in the development of programs to meet such needs (Lippitt & Fox, 1971). Sources of consultancy personnel include departments of education, educational institutions, private enterprise, industry, and state and national associations (Marks et al., 1971). The outside specialist has the advantage of being able to render judgment and advice in an objective and impartial manner, his perceptions seldom being affected by superficial problems or personalities. Marks and others (1971) comment that the consultant "who can bring new ideas to teachers is valuable. . . . the matter of techniques and methods can be supplemented if a person from outside the school brings in suggestions (p. 489)."

The roles of the consultant are many and varied. His effectiveness is a function of his success in being a listener, answer giver, synthesizer, interpreter, evaluator, stimulator, advisor, organizer, fraternizer, information gatherer, demonstrator, criticizer, inspector, and suggestor (James & Weber, 1953). His success, according to Shumsky (1958), is also dependent upon the degree to which he stresses process. He emphasizes that the "process" consultant must facilitate an individual or group's efforts to define and meet their own needs; that only through active involvement by teachers in problem identification and solution

will a greater degree of success be realized. He warns of the task-oriented consultant who, in fact, develops a dependency relationship with teachers by attempting to solve their problems for them.

In commenting that effective use of the educational specialist requires careful planning and much skill, Lippitt and Fox (1971) suggest that outside leadership in inservice education can be most effective if based on a long range continuing consultation arrangement. They assert that cooperative arrangements wherein inservice programs are planned and implemented by consultants in collaboration with key school personnel represent an especially effective approach to inservice education.

Staff Meetings

The opinions and conclusions presented in this section of the review are applicable to teacher group meetings in general. Included in this classification are two inservice practices used in the study's questionnaire--general faculty meetings and departmental meetings.

In elaborating on the potential impact of faculty meetings on the social, emotional, and professional growth of the individual teacher, the writings of Marks and others (1971) are fairly representative of the "cookbook" approach to successful meetings. Their treatment of the subject includes principles and practices, purposes, how to improve meetings, how to plan meetings, teacher involvement, timing of materials and ideas, how to conduct meetings, the role of the agenda, and evaluation procedures. Seemingly supportive of the opinions of Marks et al. regarding the value of faculty meetings were the results of a recent state-wide survey in California. Eighty-seven percent of responding school districts

considered general faculty meetings to be an important aspect of their inservice education programs, being utilized more than any other inservice practice (CTA, 1959). However, their use seems to be inversely proportional to their popularity with teachers. While remarking that the inservice potential of faculty meetings is seldom reached, Wiles (1967) states: "Teachers are informed that they must assemble to hear someone they do not know talk about a topic they have not selected. They go with resentment. They listen with resistance. They forget without remorse (p. 69)."

In agreement with the opinion of Wiles were the results of O'Hanlon's study (1967) which revealed that teachers profit very little from attendance at faculty meetings, rejecting it as an effective inservice approach. Their major concerns focused on the typical reluctance of administrators to involve teachers in the planning phase. Other criticisms dealt with irrelevant topics not meeting the needs or interests of teachers, poorly planned meetings being too routine and formal in nature, and teachers being talked at rather than actively involved. These findings were not dissimilar from those of Blumberg & Amidon (1964).

Regardless of the evidence that suggests that meetings are unpopular with teachers, Burton et al. (1955), Wiles (1967), Marks et al. (1971) and Williams (1972) are but a few of many authors who have written extensively regarding the value of faculty meetings as a viable inservice practice. Their writings are illustrative of the general nature of commentary to be found in the supervisory literature regarding faculty

meetings--a description of typical weaknesses while alluding to the in-service potential of this activity. A synthesis of their opinions reveals that faculty meetings should not be used for routine administrative matters, but for the exchange of professional ideas among staff; should be well-planned in a cooperative and democratic manner regarding topics, speakers, and procedural modes; and should be organized for clearly recognized purposes, and focused on issues with which the group is vitally concerned.

Supervisory Conference

The opinions and conclusions presented in this section of the review are applicable to supervisory conferences in general. Included in this classification are two inservice practices used in the study's questionnaire--teacher-principal conferences and teacher-department chairman conferences.

Although evidence exists to support the notion that teachers still perceive the supervisory structure to be superordinate-subordinate in nature, the traditional "visitation and conference" has been replaced by a model in which two equals meet to improve the learning situation. Contributing to its success is a positive relationship between teacher and supervisor which leads to mutual understanding and support. An important aspect of this relationship is the recognition and utilization of the principal and/or department chairman by the teacher as a resource person (Lippitt & Fox, 1971; Wiles, 1967). The main purpose of the supervisory conference is to help the teacher maintain and enhance those aspects of teaching technique that are productive and to help him change those

aspects of teaching that are in need of improvement (Blumberg, Weber, and Amidon, 1967).

Marks et al. (1971) suggest that there are several times when a conference should be scheduled: after a classroom visitation by the supervisor, after employment of a beginning teacher, at the request of a teacher, and to discuss a problem with an individual or group. The conference must be conducted in a professional climate conducive to the exchange of constructive and informed ideas regarding curriculum, methodology, instructional materials, or the professional growth of the teacher (NEA, 1966; Neagley & Evans, 1970). Burton and others (1955) emphasized that the analysis of teaching problems must be discriminating rather than general--where the teacher is able to analyze and evaluate his own teaching in order to evaluate his own strengths and weaknesses.

There are many factors which contribute to the success of a supervisory conference. Wiles (1967) and Marks and others (1971) emphasize the importance of the following: that the supervisor must prepare for the conference and is responsible for the success of it; that the purpose of the conference is clear to the teacher; that it must be scheduled in a quiet location where participants will not be interrupted; that the conference will not be rushed; and that the conference ends with a definite conclusion.

Visitation

Visitations by teachers represent a valuable inservice activity which can effectively promote professional growth (Wiles, 1967). It provides teachers the opportunity to develop new insights in teaching

through observing the on-going activities and teaching in classrooms other than their own (Burton et al., 1955; Neagley & Evans, 1970).

Supporting the assertion of Marks et al. (1971) that the visitation represents a popular and effective approach to instructional improvement were the findings of a study by DeVita (1963). He reported that teachers who participated in a voluntary five-week inter-visitation program rendered a positive evaluation of the experiment, asserting that much had been learned from colleagues regarding methodology and techniques.

Though evidence and opinion support the concept, its use on an organized school or district-level basis seems marginal at best. In a state-wide survey in California only 47 percent of the responding high school districts indicated that inter-visitations were a part of their inservice program, with most of these being on an unorganized and voluntary basis (CTA, 1959).

O'Hanlon & Witters (1967) consider the infrequency of planned visitations to be inconsistent with the general interest teachers demonstrate in wishing to share information and ideas with one another. The findings of their research indicated that only 69 percent of the teachers surveyed considered visitations to be beneficial, while 31 percent derived little or no benefit from the experience.

In assessing the advantages and disadvantages of various inservice education practices, Williams (1972) maintains that visitations are advantageous in that the realistic setting of the classroom allows the observer to witness factors influencing teaching and learning in the

presence of the vital teacher-student relationship. He also asserts that much can be learned from observing negative aspects of instruction when teachers visit the classrooms of teachers of marginal effectiveness.

Team Teaching

Considered by many to be one of the most potentially significant innovations in American education was the meteoric rise of team teaching just prior to 1960 (Trump & Miller, 1973). In response to a scarcity of qualified teachers and long before the concept had reached even embryonic proportions, Chase (1953) advocated the use of teaching teams to provide for the maximum growth and guidance of the young and inexperienced teacher.

Team teaching is an approach to learning wherein two or more members of an instructional team plan, instruct, and evaluate in one or more subject areas. Trump & Miller (1973) assert that its goals are "to recognize better the individual differences among teachers and to utilize better the special competencies of each person (p. 354)." It provides team members the opportunity to confer with each other, to be aware of methodological and technological innovations, and to keep abreast of new knowledge.

Anderson (1966) notes that among the more desirable characteristics of team teaching are the use of a wider range of instructional resources and technologies, and the opportunity for stimulating the professional growth of team members--especially that of the beginning teacher. In commenting on the value of team teaching as an inservice

technique of much promise, he states

Particularly impressive is the suggestion that team teaching offers an appropriate environment not only for the training and induction of newcomers to the profession, but also for the advancement of each experienced teacher's professional knowledge and skill. . . . Exposure to the constructive reactions and suggestions of colleagues, within the atmosphere of a full-fledged team operation, would seem almost to guarantee continual self-examination and professional study. Seen as an instrument of the profession for keeping its members constantly active as students of their own role, team teaching therefore emerges as a development potentially equal in importance to the idea of graduate study and certainly superior to the usual ineffectual devices employed hopefully by local systems under the title "in-service training for teachers (p. 89)."

In general agreement with Anderson is Hoover (1971) concerning the potential value of this inservice activity. His comments concerning the pitfalls of team teaching are representative of criticism regarding its marginal use. He asserts that prominent among those factors which have hindered its acceptance are the negative reactions of educators due to the chaos resulting from the initial rapid movement toward the concept without proper planning. Another problem associated with its acceptance is the psychological orientation of teachers. In support of this latter conjecture by Hoover is the commentary of Fraenkel & Gross (1966): "Not every teacher is prepared, either academically or psychologically, to emerge from the isolated cave he has known for so long into more open cooperation with, and comparison by, colleagues and students which teams afford (p. 376)."

There is little empirical evidence to support or reject the value of team teaching as either an instructional technique or inservice practice.

Articles in professional journals are usually glowing testimonials essentially descriptive in nature, while those in research journals are sparse at best (Georgiades, 1967; Olivero, 1964). Beggs (1964) summarizes the frustrations of researchers regarding the impact of team teaching on teacher effectiveness when he states:

Countless conjectures have been made about the use of team teaching as a vehicle for improvement of staff competency. Research results have not supported this hypothesis, although it may have validity. If so, investigation is sorely needed to validate it (p. 31).

Television

The fusion of technology and education has become commonplace in our nation's school systems. The imaginative school use of technological innovation has increased dramatically and will continue at an increasing rate. Of the recent developments, the expanding use of television in our schools is encouraging and especially promising. Similarities between the characteristics, use, and promise of closed circuit television, video-tape, and micro-teaching are much greater than dissimilarities. For this reason, the commentary which follows as applied to any one technique can legitimately be generalized to the other two.

The uses of television are many and varied within the school setting. Wigren (1967) states that there is considerable evidence to document its effectiveness in enhancing regular classroom instruction, pre-school education, adult basic education, and retraining programs for industrial workers. He particularly emphasizes its value in the pre-service and inservice education of teachers, claiming its greatest

promise to be its capacity to offer unlimited professional growth opportunities for teachers.

The use of video-tape is a promising and effective inservice practice which represents a powerful source of immediate feedback for the teacher (Westby-Gibson, 1967). Contributing greatly to its promise and value are the following capabilities: (a) instruction in the skills and techniques of teaching (Wigren, 1967), (b) self-analysis (Attea, 1970), (c) immediate feedback (Schumaker, 1967), (d) modeling capacity which can enhance the teaching performance of other teachers (Allen & McDonald, 1967), (e) control and manipulation of teaching variables (Webb & Baird, 1967), (f) simulation experiences which prove to be intellectually and psychologically stimulating for teachers (Cruickshank, 1967), and (g) analysis of classroom interaction (Clayton, 1967).

The use of video-tape as an inservice practice is an outgrowth of the micro-teaching technique developed in the early 1960's. In their pioneer work in developing micro-teaching as a pre-service and research instrument, Allen & Ryan (1969) alluded to its inservice capabilities and potential as follows: "Class size, scope of content, and time are all reduced. . . . focuses on training for the accomplishment of specific tasks. . . . greatly expands the normal . . . feedback dimension in teaching (pp. 2-3)."

The importance and effectiveness of the feedback dimension of video-tape have been confirmed. Research by Ishler (1967), Joyce (1967), and Heinrich & McKeegan (1969) indicated that the use of video-tape feedback is more successful in producing desired changes in the teaching

performance of student teachers than instruction not utilizing the feedback dimension. A study by Davis & Smoot (1969) revealed that student teachers using video-tape feedback illustrated significantly greater improvement in teaching behavior than did a control group not utilizing video-tape; specifically, the experimental group was more successful in asking probing and divergent questions and eliciting a more positive student response. In another study, student teachers who had experienced the use of video-tape in their preparation were evaluated more positively than were students whose training did not include feedback (Limbacher, 1969).

In a recent study designed to reduce teacher classroom monologue through video-tape feedback, Acheson (1965) found that a critique by teacher and supervisor was more productive than a critique by the teacher alone. Supporting Acheson (1965) concerning the value of group critique of tape feedback were the findings of Fuller, Beldmen & Richek (1966), Morse, Kysilka & Davis (1970), and Ranson (1969).

Educational television has been used with considerable success in demonstration teaching. Its value in illustrating methodology, educational materials, and equipment and techniques of instruction has been recognized (Marks *et al.*, 1971). Although efforts are generally made to present procedures, techniques, and materials in as nearly natural a context as possible, departures from reality are appropriate to focus attention upon those selected elements being demonstrated (Harris & Bissent, 1969). Despite criticisms regarding their unrealistic and unnatural format, model lessons presented under ideal circumstances can

sometimes be of value in clarifying the use of certain classroom procedures (Burton et al., 1955). Whether live or televised, demonstration teaching is an effective form of modeling which can produce significant changes in teaching behavior (Neagley & Evans, 1970).

Laboratory Method

The laboratory method is an inservice practice whose basic design incorporates many fundamental assumptions about learning--interest, involvement, discovery, transfer, and success. Laboratory experiences when incorporated into an appropriate design provide the opportunity for participants to relate past experiences to the activity itself, thereby leading to a high level of stimulation and understanding (Wolfe, 1965).

Reality simulation is an important aspect of many of the laboratory activities. For example, the success of role playing, frequently referred to as psychodrama or sociodrama, is a function of the degree to which the participants "act" and "feel" as they might in a real situation (Harris & Bissent, 1969). In commenting that simulation provides a setting in which teachers can experiment with a wide range of teaching approaches without fear of censure or failure, Cruickshank & Broadbent (1969) assert that

The creation of realistic games . . . provides them with life-long problem-solving experiences related to their present or future work. Such game situations require each player to make decisions based upon previous training and available information. After the player encounters an incident and makes a subsequent decision, he is provided with opportunities to see and/or discuss one or more possible consequences that may result (p. 2).

Characteristics common to most laboratory designs are summarized by Harris & Bissent (1969) as follows:

1. The participant is actively involved in solving the problem.
2. The problem situation is simulated as realistically as possible.
3. Quantifiable data are produced and recorded to reveal the nature of the participants.
4. Feedback on data is provided to permit each participant to contrast his reactions with those of a larger group or other groups.
5. Data are discussed and analyzed so as to lead to generalizations and implications for practice (p. 45).

The following discussion of role playing, brainstorming, and buzz sessions is intended to clarify further the many dimensions of the concept.

Harris & Bissent (1969) define role playing as "spontaneous dramatization involving one or more persons assuming designated roles in relation to a specified problem in a given situation (p. 261)." The dramatic episode is unplanned, unrehearsed, and structured only to the extent that the problem and the situation will allow. As an inservice technique, its design is particularly effective in dealing with human relations problems. Among the many purposes of role playing are the group analyses and discussion of concrete examples of behavior, an increased sensitivity to others' feelings and attitudes, the opportunity for participants to develop new attitudes, and the opportunity to enhance spontaneous verbal interaction. Important considerations in the planning of role-playing episodes include the need to focus on problems to which all group participants can relate, the explicit description of roles to be dramatized, and the timely termination of roles to avoid emotional involvement. In order for participants to act as they might in a real situation,

the fullest possible assumption of roles is encouraged and expected (Harris & Bissent, 1969).

Brainstorming is an inservice technique which attempts to develop an oral inventory of ideas. It is unique with respect to the special procedures used to assure that ideas orally expressed by participants are free from group analysis, evaluation, and criticism (Marks et al., 1971). Once the group has been oriented to the nature of the problem selected for brainstorming and the amount of time available for task completion, quantity of output is stressed in the development and flow of ideas which focus on the central problem. The value of this design resides in its capacity to lead to the stimulation of new ideas, the development of many solutions to problems, and the appreciation of others' ideas and approaches to problem-solving (Harris, 1963).

Whereas brainstorming is adaptable to a variety of group sizes, a modification of this model is designed to accommodate smaller group interaction. With a given topic and time limit established, the "buzz session" is a group activity of minimum structure wherein the group members are encouraged to express their ideas concerning a central topic. The small group is generally a temporary structure formed to examine a specific issue and report back to a larger group. Unlike brainstorming, the central thrusts of this design are the critical analysis of ideas and an effort to arrive at a consensus where possible (Harris & Bissent, 1969).

Wolfe (1965) observed that although actual evidence on change in participant behavior is sparse, there are data to document significant

gains in the assimilation of new knowledge as a result of laboratory experiences. His study revealed that when compared to other types of inservice practices the laboratory design received uniformly higher ratings by participants. However, regardless of its apparent appeal and effectiveness as an inservice practice, the laboratory approach is not a panacea for all inservice programs. There is no evidence to indicate that it is effective in skill development, restructuring value systems or efficiently presenting new information (Harris & Bissent, 1969).

Intensive Group Experience

Two aspects of teaching which dramatically influence the learning environment are knowledge of the subject matter and skills in interpersonal relations. It is to the latter category that the purposes of intensive group experiences are directed.

Only recently has education availed itself of this concept, a practice which has been widely accepted in training programs of government, business, and religion for some time (Flanders, 1970). Examples of various designs of this model include sensitivity training, T groups, and encounter groups. Each design is based primarily on group interaction in a climate of openness, risk taking, and honesty. Advocates assert that such a setting provides an opportunity for individuals to learn more of themselves and others than is possible in the usual social or working relationship (Lippitt & Fox, 1971).

King (1970) suggests that approaches designed to improve a teacher's interpersonal competency must take into account the complexity of the concept. He remarks that this competency is not likely to be

effected directly by any approach and that any "methods designed to effect it should consider a chain of factors. These factors are related in this manner: interpersonal competence is effected by self-perception; self-perception is effected by interpersonal feedback (p. 5)." The purposes which he envisions for the T-group approach are generally applicable to any intensive group design. These include improvement of interpersonal feedback, changing of self-perceptions, and change in interpersonal competence. Further, Lippitt & Fox (1971) add that one of the greater values of group interaction is the insight acquired by participants regarding the nature of group processes. These include but are not limited to the establishment of group norms, patterns of influence and communication, and internal leadership.

Though research to date on intensive group experience and its impact on school personnel is sparse, there is some evidence to support the notion that outcomes may lead to more innovative and constructive behaviors as well as improved interpersonal relationships. In a study designed to improve classroom peer relations, Schmuck (1967) combined sensitivity training, role playing, and a task-oriented approach during a four week summer workshop for elementary school teachers. It was found that the inservice experience of the teachers contributed to increased student-group cohesiveness, the opening of classroom communications, and the development of more positive student attitudes toward teachers, classmates, and learning.

Using an experimental-control design, Vogel (1967) attempted to evaluate the effects of T-group training on the teaching-learning

situation. He concluded that the T-group experience was effective in improving teacher-pupil rapport and maintaining a type of classroom climate consistent with the training objectives. Joyce (1967) found that a combination of sensitivity training, audio-visual aids, and role playing effectively led to substantial and positive changes in teaching style. In a study by Miles (1965), it was found that the interpersonal behavior of administrators who participated in T-group experiences improved more than did that of administrators in a control group not using T-group methods. A synthesis of the findings of three studies by Schmuck (1968) revealed that teachers who underwent T-group experiences were more likely to make constructive classroom behavior changes than were those teachers who did not participate.

However, despite the interest shown by some investigators, King (1970) summarizes the current state of research on the intensive group experience when he states, "It is too early to evaluate the effects of all these programs except to note that enthusiasm is out-running research and that the implications for teacher education need be clarified (p. 11)."

Interaction Analysis

Inservice practices designed to modify and categorize verbal communication within the classroom have been successful in altering teaching style and performance (Marks et al., 1971). Interaction analysis is a feedback technique developed by Flanders (1962) and modified by others (Medley, 1963; Schminke, 1962; Withall, 1963), which analyzes the classroom verbal interaction between teachers and students.

Using an observational matrix (Figure 1), a teacher-observer

Figure 1

Flanders Matrix: Summary of Categories for
Interaction Analysis

		1. ACCEPTS FEELING: accepts and clarifies the feeling tone of the students in a non-threatening manner. Feelings may be positive or negative. Predicting and recalling feelings is included.
TEACHER TALK	INDIRECT INFLUENCE	2. PRAISES OR ENCOURAGES: praises or encourages student action or behavior. Jokes that release tension, not at the expense of another individual; nodding head or saying "uh huh?" or "go on" are included. 3. ACCEPTS OR USES IDEAS OF STUDENTS: clarifying, building, or developing ideas or suggestions by the student. As teacher brings more of his own ideas into play, shift to category five. 4. ASKS QUESTIONS: asking a question about content or procedure with the intent that a student answer.
	DIRECT INFLUENCE	5. LECTURES: giving facts or opinions about content or procedure; expressing his own idea; asking rhetorical questions. 6. GIVES DIRECTIONS: directions, commands, or orders with which a student is expected to comply. 7. CRITICIZES OR JUSTIFIES AUTHORITY: statements intended to change student behavior from nonacceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self-reference.
STUDENT TALK		8. STUDENT TALK-RESPONSE: talk by students in response to teacher. Teacher initiates the contact or solicits student statement. 9. STUDENT TALK-INITIATION: talk by students, which they initiate. If "calling on" student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he did, use this category.
		10. SILENCE OR CONFUSION: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

categorizes classroom dialogue into one of ten classifications at three-second intervals. An analysis of the completed matrix differentiates between teacher-originated and student-originated communication. Flanders' basic assumption in the development of his model is that there is an optimum balance between the teacher's direct influence, which tends to inhibit the freedom of action by the student, and his indirect influence, which tends to enhance it. He asserts that through studying teaching behavior and by analyzing selected aspects of teacher-student interaction, the teacher is better able to approach this optimum balance.

In his modification of Flanders' model, Schminke (1962) presents to a group of teachers a scenario describing the teacher's classroom behavior. The scenario includes a complete transcript of student-teacher verbal interaction and serves as a basis for group critique in examining classroom procedures and teaching content. The "illustrative lesson" is advantageous in that it provides for orderly and well-planned discussions, scenario variance, and a high degree of objectivity as a result of the imaginary example avoiding personalities and personal involvement (Schminke, 1962).

There is much evidence to document the effectiveness of interaction analysis in altering teacher verbal behavior. Finske (1967) reported that student teachers using interaction analysis were more flexible, used more indirect discussion methods, and elicited more student-initiated talk than did members of a control group. Supporting the investigation of Finske were studies by Simon (1967), Kirk (1967), and Parrish (1969). A synthesis of their conclusions revealed that the use of interaction

analysis led to a more relaxed and conversational teaching style, a greater appreciation and utilization of student ideas, and an increase in student-initiated dialogue. In separate studies by Amidon (1970) and Bondi (1970) it was reported that student teachers using interaction analysis used more indirect behavior with students than did control groups whose training did not include interaction analysis. The effectiveness of his model led Flanders (1962) to the conclusion that "the use of interaction analysis was not only a training tool, but a research tool that permitted us to evaluate the in-service training by assessing the overt, spontaneous influence patterns teachers used in their classrooms (p. 316)."

Packaged Inservice Program

The use of packaged curricular programs by school systems has become commonplace. For some time schools have been able to select and use entire prepackaged curricula in virtually any discipline, or modify the programs according to the school's particular needs. Perhaps the most recent innovation in staff development is an outgrowth of this curricular approach--packaged programs for inservice education (Neagley & Evans, 1970). As an emerging pattern of professional growth, there is little evidence to support its worth or promise. Other than information and interest generated by the Educational Resources Information Center, it has received scant attention in the research journals and professional publications. Regardless of its embryonic state, the concept is supported by current scholarly opinion (Poliakoff, 1971).

The work of Popham and Baker (1973) is somewhat representative

of the commercially prepared programs which are becoming available. In describing their Teacher Competency Development System, they allude to its focus on the development of professional skills in curriculum, instruction, and evaluation. The program provides for a teacher self-evaluation of present teaching competencies, a self-diagnosis of areas in which development is needed, and a modular approach for developing competencies in specific areas. Self-instructional booklet modules have been developed to improve teaching competencies in a wide range of instructional areas, including classroom management, motivation of learners, individualization of instruction, and methodology.

Action Research

The participation of teachers in the examination and solution of problems important to them shows much promise as an inservice education practice (Shumsky, 1958). This application of scientific methodology by practitioners in order to better guide their decisions and actions has been termed action research (Corey, 1953). In the development of this concept, Collier (1945) stated that since research results are made operational by practitioners, it is vital that they "participate creatively in the research, impelled as it is, from their own area of need (p. 276)."

Corey adds that

Most of the study of what should be kept in the schools and what should go and what should be added must be done in hundreds of thousands of classrooms. . . . The studies must be undertaken by those who may have to change the way they do things as a result of the studies. Our schools cannot keep up with the life they are supposed to . . . improve unless teachers . . . continuously examine what they

are doing. . . . to identify the practices which must be changed to meet the needs and demands of modern life (p. viii).

A problem in educational research is the limited extent to which research actually modifies educational practices. In rationalizing this meager impact Morrison (1953) states that a severe limitation is the extent to which research efforts are conducted in a vacuum. Typically, "the research worker tended to define the problem, plan and conduct the study, interpret the data and write his report in isolation from those who translate his recommendations into action (p. 65)."

Caswell (1956) suggests that teachers are likely to modify teaching behaviors and practices as a consequence of their involvement in the solution of problems important to them. In agreement is Morrison, who concluded that

The people who may be expected to translate research recommendations into practice will do so more effectively when they participate in defining the problem, planning the broad scope of the study, collecting the data, interpreting the findings and reviewing the recommendations. Through such participation those who will implement the research pass through an intensive process of learning. When the research is finished, there are few surprises ahead for them. They are ready to carry on. The need for a period of re-education is reduced or eliminated (p. 65).

The structure and procedures of action research are not unlike those of formal educational research. The process includes problem identification and analysis, formulation of tentative hypotheses, gathering and interpreting data, formulating action, and evaluation (Taba & Noel, 1957). It should be emphasized, however, that formal research and action research are designed to serve different purposes. Formal research

is conducted primarily by professional investigators at the university and organizational level. Its function is to accumulate a body of valid procedures (O'Reilly, 1956). The function of action research, on the other hand, is not so much discovery of facts as to increase the effectiveness of the practitioner (Shumsky, 1958).

These, then, represent the professional growth activities selected for use in the study. Their treatment was designed to establish the justification for their inclusion in the survey instrument, A Rating of Inservice Education Practices. The review was intended to provide a general synthesis of scholarly opinion and research regarding the status of each as an inservice practice; hence, references were restricted to a general discussion of those findings and conclusions which applied to the major purposes of the research.

Summary

The central focus of Chapter II was to establish the relationship between the literature supporting the rationale of the investigation and the development of the study's questionnaire. Scholarly opinion contributed greatly to the dimensions presented in this chapter because of the paucity of research regarding evaluation of inservice programs and perceptions of school personnel.

The introductory section provided support for the study's central hypothesis and reinforced the growing importance of inservice education. In the second section selected studies relative to the classroom instructional problems of teachers were reviewed. This section provided the

rationale for the identification of selected teacher needs that were used in the questionnaire. Five specific areas of instructional difficulties emerged as being of central concern to teachers: (a) subject matter mastery, (b) methodology, (c) individualization, (d) student motivation, and (e) classroom management.

In the final section descriptions of selected inservice education practices used in the survey instrument were presented. Twenty selected professional growth activities were extracted from the literature for use in the study's questionnaire and were validated by a panel of judges. The treatment of each in this section confirmed its status as a recognized inservice practice.

The research design and methodology used in the study are summarized in Chapter III. Data treatment as described in Chapter III led to the analysis of the data presented in Chapter IV. Recommendations and conclusions resulting from this interpretation are presented in Chapter V.

CHAPTER III

RESEARCH DESIGN AND PROCEDURES

A description of research methodology and procedures used in the investigation is presented in this chapter. Dimensions of the study's research design will be described in the following order: (a) population, (b) sample, (c) instrumentation, (d) pilot study, (e) questionnaire distribution, (f) data treatment, and (g) the research hypotheses presented in null form.

Population

The population for this study was the secondary school educators in the public school system of Santa Clara County. Also included in this population were junior high school teachers and principals in unified school districts whose schools enrolled seventh, eighth, and ninth grade students. Excluded from the population were school-level certificated assignments considered to be ancillary in nature, such as counselors, librarians, school psychologists, and school nurses. Also excluded were teachers from county operated schools, continuation schools, and secondary schools in the district in which the investigator was employed.

A review of a 1971 Santa Clara County ethnic and racial report revealed the following characteristics of the total county school system:

(a) the student enrollment per district ranged from 14 to 36,722; (b) the ethnic composition of students was .3 percent American Indian, 2.5 percent Negro, 2.4 percent Oriental, 17.0 percent Spanish surname, .9 percent other non-white, and 76.9 percent other white; (c) the number of schools per district ranged from one to 50; (d) the number of classroom teachers per district ranged from one to 1464; (e) the number of principals per district ranged from one to 42; (f) the ethnic composition of certificated staff was .2 percent American Indian, 1.7 percent Negro, 3.1 percent Oriental, 3.5 percent Spanish surname, .3 percent other non-white, and 91.2 percent other white. Of the 33 separate school districts within the county, six are unified school districts, four are union high school districts, and one is a joint union high school district.

Sample

Two sample groups were derived from the population of secondary school educators. For the purpose of this investigation the entire population of 48 secondary school principals was accepted as the sample for that group. A five percent random sample (Sax, 1968) was obtained from the teacher population. Because an ancillary aspect of this investigation dealt with perceptual relationships between teachers from different subject areas, it was necessary to stratify the teacher sample by teaching assignment. The following procedures were used to derive the teacher sample:

1. A list of the major secondary school subject areas was developed. Each of the eleven major departments was assigned a departmental

number as follows: #1-Art, #2-Business, #3-English, #4-Homemaking, #5-Industrial Arts, #6-Foreign Language, #7-Mathematics, #8-Music, #9-Physical Education, #10-Science, #11-Social Science. All classroom teaching assignments were categorized into one of these eleven areas.

2. The 48 secondary schools included in the study were randomly numbered and arranged in numerical sequence from 1 to 48. Departmental numbers were then drawn and assigned to the first eleven schools. When the eleven departmental numbers had been assigned, all numbers were then replaced and the process was repeated for the next eleven schools. This selection process was repeated 16 times.

3. Prior to the initial draw the investigator established a priori that no school would be assigned the same departmental number twice. When the selection process produced a number that would pair with a previously drawn departmental number, the number was assigned to the next school in the numerical sequence which had not been assigned that number. The subsequent selection of a new departmental number would then be assigned to the original school. If it again paired with an earlier selection the reassignment process was repeated.

4. It was also determined before the initial draw that no school would be assigned more than four departments. Consequently, when a school received its fourth departmental assignment, the school was removed from the numerical sequence.

Departmental assignments are presented in Table 6. Each of 11 departments had been selected 16 times and randomly assigned to 48 secondary schools. This procedure resulted in 176 departmental assignments

Table 6

Departmental Assignments to Each of 48 Secondary Schools

School	Department	School	Department
A	Business, Foreign Language Home Economics, Physical Education	N	Foreign Language, Home Economics, Industrial Arts, Social Science
B	Business, Industrial Arts, Physical Education, Science	O	Art, Foreign Language, Home Economics, Music
C	Business, Industrial Arts, Science, Social Science	P	English, Foreign Language, Home Economics, Music
D	English, Foreign Language, Industrial Arts, Mathe- matics	Q	Home Economics, Industrial Arts, Physical Education, Science
E	Business, Industrial Arts, Science, Social Science	R	Foreign Language, In- dustrial Arts, Music, Science
F	Art, English, Home Economics, Mathematics	S	Art, Music, Science, Social Science
G	Home Economics, Industrial Arts, Physical Education, Science	T	Art, Business, Home Economics, Industrial Arts
H	Art, Mathematics, Music, Social Science	U	Foreign Language, Mathe- matics, Music, Science
I	Art, Music, Physical Education	V	Art, Business, English, Physical Education
J	Business, English, Industrial Arts, Mathematics	W	Business, Industrial Arts, Science, Social Science
K	Art, Foreign Language, Home Economics, Physical Education	X	Art, Business, Home Economics, Science
L	Home Economics, Industrial Arts, Music	Y	Art, English, Foreign Language, Social Science
M	Foreign Language, Industrial Arts, Physical Education, Science	Z	Business, Home Economics, Physical Education
		a	Business, Foreign Language, Science

Table 6 (Continued)

School	Department	School	Department
b	Business, Physical Education, Social Science	m	Art, English, Foreign Language, Mathematics
c	English, Home Economics, Science	n	English, Mathematics, Social Science
d	Art, Industrial Arts, Mathematics, Physical Education	o	English, Home Economics, Mathematics
e	Industrial Arts, Music, Social Science	p	English, Foreign Language, Mathematics, Physical Education
f	Business, Mathematics, Science, Social Science	q	English, Industrial Arts, Music, Physical Education
g	Art, Home Economics, Physical Education	r	Business, Home Economics, Social Science
h	Business, Foreign Language, Mathematics	s	Art, English, Mathematics, Social Science
i	Art, English, Music	t	English, Mathematics, Music, Social Science
j	English, Foreign Language, Mathematics, Music	u	Music, Physical Education, Social Science
k	Art, Mathematics, Music, Science	v	Business, Music, Science
l	Foreign Language, Physical Education, Social Science		

to 48 secondary schools from which the teacher sample was derived.

5. Following the assignment of departments to each school, clerical help was requested (Appendix H) to assist in the development of the stratified random sample. Upon receipt of the principal's approval (Appendix I) his secretary provided assistance in either of two ways:

(a) she mailed to the investigator departmentalized lists previously requested in the correspondence to her principal. From these lists teachers were randomly selected by a sampling process similar to the one described below; (b) if lists were not sent, the secretary was contacted by telephone. She informed the investigator of the number of teachers in each of the departments assigned to that particular school. The investigator then drew a random number for each department and requested that the secretary select from an alphabetized departmental list the name of the teacher corresponding to the number. Thus, after repeating either of the above procedures for each of the 48 schools, the five percent stratified random sample of 176 teachers was derived.

Instrumentation

The survey instrument, A Rating of Inservice Education Practices, was developed from a review of related literature. The construction of the questionnaire was guided by two considerations: (a) the organization, content, and format must relate specific inservice practices to specific instructional needs of teachers; and (b) the organization, content, and format must facilitate the generation of data which accurately describe the perceptions of respondents regarding the appropriateness of inservice education practices. As a result of these factors, three major dimensions of questionnaire construction emerged: (a) teacher needs, (b) inservice practices, and (c) rating procedure.

An important aspect of the investigation was the identification of teacher instructional needs to be used in the survey instrument.

Extracted from the literature as being of central concern to teachers were the following instructional problems: (a) subject matter mastery, (b) methodology, (c) individualization, (d) student motivation, and (e) classroom management.

A second dimension of instrumentation was the selection of inservice education practices to be used in the investigation. The following guidelines were established to facilitate the selection process: (a) the central criterion determining the selection of each would be the appropriateness of the practice in relation to the instructional difficulties selected for investigation, (b) only those practices which dealt directly with the improvement of the classroom instructional performance of teachers would be considered for inclusion, and (c) their selection would be contingent upon acceptance and validation by a panel of judges. With these criteria in mind, an examination of the spectrum of inservice practices described in the literature led to the identification of the following selected inservice practices used in the survey instrument:

- | | |
|---|---------------------------------|
| 1. Formal Academic Study | 11. Visitation, Within School |
| 2. Institute | 12. Visitation, Other School |
| 3. Professional Conference | 13. Team Teaching |
| 4. Workshop | 14. Educational Television |
| 5. Professional Reading | 15. Video-Tape |
| 6. Consultancy Service | 16. Laboratory Method |
| 7. Meeting, Faculty | 17. Intensive Group Experience |
| 8. Meeting, Departmental | 18. Interaction Analysis |
| 9. Teacher-Principal Conference | 19. Packaged Inservice Programs |
| 10. Teacher-Department
Chairman Conference | 20. Action Research |

A Likert-type scale represented the third component of questionnaire construction. A six-point rating scale was used in order to eliminate respondent neutrality. Participants were asked to consider the appropriateness of specific inservice practices in meeting specific teacher needs. Scaled responses ranged from "very appropriate" to "very inappropriate."

The questionnaire was submitted to a panel of judges (Appendices E, F) for review and validation. The composition of the panel included three professors of educational administration, two educational researchers, a county deputy superintendent (curriculum/instruction), a district deputy superintendent (curriculum/instruction), and a secondary school vice principal (curriculum/instruction). The final draft of the questionnaire packet (Appendices B, C, and D) incorporated the panel's suggestions regarding changes in content and wording.

Pilot Study

A pilot study was conducted in the investigator's school to further validate the survey instrument. Two teachers were randomly selected from each of the school's eleven departments--a total of 22 teachers comprising the study. Participants were asked to return the completed questionnaire within one week. Criticisms and suggestions regarding clarity, content, format and wording were solicited (Appendix G). Incorporated in the final draft of the questionnaire packet were modifications of format and wording suggested by the pilot group.

A second purpose of the pilot study was to establish, through

test-retest procedures, the reliability of the questionnaire. The pilot group was re-administered the questionnaire six weeks following the initial survey. Twenty-two Pearson product-moment correlations were computed to analyze the paired responses of participants to the two tests. The test-retest reliability coefficient for the inservice practice-teacher need responses ranged from .34 to .88 with a median value of .68.

Questionnaire Distribution

The questionnaire was mailed to members of the two sample groups. Accompanying the questionnaire was a cover letter (Appendix A) in which the County Superintendent of Schools specified the purpose and importance of the study, alluded to endorsements by the Santa Clara County Office of Education and the Association of California School Administrators, and encouraged teacher and principal participation in the investigation. Participants were asked to respond within seven days. Follow-up questionnaires were mailed to non-respondents on the tenth day following the initial mailing. A response within seven days was requested (Appendix J). On the 20th day following the initial mailing a second follow-up letter was mailed, requesting a response within five days (Appendix K).

To determine if the results could be generalized to the entire sample, an attempt was made to ascertain the degree of bias, if any, existing between responding and non-responding groups. For this reason a 50 percent random sample of non-respondents was derived (Van Dalen, 1966) and the ten teachers comprising this sample were contacted (Appendix L). These returns were considered to be representative of the perceptions of

the 21 non-respondents and were compared with those of the responding group.

Data Treatment

Data treatment was designed to determine the significance of differences which may exist between the perceptions of teachers and principals regarding the appropriateness of selected inservice education practices in meeting specific teacher needs. The study's ancillary questions mandated an analysis which would reflect differences within the teacher group as well. Guided by these considerations, the data derived from the study's questionnaire, A Rating of Inservice Education Practices, were analyzed as described below. The .01 level of significance was deemed to be appropriate for each aspect of the investigation.

1. The t-test procedures were used to determine if significant differences existed between the perceptions of principals and teachers regarding the appropriateness of inservice education practices in meeting specific teacher needs. Similarly, t-test procedures were used to determine if there were significant perceptual differences between male and female teachers regarding the appropriateness of inservice practices in meeting specific teacher needs.

2. Pearson product-moment correlation procedures were used to ascertain whether a relationship existed between years of experience and teachers' perceptions of the appropriateness of inservice practices in meeting specific teacher needs.

3. The analysis of variance procedures were used to determine

if significant differences existed between teachers from different departments regarding the appropriateness of inservice education practices in meeting specific teacher needs.

4. Histograms were used to illustrate by respondent category the mean score derived for each inservice education practice relative to each specific teacher need.

Statement of Null Hypotheses

The central hypothesis of the investigation stated in null form leads to the assertion that there are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice education practices in the amelioration of specific areas of instructional difficulties. Stated in null form, the research hypotheses assert:

Hypothesis 1: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of subject matter mastery.

Hypothesis 2: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of methodology.

Hypothesis 3: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher

need of individualization.

Hypothesis 4: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of student motivation.

Hypothesis 5: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of classroom management.

An important aspect of the investigation focused on answers to the following ancillary questions:

1. Does a relationship exist between the teacher's years of experience and his perceptions regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties?

2. Do perceptual differences regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties exist between male and female teachers?

3. Do perceptual differences regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties exist between teachers from different areas of teaching specialization?

Summary

The study's research design was presented in this chapter.

Through the execution of this design, the research hypotheses were tested, data analyzed and interpreted, and conclusions and recommendations ultimately formulated.

The chapter was divided into seven sections. Described in section one was the population selected for the study. The sampling process was discussed in section two. In section three the development of the study's questionnaire, A Rating of Inservice Education Practices, was presented. The pilot study used in the research was discussed in the fourth section. Questionnaire distribution and data treatment were explained in sections five and six. The study's hypotheses were stated in null form in the concluding section.

Data are analyzed and interpreted in Chapter IV. Conclusions and recommendations will be presented in Chapter V.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

The data analyzed in Chapter IV were obtained from participants' responses to the questionnaire, A Rating of Inservice Education Practices. Presented in this chapter are: (a) data pertaining to the questionnaire return, (b) data pertaining to the research hypotheses, and (c) data pertaining to the ancillary questions.

Data Pertaining to Questionnaire Return

The questionnaire used in this study was designed to assess the perceptions of secondary school educators in Santa Clara County regarding the appropriateness of selected inservice education practices in meeting specific teacher needs. Through this assessment the following goals of this investigation were achieved: (a) to determine if perceptual differences exist between teachers and principals regarding the appropriateness of inservice education activities, and (b) to determine if perceptual relationships and/or differences exist between teacher groups when considering experiential levels, sex, and subject area assignments of the teachers.

From a review of the research, five areas of instructional difficulties were identified as representative of the more common inservice needs of teachers:

1. Subject Matter Mastery: the need to increase knowledge of

the subject matter in a specific teaching area.

2. Methodology: the need to gain insights and skills which may lead to more effective utilization of teaching techniques and materials.

3. Individualization: the need to gain insights and skills which may lead to a more personalized approach to classroom instruction.

4. Student Motivation: the need to gain insights and skills which may assist the teacher in increasing student motivation.

5. Classroom Management: the need to gain insights and skills which may lead to improved classroom discipline and a more effective learning environment.

Twenty selected inservice practices were extracted from the literature as being most appropriate in meeting this range of teacher needs. These two dimensions, teacher needs and selected inservice practices, were the major components of the survey instrument.

The questionnaire was submitted to a panel of judges for validation and a pilot study was conducted. An analysis of the data generated by test-retest procedures over a six week interval established a median reliability coefficient of .68.

The sample groups were derived from teachers and principals in Santa Clara County and the questionnaires were mailed. Participants were asked to indicate their perceptions regarding the appropriateness of inservice education practices in meeting specific educational needs. Responses on a six-point Likert-type scale ranged from "very inappropriate" to "very appropriate." Follow-up questionnaires were mailed to non-

respondents on the 10th and 20th days following the initial mailing. On the 25th day, a 50 percent random sample of non-respondents was derived. The ten teachers comprising this sample were mailed questionnaires. An analysis of the five responses, a 50 percent return, revealed no significant differences when compared with those who had responded before the 25th day.

Information regarding questionnaire return is summarized in Table 7. Eighty-seven questionnaires were received from teachers by the initial deadline. Follow-up procedures yielded another 75 questionnaires and an ultimate return of 163, or a 93 percent response. Twenty-four questionnaires were received from principals by the initial deadline. Follow-up procedures yielded another 22 questionnaires and an ultimate return of 46, or a 96 percent response.

Of the 224 questionnaires mailed to both teachers and principals, 209 were returned, an overall response of 93 percent. Response patterns on 11 questionnaires suggested that the motivation of the respondents was questionable or that the directions were misunderstood. For this reason, these questionnaires were rejected. Three questionnaires were received after the data had been submitted to the computer center for processing. Research findings, then, were generated from the analysis and interpretation of 195 questionnaires, or an 87 percent response.

Data Pertaining to the Research Hypotheses

The t-test procedures were used to determine the statistical significance of differences between teacher and principal samples. Mean

Table 7

An Analysis of the Number and Percent of Questionnaire
Response by Participant Category

Position	Number in Sample	Usable Return	
		Number	Percent
Teachers: Art	16	12	75.0
Teachers: Business	16	14	87.5
Teachers: English	16	16	100.0
Teachers: Home Economics	16	15	93.8
Teachers: Industrial Arts	16	13	81.3
Teachers: Language	16	13	81.3
Teachers: Mathematics	16	12	75.0
Teachers: Music	16	11	68.8
Teachers: Physical Education	16	16	100.0
Teachers: Science	16	15	93.8
Teachers: Social Science	16	11	68.8
Teachers: Total	176	150	85.2
Principals	48	45	93.8
Totals	224	195	87.1

scores and standard deviations were computed by respondent category for each of the 20 inservice practices as it related to each of the five instructional needs. Histograms were used to illustrate response profiles for each group and significant differences between groups relative to the research hypotheses.

Presented below in null form are the research hypotheses upon which this investigation is focused:

Hypothesis 1. There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of subject matter mastery.

Hypothesis 2. There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of methodology.

Hypothesis 3. There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of individualization.

Hypothesis 4. There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of student motivation.

Hypothesis 5. There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of classroom management.

The data leading to the acceptance or rejection of these null hypotheses are presented by areas of specific teacher needs. In analyzing the data the mean scores were interpreted on a continuum of value from 1 to 6 as follows: (a) "very inappropriate" - 1.0 to 1.5; (b) "inappropriate" - 1.51 to 2.50; (c) "marginally inappropriate" - 2.51 to 3.50;

(d) "marginally appropriate" - 3.51 to 4.50; (e) "appropriate" - 4.51 to 5.50; and (f) "very appropriate" - 5.51 to 6.00.

Subject Matter Mastery

Presented in Table 8 are mean scores and standard deviations produced by teachers and principals when considering the appropriateness of selected inservice practices in meeting the teacher need of subject matter mastery.

An analysis of the data in Table 8 suggests that teachers and principals consider formal academic study to be the most appropriate inservice practice in meeting the teacher need of subject matter mastery. Formal academic study received the highest mean score of both teacher and principal groups, teachers producing a mean score of 5.25, while principals produced a mean score of 5.29.

The data suggest that teachers and principals may differ in their perceptions of the least appropriate inservice practice in meeting the teacher need of subject matter mastery. Teachers considered teacher-principal conferences to be "inappropriate," with a low mean score of 2.48, while principals rated faculty meetings to be "marginally appropriate" with a low mean score of 2.69.

The data further suggest that the perceived appropriateness of teacher-principal conferences in meeting this particular need produced the greatest disagreement between teachers and principals. Teachers ascribed to it a rating of "inappropriate" with a mean score of 2.48, while principals considered it to be "marginally inappropriate" with a mean score of 2.95. Closest agreement between the two groups was found

Table 8

A Summary of Mean Scores and Standard Deviations of 20
Inservice Education Practices Relating to Subject Matter Mastery
According to Respondent Level

Inservice Education Practice	Teacher		Principal	
	Mean	S.D.	Mean	S.D.
1. Formal Academic Study	5.25	1.01	5.29	1.14
2. Institute	4.59	1.26	4.31	1.41
3. Professional Conference	4.35	1.45	4.13	1.18
4. Workshop	4.71	1.24	4.38	1.42
5. Professional Reading	4.88	1.34	4.89	1.11
6. Consultancy Service	3.55	1.50	3.84	1.04
7. Meeting, Faculty	2.55	1.45	2.69	1.44
8. Meeting, Departmental	3.85	1.65	4.07	1.37
9. Teacher-Principal Conference	2.48	1.63	2.95	1.49
10. Teacher-Department Chairman Conference	3.66	1.61	4.00	1.41
11. Visitation, Within School	3.41	1.59	3.67	1.43
12. Visitation, Other School	4.02	1.64	3.58	1.45
13. Team Teaching	3.93	1.47	3.89	1.23
14. Educational Television	3.70	1.53	3.98	1.08
15. Video-Tape	3.69	1.67	3.78	1.44
16. Laboratory Method	3.43	1.64	3.34	1.48
17. Intensive Group Experience	2.79	1.61	2.84	1.69
18. Interaction Analysis	2.87	1.54	2.80	1.70
19. Packaged Inservice Program	3.31	1.53	3.29	1.25
20. Action Research	3.66	1.57	3.42	1.56

in the perceived appropriateness of professional reading in meeting this particular need. Both groups considered this practice to be "appropriate" with group means ranging from 4.88 to 4.89.

A ranking of the five most appropriate inservice practices in meeting the teacher need of subject matter mastery as perceived by teachers were: (a) formal academic study (M=5.25), (b) professional reading (M=4.88), (c) workshops (M=4.71), (d) institutes (M=4.59), and (e) professional conferences (M=4.59).

A ranking of the five least appropriate inservice practices in meeting the teacher need of subject matter mastery as perceived by teachers were: (a) teacher-principal conferences (M=2.48), (b) faculty meetings (M=2.55), (c) intensive group experiences (M=2.79), (d) interaction analysis (M=2.87), and (e) packaged inservice programs (M=3.31).

A ranking of the five most appropriate inservice education practices in meeting the teacher need of subject matter mastery as perceived by principals were: (a) formal academic study (M=5.29), (b) professional reading (M=4.89), (c) workshops (M=4.38), (d) institutes (M=4.31), and (e) professional conferences (M=4.13).

A ranking of the five least appropriate inservice education practices in meeting the teacher need of subject matter mastery as perceived by principals were: (a) faculty meetings (M=2.69), (b) interaction analysis (M=2.80), (c) intensive group experiences (M=2.84), (d) teacher-principal conferences (M=2.95), and (e) packaged inservice programs (M=3.29).

Presented in Table 9 are t-test results. An analysis of the

Table 9

Results of t-test Procedures for 20 Inservice Education
Practices Relating to Subject Matter Mastery
According to Respondent Level

Variable	t Value	Degrees of Freedom	P Less Than
1. Formal Academic Study	0.20	193	0.840
2. Institute	-1.27	192	0.207
3. Professional Conference	-0.91	192	0.364
4. Workshop	-1.51	193	0.133
5. Professional Reading	0.04	193	0.968
6. Consultancy Service	1.24	191	0.217
7. Meeting, Faculty	0.55	193	0.582
8. Meeting, Departmental	0.79	193	0.432
9. Teacher-Principal Conference	1.74	191	0.083
10. Teacher-Department Chairman Conference	1.26	191	0.208
11. Visitation, Within School	0.96	191	0.337
12. Visitation, Other School	-1.62	190	0.106
13. Team Teaching	-0.18	189	0.860
14. Educational Television	1.14	189	0.257
15. Video-Tape	0.32	188	0.750
16. Laboratory Method	-0.31	187	0.753
17. Intensive Group Experience	0.21	187	0.831
18. Interaction Analysis	-0.27	185	0.787
19. Packaged Inservice Program	-0.09	187	0.925
20. Action Research	-0.88	186	0.380

data revealed no significant differences in the way that teachers and principals perceive the appropriateness of selected inservice practices in meeting the teacher need of subject matter mastery. For this reason all elements of Hypothesis 1 were accepted.

Figure 2 is a histogram which summarizes the responses of teachers and principals regarding the appropriateness of each inservice education practice in meeting the teacher need of subject matter mastery.

Methodology

Presented in Table 10 are mean scores and standard deviations produced by teachers and principals when considering the appropriateness of selected inservice practices in meeting the teacher need of methodology.

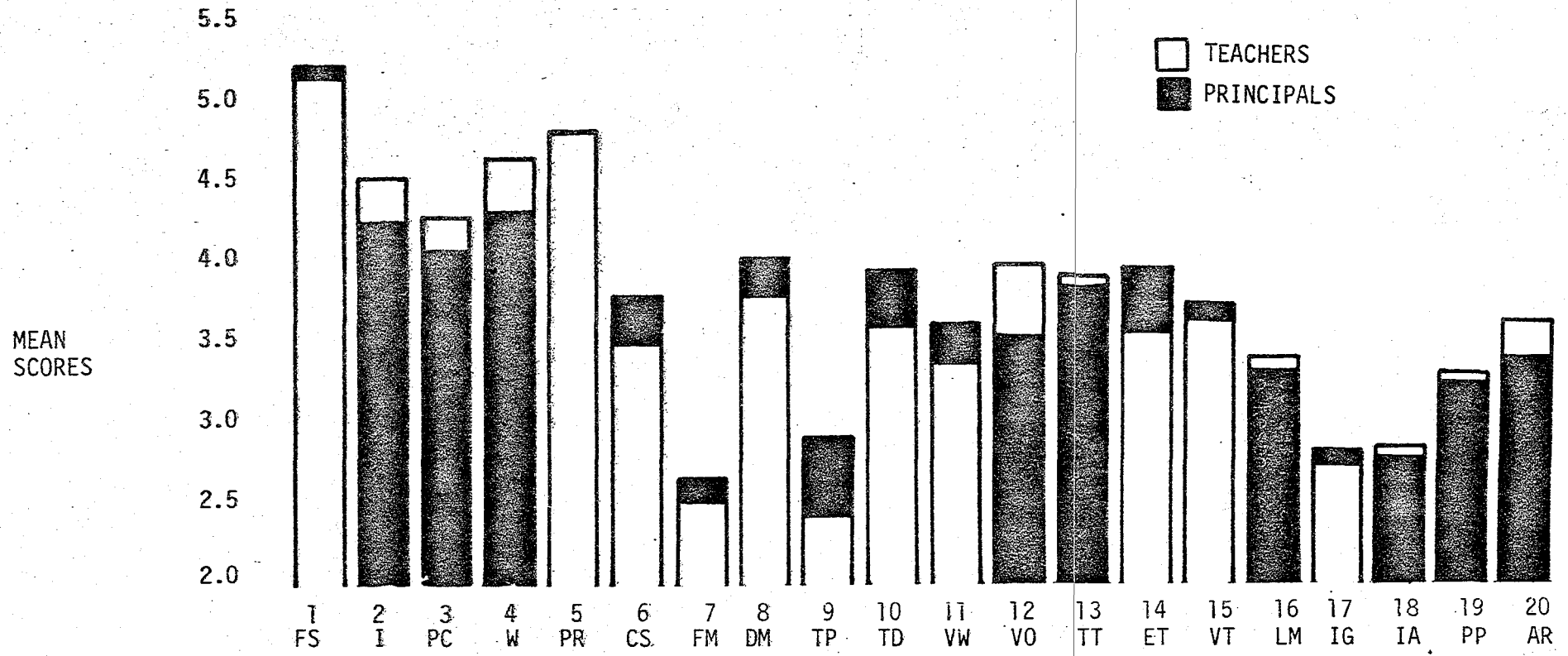
An analysis of the data in Table 10 suggests that teachers and principals consider workshops to be the most appropriate inservice practice in meeting the teacher need of methodology. Workshops received the highest mean score of both teacher and principal groups, teachers producing a mean score of 5.04, while principals produced a mean score of 5.18.

The data suggest that teachers and principals consider faculty meetings to be the least appropriate inservice education practice in meeting the teacher need of methodology. In each group it was considered to be "inappropriate," with teachers producing a low mean score of 2.71, while principals produced a low mean score of 3.20.

The data further suggest that the perceived appropriateness of teacher-principal conferences in meeting this particular need produced the greatest disagreement between teachers and principals. Teachers

Figure 2

Teacher Need: Subject Matter Mastery



INSERVICE EDUCATION PRACTICES

- | | | | |
|-----------------------------------|---|----------------------------------|-----------------------------------|
| Code: 1. FS-Formal Academic Study | 6. CS-Consultancy Service | 11. VW-Visitation, Within School | 16. LM-Laboratory Method |
| 2. I -Institute | 7. FM-Meeting, Faculty | 12. VO-Visitation, Other School | 17. IG-Intensive Group Experience |
| 3. PC-Professional Conference | 8. DM-Meeting, Departmental | 13. TT-Team Teaching | 18. IA-Interaction Analysis |
| 4. W -Workshop | 9. TP-Teacher-Principal Conference | 14. ET-Educational Television | 19. PP-Packaged Inservice Program |
| 5. PR-Professional Reading | 10. TD-Teacher-Department Chairman Conference | 15. VT-Video-Tape | 20. AR-Action Research |

Table 10

A Summary of Mean Scores and Standard Deviations of 20
Inservice Education Practices Relating to Methodology
According to Respondent Level

Inservice Education Practice	Teacher		Principal	
	Mean	S.D.	Mean	S.D.
1. Formal Academic Study	4.51	1.34	4.44	1.14
2. Institute	4.55	1.29	4.78	1.06
3. Professional Conference	4.64	1.19	4.73	1.05
4. Workshop	5.04	1.10	5.18	1.15
5. Professional Reading	4.45	1.28	4.40	1.03
6. Consultancy Service	3.90	1.49	4.44	0.99
7. Meeting, Faculty	2.71	1.46	3.20	1.24
8. Meeting, Departmental	4.18	1.49	4.36	1.33
9. Teacher-Principal Conference	3.01	1.59	4.25	1.01
10. Teacher-Department Chairman Conference	4.22	1.45	4.71	1.14
11. Visitation, Within School	4.43	1.33	4.96	1.09
12. Visitation, Other School	4.76	1.32	4.93	1.05
13. Team Teaching	4.38	1.45	4.38	0.98
14. Educational Television	3.97	1.49	4.31	1.13
15. Video-Tape	4.30	1.48	4.82	1.01
16. Laboratory Method	4.03	1.47	4.39	0.97
17. Intensive Group Experience	3.34	1.65	3.44	1.50
18. Interaction Analysis	3.71	1.58	3.91	1.44
19. Packaged Inservice Program	3.41	1.46	4.07	0.89
20. Action Research	4.18	1.47	4.58	1.10

ascribed to it a rating of "marginally inappropriate" with a mean score of 3.01, while principals considered it to be "marginally appropriate" with a mean score of 4.25. Closest agreement between the two groups was found in the perceived appropriateness of team teaching in meeting this particular need. Both groups considered this practice to be "appropriate" with identical group means of 4.38.

A ranking of the five most appropriate inservice practices in meeting the teacher need of methodology as perceived by teachers were: (a) workshops (M=5.04), (b) visitations to other schools (M=4.76), (c) professional conferences (M=4.64), (d) institutes (M=4.55), and (e) formal academic study (M=4.51).

A ranking of the five least appropriate inservice practices in meeting the teacher need of methodology as perceived by teachers were: (a) faculty meetings (M=2.71), (b) teacher-principal conferences (M=3.01), (c) intensive group experiences (M=3.34), (d) packaged inservice programs (M=3.41), and (e) interaction analysis (M=3.71).

A ranking of the five most appropriate inservice education practices in meeting the teacher need of methodology as perceived by principals were: (a) workshops (M=5.18), (b) within-school visitations (M=4.96), (c) visitation, other school (M=4.93), (d) institute (M=4.78), and (e) professional conferences (M=4.73).

A ranking of the five least appropriate inservice education practices in meeting the teacher need of methodology as perceived by principals were: (a) faculty meetings (M=3.20), (b) intensive group experience (M=3.44), (c) interaction analysis (M=3.91), (d) packaged

inservice programs (M=4.07), and (e) teacher-principal conferences (M=4.25).

Presented in Table 11 are t-test results. These data show that there are significant differences in the way that teachers and principals perceive the appropriateness of the following inservice practices in meeting the teacher need of methodology:

1. Teacher-principal conferences
2. Packaged inservice programs.

Thus, with regard to the selected inservice practices of teacher-principal conferences and packaged inservice programs Hypothesis 2 was rejected. An analysis of the data revealed no significant differences with respect to the remaining 18 practices, and with respect to these elements the null hypothesis was accepted.

Figure 3 is a histogram which summarizes the responses of teachers and principals regarding the appropriateness of each inservice education practice in meeting the teacher need of methodology.

Individualization

Presented in Table 12 are mean scores and standard deviations produced by teachers and principals when considering the appropriateness of selected inservice practices in meeting the teacher need of individualization.

An analysis of the data in Table 12 suggests that teachers and principals consider workshops to be the most appropriate inservice practice in meeting the teacher need of individualization. Workshops

Table 11

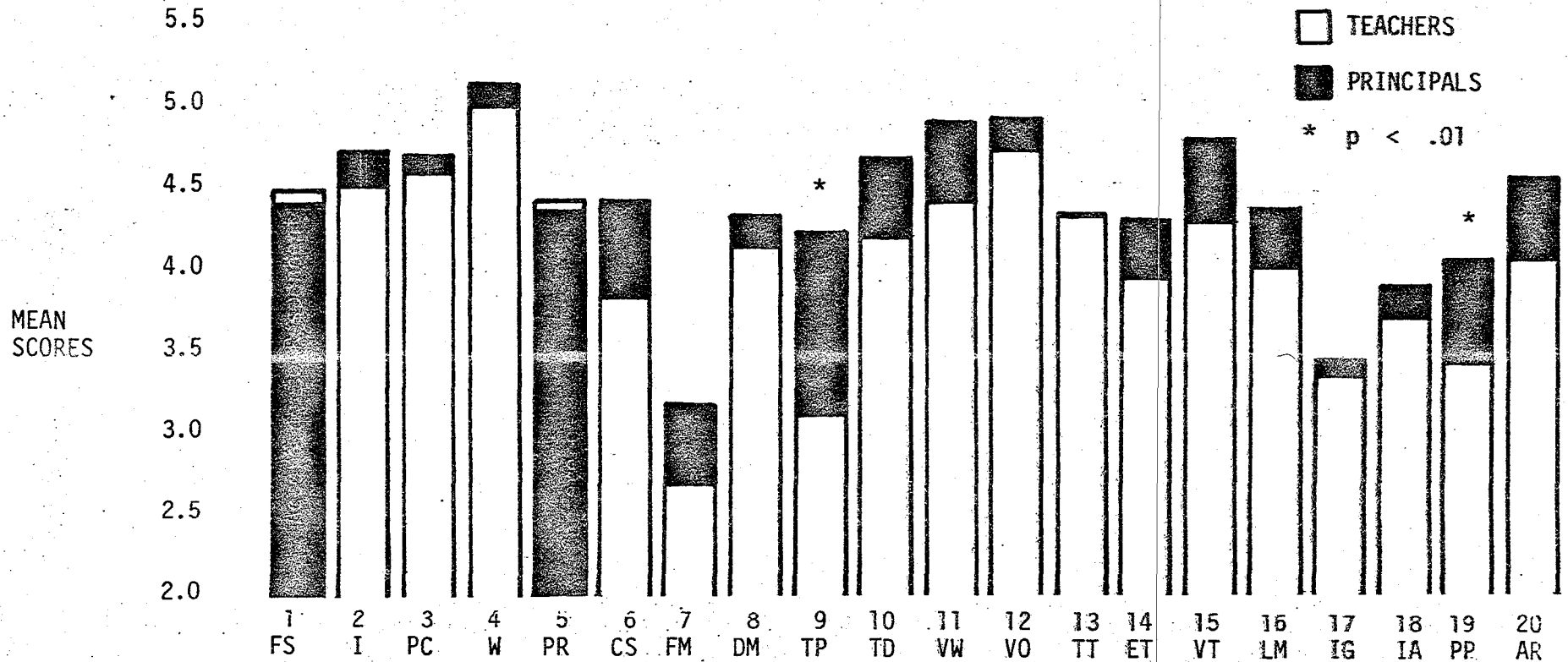
Results of t-test Procedures for 20 Inservice Education
Practices Relating to Methodology
According to Respondent Level

Variable	t Value	Degrees of Freedom	P Less Than
1. Formal Academic Study	-0.31	193	0.755
2. Institute	1.07	190	0.284
3. Professional Conference	0.48	192	0.629
4. Workshop	0.73	193	0.467
5. Professional Reading	-0.26	193	0.798
6. Consultancy Service	2.30	191	0.022
7. Meeting, Faculty	2.02	193	0.044
8. Meeting, Departmental	0.71	193	0.479
9. Teacher-Principal Conference	4.87	191	0.000*
10. Teacher-Department Chairman Conference	2.10	191	0.037
11. Visitation, Within School	2.44	191	0.015
12. Visitation, Other School	0.80	190	0.425
13. Team Teaching	0.00	189	0.996
14. Educational Television	1.40	189	0.162
15. Video-Tape	2.20	188	0.029
16. Laboratory Method	1.49	187	0.139
17. Intensive Group Experience	0.37	186	0.712
18. Interaction Analysis	0.76	185	0.451
19. Packaged Inservice Program	2.86	187	0.005*
20. Action Research	1.69	185	0.092

* p < .01

Figure 3

Teacher Need: Methodology



□ TEACHERS
 ■ PRINCIPALS
 * p < .01

INSERVICE EDUCATION PRACTICES

- | | | | |
|-----------------------------------|---|----------------------------------|-----------------------------------|
| Code: 1. FS-Formal Academic Study | 6. CS-Consultancy Service | 11. VW-Visitation, Within School | 16. LM-Laboratory Method |
| 2. I -Institute | 7. FM-Meeting, Faculty | 12. VO-Visitation, Other School | 17. IG-Intensive Group Experience |
| 3. PC-Professional Conference | 8. DM-Meeting, Departmental | 13. TT-Team Teaching | 18. IA-Interaction Analysis |
| 4. W -Workshop | 9. TP-Teacher-Principal Conference | 14. ET-Educational Television | 19. PP-Packaged Inservice Program |
| 5. PR-Professional Reading | 10. TD-Teacher-Department Chairman Conference | 15. VT-Video-Tape | 20. AR-Action Research |

Table 12

A Summary of Mean Scores and Standard Deviations of 20
Inservice Education Practices Relating to Individualization
According to Respondent Level

	Inservice Education Practice	Teacher		Principal	
		Mean	S.D.	Mean	S.D.
1.	Formal Academic Study	4.04	1.42	4.49	1.10
2.	Institute	4.42	1.22	4.80	0.87
3.	Professional Conference	4.39	1.30	4.53	1.12
4.	Workshop	4.99	1.08	5.18	1.05
5.	Professional Reading	4.19	1.33	4.44	0.94
6.	Consultancy Service	3.86	1.53	4.69	1.00
7.	Meeting, Faculty	2.66	1.34	3.27	1.36
8.	Meeting, Departmental	3.96	1.56	4.33	1.15
9.	Teacher-Principal Conference	2.95	1.59	3.82	1.19
10.	Teacher-Department Chairman Conference	3.98	1.48	4.47	1.22
11.	Visitation, Within School	4.22	1.24	4.89	1.03
12.	Visitation, Other School	4.69	1.25	5.02	1.06
13.	Team Teaching	4.07	1.51	4.07	1.37
14.	Educational Television	3.58	1.53	4.44	1.14
15.	Video-Tape	3.88	1.55	4.44	1.20
16.	Laboratory Method	3.85	1.52	4.20	1.23
17.	Intensive Group Experience	3.46	1.60	3.58	1.50
18.	Interaction Analysis	3.73	1.62	3.73	1.39
19.	Packaged Inservice Program	3.50	1.47	4.13	0.94
20.	Action Research	4.11	1.40	4.36	1.30

received the highest mean score of both teacher and principal groups, teachers producing a mean score of 4.99, while principals produced a mean score of 5.18.

The data suggest that teachers and principals consider faculty meetings to be the least appropriate inservice education practice in meeting the teacher need of individualization. In each group it was considered to be "marginally inappropriate," with teachers producing a low mean score of 2.66, while principals produced a low mean score of 3.27.

The data further suggest that the perceived appropriateness of teacher-principal conferences in meeting this particular need produced the greatest disagreement between teachers and principals. Teachers ascribed to it a rating of "marginally inappropriate" with a mean score of 2.95, while principals considered it to be "marginally appropriate" with a mean score of 3.82. Closest agreement between the two groups was found in the perceived appropriateness of team teaching in meeting this particular need. Both groups considered this practice to be "marginally appropriate" with identical mean scores of 4.07.

A ranking of the five most appropriate inservice education practices in meeting the teacher need of individualization as perceived by teachers were: (a) workshops (M=4.99), (b) visitations to other schools (M=4.69), (c) institutes (M=4.42), (d) professional conferences (M=4.39), and (e) within-school visitations (M=4.22).

A ranking of the five least appropriate inservice education practices in meeting the teacher need of individualization as perceived

by teachers were: (a) faculty meetings (M=2.66), (b) teacher-principal conferences (M=2.95), (c) intensive group experiences (M=3.46), (d) packaged inservice programs (M=3.50), and (e) educational television (M=3.58).

A ranking of the five most appropriate inservice education practices in meeting the teacher need of individualization as perceived by principals were: (a) workshops (M=5.18), (b) visitations to other schools (M=5.02), (c) within-school visitations (M=4.89), (d) institutes (M=4.80), and (e) consultancy service (M=4.69).

A ranking of the five least appropriate inservice education practices in meeting the teacher need of individualization as perceived by principals were: (a) faculty meetings (M=3.27), (b) intensive group experiences (M=3.58), (c) interaction analysis (M=3.73), (d) teacher-principal conferences (M=3.82), and (e) team teaching (M=4.07).

Presented in Table 13 are t-test results. These data show that there are significant differences in the way that teachers and principals perceive the appropriateness of the following inservice practices in meeting the teacher need of individualization:

1. Consultancy service
2. Faculty meetings
3. Teacher-principal conferences
4. Within-school visitations
5. Educational television
6. Packaged inservice programs.

Thus, with regard to the selected inservice education practices

Table 13

Results of t-test Procedures for 20 Inservice Education
Practices Relating to Individualization
According to Respondent Level

Variable	t Value	Degrees of Freedom	P Less Than
1. Formal Academic Study	1.95	193	0.052
2. Institute	1.97	190	0.050
3. Professional Conference	0.66	191	0.511
4. Workshop	1.05	191	0.295
5. Professional Reading	1.20	192	0.231
6. Consultancy Service	3.43	191	0.001*
7. Meeting, Faculty	2.63	192	0.009*
8. Meeting, Departmental	1.49	192	0.138
9. Teacher-Principal Conference	3.37	190	0.001*
10. Teacher-Department Chairman Conference	2.01	190	0.046
11. Visitation, Within School	3.26	190	0.001*
12. Visitation, Other School	1.60	189	0.111
13. Team Teaching	-0.01	188	0.993
14. Educational Television	3.51	188	0.001*
15. Video-Tape	2.24	187	0.027
16. Laboratory Method	1.43	186	0.156
17. Intensive Group Experience	0.45	185	0.656
18. Interaction Analysis	0.03	185	0.976
19. Packaged Inservice Program	2.73	186	0.007*
20. Action Research	1.03	185	0.302

* p < .01

of consultancy service, faculty meetings, teacher-principal conferences, within-school visitations, educational television, and packaged inservice programs Hypothesis 3 was rejected. An analysis of the data revealed no significant differences with respect to the remaining 14 practices, and with respect to these elements the null hypothesis was accepted.

Figure 4 is a histogram which summarizes the responses of teachers and principals regarding the appropriateness of each inservice education practice in meeting the teacher need of individualization.

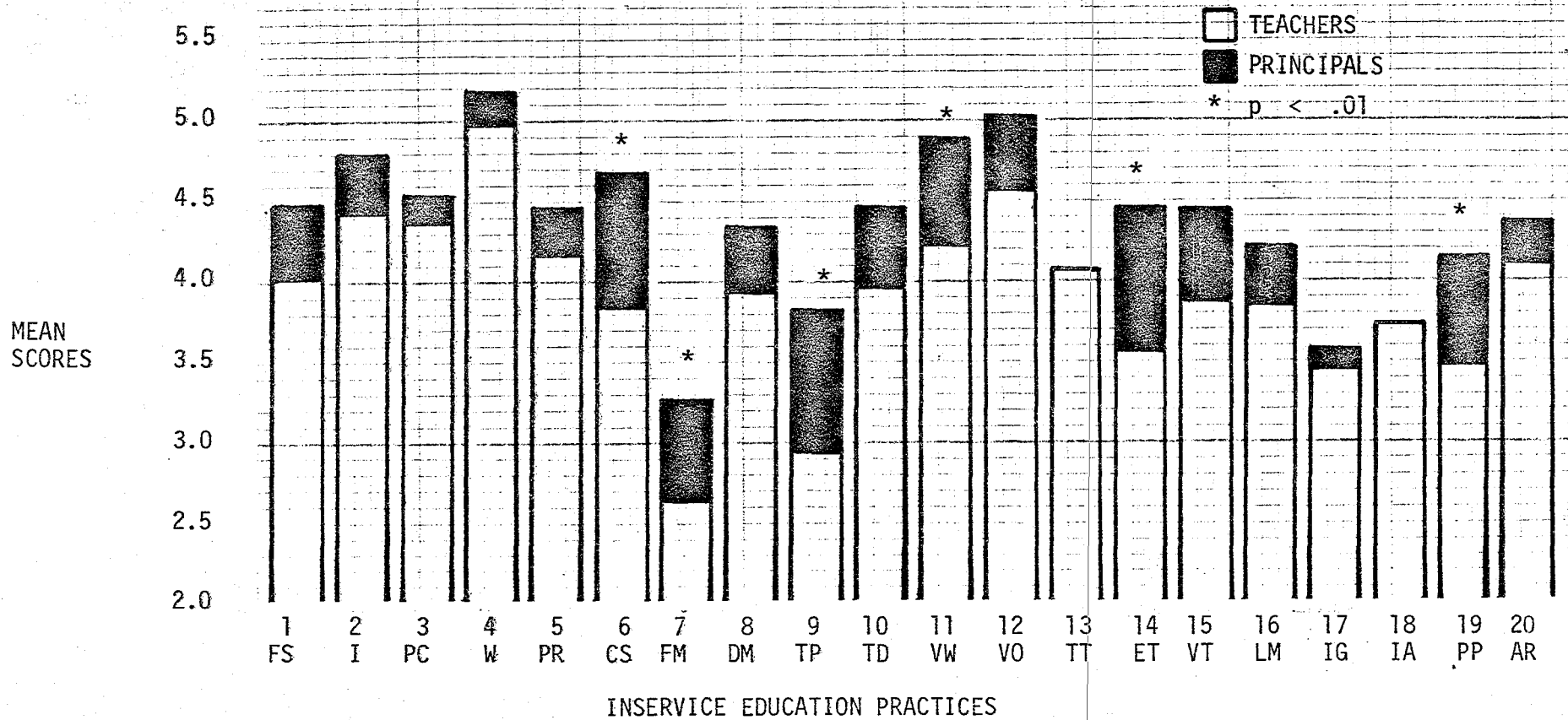
Student Motivation

Presented in Table 14 are mean scores and standard deviations produced by teachers and principals when considering the appropriateness of selected inservice practices in meeting the teacher need of student motivation.

An analysis of the data in Table 14 suggests that teachers and principals differ in their perceptions of the most appropriate inservice practice in meeting the teacher need for student motivation. Teachers considered workshops to be "appropriate" with a high mean score of 4.76, while principals rated visitations to other schools as "appropriate" with a high mean score of 4.80.

The data suggest that teachers and principals consider faculty meetings to be the most inappropriate inservice education practice in meeting the teacher need of student motivation. In each group it was considered to be "marginally inappropriate," with teachers producing a low mean score of 2.77, while principals produced a low mean score of

Figure 4
Teacher Need: Individualization



Code: 1. FS-Formal Academic Study
2. I -Institute
3. PC-Professional Conference
4. W -Workshop
5. PR-Professional Reading

6. CS-Consultancy Service
7. FM-Meeting, Faculty
8. DM-Meeting, Departmental
9. TP-Teacher-Principal Conference
10. TD-Teacher-Department Chairman Conference

11. VW-Visitation, Within School
12. VO-Visitation, Other School
13. TT-Team Teaching
14. ET-Educational Television
15. VT-Video-Tape

16. LM-Laboratory Method
17. IG-Intensive Group Experience
18. IA-Interaction Analysis
19. PP-Packaged Inservice Program
20. AR-Action Research

Table 14

A Summary of Mean Scores and Standard Deviations of 20
Inservice Education Practices Relating to Student Motivation
According to Respondent Level

Inservice Education Practice	Teacher		Principal	
	Mean	S.D.	Mean	S.D.
1. Formal Academic Study	4.13	1.40	4.47	1.14
2. Institute	4.43	1.29	4.49	1.18
3. Professional Conference	4.43	1.36	4.44	1.18
4. Workshop	4.76	1.25	4.76	1.28
5. Professional Reading	4.21	1.33	4.20	0.97
6. Consultancy Service	3.85	1.52	4.33	1.02
7. Meeting, Faculty	2.77	1.42	3.47	1.24
8. Meeting, Departmental	3.97	1.52	4.27	1.14
9. Teacher-Principal Conference	3.01	1.54	4.27	1.02
10. Teacher-Department Chairman Conference	3.95	1.49	4.67	0.91
11. Visitation, Within School	4.38	1.25	4.78	0.95
12. Visitation, Other School	4.61	1.29	4.80	0.89
13. Team Teaching	4.09	1.50	4.22	0.97
14. Educational Television	3.72	1.56	4.33	1.09
15. Video-Tape	4.18	1.48	4.67	1.23
16. Laboratory Method	3.97	1.51	4.66	1.03
17. Intensive Group Experience	3.65	1.63	3.89	1.48
18. Interaction Analysis	3.97	1.56	4.40	1.37
19. Packaged Inservice Program	3.24	1.44	4.04	0.93
20. Action Research	4.07	1.48	4.53	1.18

3.47.

The data further suggest that the perceived appropriateness of packaged inservice programs in meeting this particular need produced the greatest disagreement between teachers and principals. Teachers ascribed to it a rating of "marginally inappropriate" with a mean score of 3.24, while principals considered it to be "marginally appropriate" with a mean score of 4.04. Closest agreement between the two groups was found in the perceived appropriateness of workshops in meeting this particular need. Both groups considered this practice to be "appropriate" with identical group means of 4.76.

A ranking of the five most appropriate inservice practices in meeting the teacher need of student motivation as perceived by teachers were: (a) workshops (M=4.76), (b) visitations to other schools (M=4.61), (c) institutes (M=4.43), (d) professional conferences (M=4.43), and (e) within-school visitations (M=4.38).

A ranking of the five least appropriate inservice practices in meeting the teacher need of student motivation as perceived by teachers were: (a) faculty meetings (M=2.77), (b) teacher-principal conferences (M=3.01), (c) packaged inservice programs (M=3.24), (d) educational television (M=3.72), and (e) consultancy service (M=3.85).

A ranking of the five most appropriate inservice education practices in meeting the teacher need of student motivation as perceived by principals were: (a) visitations to other schools (M=4.80), (b) within-school visitations (M=4.78), (c) workshops (M=4.76), (d) teacher-department chairman conferences (M=4.67), and (e) video-tape (M=4.78).

A ranking of the five least appropriate inservice education practices in meeting the teacher need of student motivation as perceived by principals were: (a) intensive group experiences (M=3.84), (b) packaged inservice programs (M=4.04), (c) professional reading (M=4.20), (d) team teaching (M=4.22), and (e) departmental meetings (M=4.26).

Presented in Table 15 are t-test results. These data show that there are significant differences in the way that teachers and principals perceive the appropriateness of the following inservice practices in meeting the teacher need of student motivation:

1. Faculty meetings
2. Teacher-principal conferences
3. Teacher-department chairman conferences
4. Laboratory methods
5. Packaged inservice programs.

Thus, with regard to the selected inservice practices of faculty meetings, teacher-principal conferences, teacher-department chairman conferences, laboratory methods, and packaged inservice programs Hypothesis 4 was rejected. An analysis of the data revealed no significant differences with respect to the remaining 15 practices, and with respect to these elements the null hypothesis was accepted.

Figure 5 is a histogram which summarizes the responses of teachers and principals regarding the appropriateness of each inservice education practice in meeting the teacher need of student motivation.

Table 15

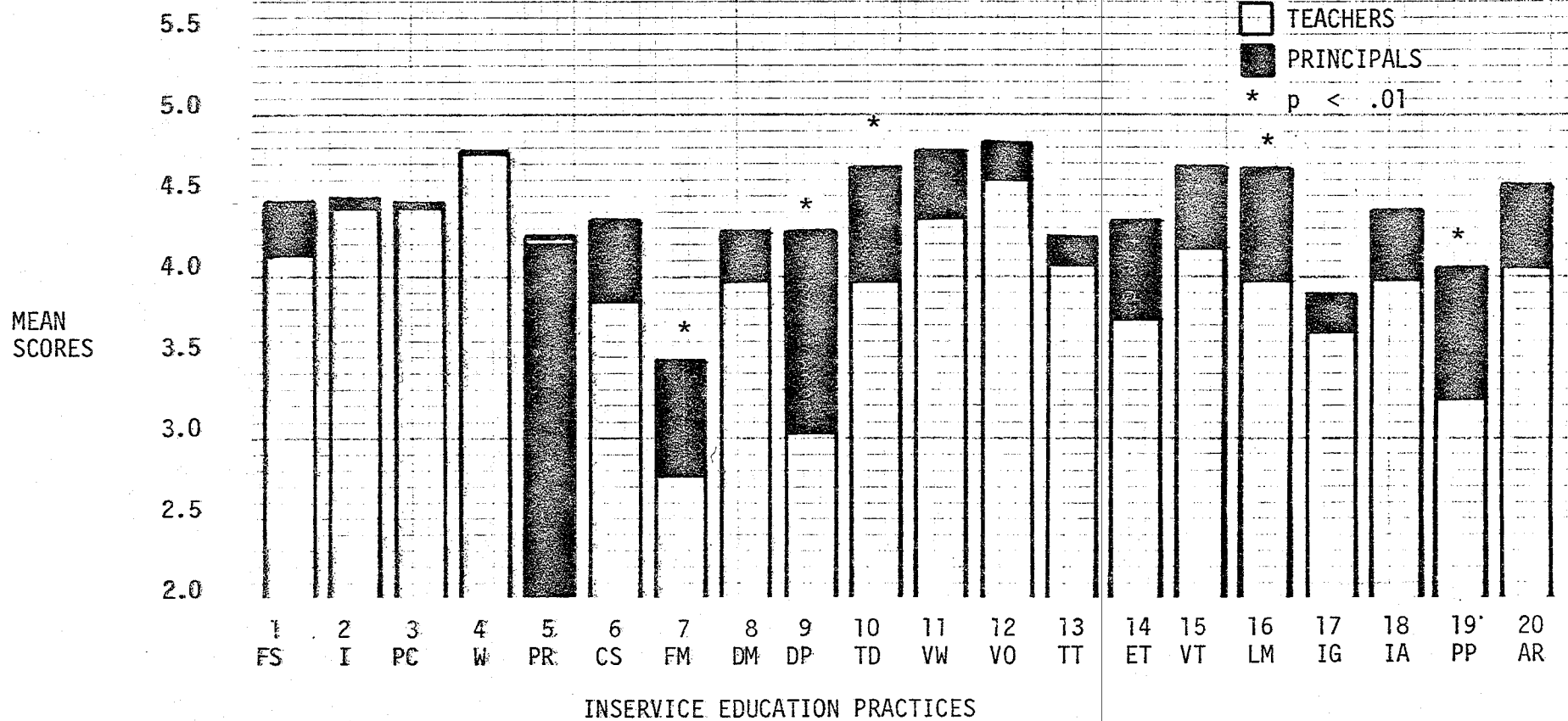
Results of t-test Procedures for 20 Inservice Education
Practices Relating to Student Motivation
According to Respondent Level

Variable	t Value	Degrees of Freedom	P Less Than
1. Formal Academic Study	1.45	192	0.147
2. Institute	0.28	190	0.780
3. Professional Conference	0.08	191	0.933
4. Workshop	-0.04	191	0.970
5. Professional Reading	-0.07	192	0.945
6. Consultancy Service	2.01	188	0.046
7. Meeting, Faculty	2.99	192	0.003*
8. Meeting, Departmental	1.23	192	0.222
9. Teacher-Principal Conference	5.11	191	0.000*
10. Teacher-Department Chairman Conference	3.07	190	0.002*
11. Visitation, Within School	1.97	190	0.051
12. Visitation, Other School	0.92	189	0.357
13. Team Teaching	0.56	188	0.578
14. Educational Television	2.44	188	0.016
15. Video-Tape	2.00	187	0.047
16. Laboratory Method	2.82	186	0.005*
17. Intensive Group Experience	0.88	185	0.379
18. Interaction Analysis	1.65	185	0.100
19. Packaged Inservice Program	3.51	187	0.001*
20. Action Research	1.91	185	0.057

* p < .01

Figure 5

Teacher Need: Student Motivation



- Code:
- | | | | |
|-------------------------------|---|----------------------------------|-----------------------------------|
| 1. FS-Formal Academic Study | 6. CS-Consultancy Service | 11. VW-Visitation, Within School | 16. LM-Laboratory Method |
| 2. I -Institute | 7. FM-Meeting, Faculty | 12. VO-Visitation, Other School | 17. IG-Intensive Group Experience |
| 3. PC-Professional Conference | 8. DM-Meeting, Departmental Conference | 13. TT-Team Teaching | 18. IA-Interaction Analysis |
| 4. W -Workshop | 9. TP-Teacher-Principal Conference | 14. ET-Educational Television | 19. PP-Packaged Inservice Program |
| 5. PR-Professional Reading | 10. TD-Teacher-Department Chairman Conference | 15. VT-Video-Tape | 20. Action Research |

Classroom Management

Presented in Table 16 are mean scores and standard deviations produced by teachers and principals when considering the appropriateness of selected inservice practices in meeting the teacher need of classroom management.

An analysis of the data in Table 16 suggests that teachers and principals differ in their perceptions of the most appropriate inservice education practice in meeting the teacher need of classroom management. Teachers considered visitations to other schools to be "appropriate" with a high mean score of 4.56, and principals rated within-school visitations as "appropriate" with a high mean score of 4.89.

The data suggest that teachers and principals may differ in their perceptions of the least appropriate inservice education practice in meeting the teacher need of classroom management. Teachers considered faculty meetings to be "marginally inappropriate" with a low mean score of 2.89, and principals rated professional reading to be "marginally inappropriate" with a low mean score of 3.67.

The data further suggest that the perceived appropriateness of teacher-principal conferences in meeting this particular need produced the greatest disagreement between teachers and principals. Teachers ascribed to it a rating of "marginally appropriate" with a mean score of 3.52, while principals considered it to be "appropriate" with a mean score of 4.70. Closest agreement between the two groups was found in the perceived appropriateness of professional conferences in meeting this particular need. Both groups considered this practice to be "marginally

Table 16

A Summary of Mean Scores and Standard Deviations of 20
Inservice Education Practices Relating to Classroom Management
According to Respondent Level

	Inservice Education Practice	Teacher		Principal	
		Mean	S.D.	Mean	S.D.
1.	Formal Academic Study	3.54	1.52	3.69	1.54
2.	Institute	3.75	1.35	3.98	1.42
3.	Professional Conference	3.95	1.41	3.89	1.50
4.	Workshop	4.36	1.39	4.60	1.51
5.	Professional Reading	3.84	1.32	3.67	1.33
6.	Consultancy Service	3.64	1.61	3.93	1.15
7.	Meeting, Faculty	2.89	1.51	3.76	1.32
8.	Meeting, Departmental	3.93	1.58	4.33	1.24
9.	Teacher-Principal Conference	3.52	1.68	4.70	1.19
10.	Teacher-Department Chairman Conference	4.22	1.47	4.80	1.12
11.	Visitation, Within School	4.35	1.27	4.89	1.01
12.	Visitation, Other School	4.56	1.38	4.60	1.18
13.	Team Teaching	4.06	1.54	4.40	0.94
14.	Educational Television	3.38	1.59	3.98	1.39
15.	Video-Tape	4.04	1.61	4.56	1.32
16.	Laboratory Method	3.74	1.60	4.36	1.12
17.	Intensive Group Experience	3.43	1.64	3.80	1.41
18.	Interaction Analysis	3.91	1.61	4.36	1.35
19.	Packaged Inservice Program	3.28	1.49	3.76	1.11
20.	Action Research	4.02	1.53	4.47	1.16

appropriate" with group means ranging from 3.89 to 3.95.

A ranking of the five most appropriate inservice education practices in meeting the teacher need of classroom management as perceived by teachers were: (a) visitations to other schools (M=4.56), (b) workshops (M=4.36), (c) within-school visitations (M=4.35), (d) teacher-department chairman conferences (M=4.22), and (e) team teaching (M=4.06).

A ranking of the five least appropriate inservice education practices in meeting the teacher need of classroom management as perceived by teachers were: (a) faculty meetings (M=2.89), (b) packaged inservice programs (M=3.28), (c) educational television (M=3.38), (d) intensive group experiences (M=3.43), and (e) teacher-principal conferences (M=3.52).

A ranking of the five most appropriate inservice education practices in meeting the teacher need of classroom management as perceived by principals were: (a) within-school visitations (M=4.89), (b) teacher-department chairman conferences (M=4.80), (c) teacher-principal conferences (M=4.70), (d) visitations to other schools (M=4.60), and (e) workshops (M=4.60).

A ranking of the five least appropriate inservice education practices in meeting the teacher need for classroom management as perceived by principals were: (a) professional reading (M=3.67), (b) formal academic study (M=3.69), (c) faculty meetings (M=3.76), (d) packaged inservice programs (M=3.76), and (e) intensive group experiences (M=3.80).

Presented in Table 17 are t-test results. These data show that there are significant differences in the way that teachers and principals perceive the appropriateness of the following inservice education practices in meeting the teacher need of classroom management:

1. Faculty meetings
2. Teacher-principal conferences
3. Within-school visitations.

Thus, with regard to the selected inservice education practices of faculty meetings, teacher-principal conferences, and within-school visitations Hypothesis 5 was rejected. An analysis of the data revealed no significant differences with respect to the remaining 17 practices, and with respect to these elements the null hypothesis was accepted.

Figure 6 is a histogram which summarizes the responses of teachers and principals regarding the appropriateness of each inservice education practice in meeting the teacher need of classroom management.

Data Pertaining to the Study's Ancillary Questions

A secondary purpose of the study was to determine if perceptual relationships and/or differences could be found between teacher groups regarding the appropriateness of inservice education practices in meeting the instructional needs of teachers. In reference to this purpose three ancillary questions were considered and are presented below.

Ancillary Question 1. Does a relationship exist between the teacher's years of experience and his perceptions regarding the

Table 17

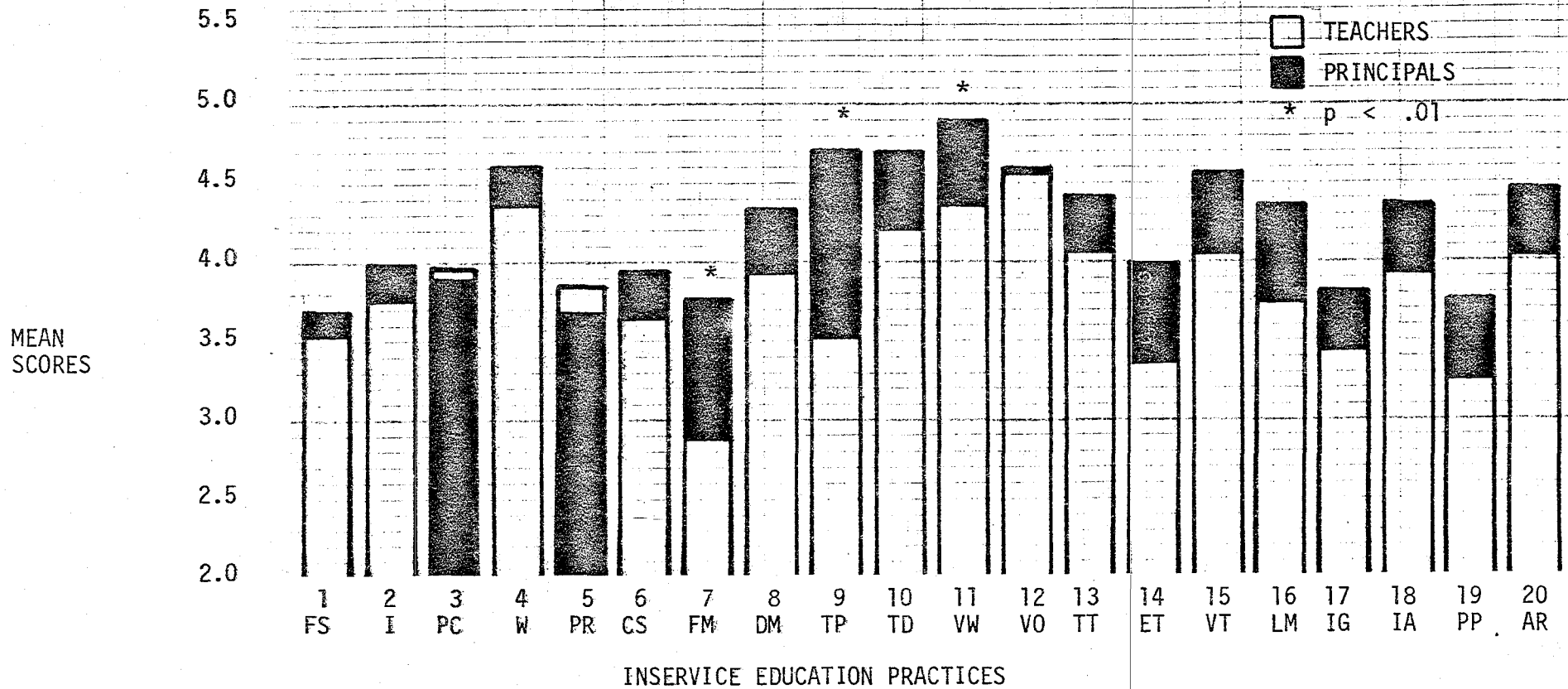
Results of t-test Procedures for 20 Inservice
Education Practices Relating to Classroom Management
According to Respondent Level

Variable	t Value	Degrees of Freedom	P Less Than
1. Formal Academic Study	0.59	192	0.558
2. Institute	0.99	189	0.323
3. Professional Conference	-0.23	190	0.816
4. Workshop	0.99	190	0.325
5. Professional Reading	-0.79	191	0.431
6. Consultancy Service	1.12	187	0.266
7. Meeting, Faculty	3.48	191	0.001*
8. Meeting, Departmental	1.58	191	0.115
9. Teacher-Principal Conference	4.37	191	0.000*
10. Teacher-Department Chairman Conference	2.44	190	0.016
11. Visitation, Within School	2.60	190	0.010*
12. Visitation, Other School	0.17	189	0.866
13. Team Teaching	1.39	187	0.167
14. Educational Television	2.24	186	0.026
15. Video-Tape	1.94	185	0.054
16. Laboratory Method	2.40	185	0.017
17. Intensive Group Experience	1.38	184	0.170
18. Interaction Analysis	1.68	184	0.094
19. Packaged Inservice Program	1.99	184	0.048
20. Action Research	1.79	182	0.076

* p < .01

Figure 6

Teacher Need: Classroom Management



- Code:
- | | | | |
|-------------------------------|---|----------------------------------|-----------------------------------|
| 1. FS-Formal Academic Study | 6. CS-Consultancy Service | 11. VW-Visitation, Within School | 16. LM-Laboratory Method |
| 2. I -Institute | 7. FM-Meeting, Faculty | 12. VO-Visitation, Other School | 17. IG-Intensive Group Experience |
| 3. PC-Professional Conference | 8. DM-Meeting, Departmental Conference | 13. TT-Team Teaching | 18. IA-Interaction Analysis |
| 4. W -Workshop | 9. TP-Teacher-Principal | 14. ET-Educational Television | 19. PP-Packaged Inservice Program |
| 5. PR-Professional Reading | 10. TD-Teacher-Department Chairman Conference | 15. VT-Video-Tape | 20. AR-Action Research |

appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties?

Pearson product-moment correlation procedures were used to ascertain whether a relationship existed between years of experience and teachers' perceptions of the appropriateness of inservice education practices. Correlation coefficients were computed for each of the 20 inservice practices as it related to each of the five instructional needs (Appendix M).

An analysis of the data generated from these procedures revealed no relationship between teachers' experience levels and their perceptions regarding inservice practices. Of 100 computed correlation coefficients, only two were of statistical significance; however, due to the large number of computed coefficients and to their small obtained values, it is likely that these two statistically significant values were due to sampling variance. Therefore, because of their unreliability they were discounted.

Ancillary Question 2. Do perceptual differences regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties exist between male and female teachers?

The t-test procedures were used to determine the statistical significance of the difference between responses of male and female teachers (Appendix N). Mean scores and standard deviations were also computed by respondent category for each of the 20 inservice education practices as it related to each of the five instructional needs.

An analysis of the data generated from these procedures revealed no differences of statistical significance between the perceptions of male and female teachers regarding inservice practices.

Ancillary Question 3. Do perceptual differences regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties exist between teachers from different areas of teaching specialization?

The analysis of variance procedures were used to determine the statistical significance of the difference between responses of teachers from different subject matter areas (Appendix O). Mean scores and standard deviations were also computed by respondent category for each of the 20 inservice practices as it related to each of the five instructional needs. An analysis of the data generated from these procedures revealed no differences of statistical significance between the perceptions of teachers from different areas of teaching specialization.

Summary of Findings

The central purpose of the study was to determine if there were differences between the perceptions of secondary school teachers and the perceptions of principals in Santa Clara County regarding the appropriateness of selected inservice education practices in the amelioration of specific instructional difficulties. Secondary purposes were to determine if relationships and/or differences existed between the perceptions of teachers when analyzed by experience level, sex, and subject area specialization.

These goals were achieved through an analysis of responses to the survey instrument, A Rating of Inservice Education Practices. Findings generated from this analysis are summarized under the teacher need headings used in the questionnaire: (a) subject matter mastery, (b) methodology, (c) individualization, (d) student motivation, and (e) classroom management.

Subject Matter Mastery: An analysis of the data pertaining to the appropriateness of selected inservice education practices in meeting the teacher need of subject matter mastery suggests that:

1. There were no differences of statistical significance between the perceptions of teachers and principals. Each group considered formal academic study to be the most effective inservice education practice, assigning it a rating of "appropriate." Of 20 inservice practices rated, principals' mean rankings were higher than those of teachers in 11 cases. Standard deviations derived from the principals' group were lower than those of teachers in 19 cases.

2. No significant relationship could be found between the perceptions of teachers of different experience levels.

3. No significant differences could be found between the perceptions of male and female teachers.

4. No significant differences could be found between the perceptions of teachers from different areas of teaching specialization.

Methodology: An analysis of the data pertaining to the appropriateness of selected inservice education practices in meeting the

teacher need of methodology suggests that:

1. There were two differences of statistical significance between the perceptions of teachers and principals: (a) teacher-principal conferences, and (b) packaged inservice programs; hence, two elements of Hypothesis 2 were rejected. In both cases the principals rated the practices higher than did teachers. Each group considered workshops to be the most effective inservice practice, assigning it a rating of "appropriate." Of 20 inservice practices rated, principals' rankings were higher than those of teachers in 17 cases. One practice received identical ratings from both teachers and principals. Standard deviations derived from the principals' group were lower than those of teachers in 19 cases.

2. No significant relationships could be found between the perceptions of teachers of different experience levels.

3. No significant differences could be found between the perceptions of male and female teachers.

4. No significant differences could be found between the perceptions of teachers from different areas of teaching specialization.

Individualization: An analysis of the data pertaining to the appropriateness of selected inservice education practices in meeting the teacher need of individualization suggests that:

1. There were six differences of statistical significance between the perceptions of teachers and principals: (a) consultancy services, (b) faculty meetings, (c) teacher-principal conferences, (d) within-school visitations, (e) educational television, and (f) packaged

inservice programs; hence, six elements of Hypothesis 3 were rejected. In each case principals rated the practice higher than did teachers. Workshops were considered by both groups to be the most effective, each rating it as "appropriate." Of 20 inservice practices evaluated, principals' mean ratings were higher than those of teachers in 18 cases. Two practices received identical ratings from both groups. Standard deviations derived from the principals' group were lower than those of teachers in 19 cases.

2. No significant relationships could be found between the perceptions of teachers of different experience levels.

3. No significant differences could be found between the perceptions of male and female teachers.

4. No significant differences could be found between the perceptions of teachers from different areas of teaching specialization.

Student Motivation: An analysis of the data pertaining to the appropriateness of selected inservice education practices in meeting the teacher need of student motivation suggests that:

1. There were five differences of statistical significance between the perceptions of teachers and principals: (a) faculty meetings, (b) teacher-principal conferences, (c) teacher-department chairman conferences, (d) laboratory methods, and (e) packaged inservice programs; hence, five elements of Hypothesis 4 were rejected. In each case the principals rated the practice higher than did teachers. Teachers considered workshops to be most effective, ranking it as "appropriate," while principals evaluated visitations to other schools of most value with a

rating of "appropriate." Of 20 inservice practices evaluated, principals' mean ratings were higher than those of teachers in 18 cases. One practice received identical ratings from both groups. Standard deviations derived from the principals' group were lower than those of teachers in 15 cases.

2. No significant relationships could be found between the perceptions of teachers of different experience levels.

3. No significant differences could be found between the perceptions of male and female teachers.

4. No significant differences could be found between the perceptions of teachers from different areas of teaching specialization.

Classroom Management: An analysis of the data pertaining to the appropriateness of selected inservice practices in meeting the teacher need of classroom management suggests that:

1. There were three differences of statistical significance between the perceptions of teachers and principals: (a) faculty meetings, (b) teacher-principal conferences, and (c) within-school visitations; hence, three elements of Hypothesis 5 were rejected. In each case the principals rated the practice higher than did teachers. Teachers considered visitations to other schools to be most effective, ranking it as "appropriate," while principals evaluated within-school visitations of most value with a rating of "appropriate." Of 20 inservice practice evaluations, principals' mean ratings were higher than those of teachers in 18 cases. Standard deviations derived from the principals' group were lower than those of teachers in 15 cases.

2. No significant relationships could be found between the perceptions of teachers of different experience levels.
3. No significant differences could be found between the perceptions of male and female teachers.
4. No significant differences could be found between the perceptions of teachers from different areas of teaching specialization.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Problem

It has been established that the rate and impact of social, cultural, and technological change pose a formidable challenge for those involved in teacher preparation. This factor adds to the increasing concern of educational writers regarding the current state of inservice education programs and the continuing education of teachers. It is vital that research be directed to the adequacy of current professional growth practices as well as new dimensions worthy of consideration in teacher education.

The central problem of this investigation deals with perceptual relationships between teachers and principals regarding inservice practices. There is evidence to suggest that:

1. while the contemporary model of inservice planning is one of cooperative development between teachers and administrators, typical inservice programs remain a result of administrative planning with minimum teacher involvement;
2. a common deficiency of inservice programs is the failure to relate inservice practices to valid teacher needs;
3. therefore, differences between the perceptions of teachers

and administrators could exist which tend to limit program relevance, effectiveness, and acceptance. In essence, this study was concerned with the question: "Do teachers and principals differ in their perceptions regarding the appropriateness of inservice education practices in meeting specific teacher needs?"

Research Hypotheses

To test the theory that perceptual differences exist between teachers and principals regarding the appropriateness of selected inservice practices in meeting specific teacher needs, five research hypotheses were derived from the central hypothesis of the study. Each hypothesis focused on the perceived appropriateness of 20 selected inservice practices in meeting a specific teacher need; hence, each inservice practice was subject to acceptance or rejection for each of five hypotheses.

Ancillary aspects of the study investigated the perceptions of teacher groups regarding the appropriateness of selected inservice practices in meeting five specific teacher needs. Teacher responses to the study's questionnaire were analyzed with respect to the respondent's teaching experience, sex, and teaching assignment.

Conclusions

Analyzed in the preceding chapter were the responses of teachers and principals regarding the appropriateness of selected inservice practices in meeting specific instructional needs. To add additional perspective to the interpretation of these data, composite rankings of

inservice practices by teacher and principal groups without regard to specific teacher needs are presented in Table 18. The purpose of this summary is to present the data in such a manner that comparisons can be made between the rankings and ratings of inservice education practices by teachers and principals. Though not specifically related to teacher needs, these data illustrate the relative overall value ascribed to each practice by each group.

Conclusions resulting from the analysis and interpretation of the data derived from this study are presented under three general headings: (a) null hypotheses, (b) ancillary questions, and (c) general observations. Before discussion of these conclusions, it is necessary to elaborate on a factor which may have influenced responses to the questionnaire, hence, data interpretation. In the analysis of those data derived from the pilot study, it was found that in some cases participants, although asked to evaluate the "perceived appropriateness" of the inservice practices, responded on the basis of "experienced effectiveness." This same possibility may be legitimately generalized to the investigation itself. This possibility was not overlooked in the derivation of the following conclusions.

Null Hypotheses

On the basis of the research findings certain elements of the five null hypotheses were either accepted or rejected. No significant differences were found between the perceptions of teachers and principals in Hypothesis 1; however, there were significant perceptual differences between teachers and principals regarding the appropriateness of selected

Table 18

Composite Sample Group Rankings of Selected Inservice
Education Practices

Rank	Teachers	Principals
1	Workshop (M=4.77)	Workshop (M=4.81)
2	Visitation, Other Schools (M=4.53)	Visitation, Within Schools (M=4.64)
3	Professional Conference (M=4.35)	Visitation, Other Schools (M=4.59)
4	Institute (M=4.34)	Teacher-Department Chairman Conference (M=4.53)
5	Professional Reading (M=4.32)	Institute (M=4.47)
6.	Formal Academic Study (M=4.29)	Formal Academic Study (M=4.46)
7.	Visitation, Within School (M=4.16)	Video-Tape (M=4.45)
8.	Team Teaching (M=4.11)	Professional Conference (M=4.34)
9.	Video-Tape (M=4.02)	Professional Reading (M=4.32)
10.	Action Research (M=4.01)	Action Research (M=4.28)
11.	Teacher-Department Chairman Conference (M=4.00)	Department Meeting (M=4.27)
12.	Department Meeting (M=3.98)	Consultancy Services (M=4.25)
13.	Laboratory Method (M=3.80)	Educational Television (M=4.21)
14.	Consultancy Services (M=3.76)	Team Teaching (M=4.20)
15.	Educational Television (M=3.67)	Laboratory Method (M=4.19)
16.	Interaction Analysis (M=3.64)	Teacher-Principal Conference (M=4.00)
17.	Packaged Inservice Programs (M=3.35)	Packaged Inservice Programs (M=3.86)
18.	Intensive Group Experiences (M=3.33)	Interaction Analysis (M=3.84)
19.	Teacher-Principal Conference (M=2.99)	Intensive Group Experiences (M=3.51)
20.	Faculty Meetings (M=2.72)	Faculty Meetings (M=3.28)

in-service practices in Hypotheses 2, 3, 4, and 5. The following eight in-service practices were rejected in one or more of these four research hypotheses: teacher-principal conferences, faculty meetings, packaged in-service programs, within-school visitations, teacher-department chairman conferences, consultancy services, educational television, and laboratory methods.

Hypothesis 1: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected in-service practices in meeting the teacher need of subject matter mastery. In the consideration of the need to increase the teacher's knowledge of the subject matter in a specific teaching area, the acceptance of the null hypothesis indicates that there were no significant perceptual differences between teachers and principals regarding the appropriateness of selected in-service practices. Although principals considered 11 of these practices to be of more value than did teachers, differences were not at significant levels.

Hypothesis 2: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected in-service practices in meeting the teacher need of methodology. In the consideration of the need to enhance the teacher's ability to utilize more effectively a variety of teaching techniques and materials, the null hypothesis was rejected with regard to the following in-service practices: teacher-principal conferences and packaged in-service programs. The rejection of the hypothesis indicates that principals placed a significantly higher value on these in-service

activities in meeting the teacher need of methodology than did teachers.

The acceptance of the null hypothesis with regard to the remaining 18 practices indicates that the perceptions of teachers and principals were not significantly different. Although principals considered 15 of these practices to be of more value than did teachers, differences were not at significant levels.

Hypothesis 3: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of individualization. In the consideration of the need to enhance the teacher's ability to develop a more personalized approach to teaching, the null hypothesis was rejected with regard to the following practices: consultancy services, faculty meetings, teacher-principal conferences, within-school visitations, educational television, and packaged inservice programs. The rejection of the hypothesis indicates that principals placed a significantly higher value on these inservice activities in meeting the teacher need of individualization than did teachers.

The acceptance of the null hypothesis with regard to the remaining 14 practices indicates that the perceptions of teachers and principals were not significantly different. Although principals considered 12 of these practices to be of more value than did teachers, differences were not at significant levels.

Hypothesis 4: There are no significant differences between the perceptions of secondary school teachers and principals regarding the

appropriateness of selected inservice practices in meeting the teacher need of student motivation. In the consideration of the need to enhance the teacher's ability to improve students' motivation toward learning, the null hypothesis was rejected with respect to the following practices: faculty meetings, teacher-principal conferences, teacher-department chairman conferences, laboratory methods, and packaged inservice programs. The rejection of the hypothesis indicates that principals placed a significantly higher value on these inservice activities in meeting the teacher need of student motivation than did teachers.

The acceptance of the null hypothesis with regard to the remaining 15 practices indicates that the perceptions of teachers and principals were not significantly different. Although principals considered 13 of these practices to be of more value than did teachers, differences were not at significant levels.

Hypothesis 5: There are no significant differences between the perceptions of secondary school teachers and principals regarding the appropriateness of selected inservice practices in meeting the teacher need of classroom management. In the consideration of the need to enhance the teacher's ability to improve classroom discipline and provide for a more effective learning environment, the null hypothesis was rejected with regard to the following practices: faculty meetings, teacher-principal conferences, and within-school visitations. The rejection of the hypothesis indicates that principals placed a significantly higher value on these inservice activities in meeting the teacher need of classroom management than did teachers.

The acceptance of the null hypothesis with regard to the remaining 17 practices indicates that the perceptions of teachers and principals were not significantly different. Although principals considered 15 of these practices to be of more value than did teachers, differences were not at significant levels.

It should be noted that in 16 of 100 possible comparisons principals perceived the value of selected inservice practices in meeting specific teacher needs to be significantly greater than did teachers. Further, though not at significant levels, principals' ratings were equal to or higher than teachers' in 70 additional comparisons. The 16 comparisons which were at significant levels dealt with eight of 20 selected inservice practices, i.e., there were significant perceptual differences between teachers and principals regarding the value of eight inservice practices in meeting specific teacher needs. Conclusions and discussions regarding these eight inservice practices are presented in the following order: (a) teacher-principal conferences and teacher-department chairman conferences, (b) faculty meetings, (c) packaged inservice programs, (d) within-school visitations, (e) consultancy services, (f) educational television, and (g) laboratory methods.

Teacher-Principal Conferences and Teacher-Department Chairman Conferences. There were significant differences between the perceptions of teachers and principals regarding the effectiveness of teacher-principal conferences in Null Hypotheses 2, 3, 4, and 5. These hypotheses dealt with methodology, individualization, student motivation, and classroom management, respectively. Although teachers and principals

were in general agreement regarding the marginal value of the teacher-principal conference in providing assistance in the area of subject matter mastery, teachers considered the supervisory assistance available to them through this practice to be of less value in all areas of teacher needs than did the principals. Significant levels were attained in four comparisons. Similarly, teachers consistently assigned a lower value than did principals to supervisory conferences with department chairmen; however, only one comparison, that pertaining to student motivation, was at the significant level. These findings seem to confirm the doubts of Blumberg et al. (1967) regarding the acceptance and effectiveness of the supervisory conference. Their study revealed that teachers perceived the conference to be based on a superordinate-subordinate structure, a relationship fostered by the supervisor. In emphasizing the need for better understanding between teachers and supervisors, the writers hypothesized that "communication barriers exist between supervisors and teachers that prevent them from seeing both the dynamics and the outcomes of their interaction in a similar manner (p. 10)."

While the impact of communication barriers cannot be discounted in either study, it may be conjectured that there are other factors which may influence teachers' perceptions regarding the effectiveness of supervisory conferences. Teachers may be unwilling to recognize the principal as a source of instructional assistance because:

1. at the secondary level, the principal's appointment may be dependent on factors other than instructional expertise. Frequently a

candidate's skills in planning, organization, management, and public relations have a profound influence on the selection process. Assuming this to be a valid premise, unless the principal addresses himself to the development of competencies associated with instructional supervision and curriculum development, his instructional assistance to teachers may be marginal at best;

2. the very nature of the authority relationship, especially in an era of teacher militancy, might contribute to a reluctance on the part of teachers to acknowledge the resource potential of the principal. Supportive of this viewpoint is Bush (1971), who feels that the principal is in "too strong an authoritative role . . . to also play a role as an impartial, objective expert who can help with the diagnosis of instructional problems (p. 58)." This authority relationship might contribute to some degree to the marginal value teachers seem to ascribe to the teacher-department chairman relationship as well. With regard to the latter speculation, an equally plausible explanation may reside in the typical relationship between teacher and department chairman. This model is apparently more managerial than supervisory, with the chairman devoting more time and energy to departmental administration than to instructional leadership;

3. in the absence of clearly delineated and proven competencies required in teaching (Meade, 1971), teachers may assume a relatively closed attitude toward the suggestions of others--colleague, department chairman, principal.

Faculty Meetings. There were significant differences between

the perceptions of teachers and principals regarding the effectiveness of faculty meetings in Null Hypotheses 3, 4, and 5. These hypotheses dealt with individualization, student motivation, and classroom management, respectively. Although both sample groups ranked it as the least effective inservice practice, teachers ascribed significantly less value to it than did principals. These conclusions are consistent with those of O'Hanlon (1967) who determined that teachers derived little benefit from faculty meetings. The teachers' criticisms identified by O'Hanlon could be legitimately generalized to this study. They include statements that faculty meetings are typically one-shot affairs, administrator-dominated, and irrelevant to the needs and interests of teachers. Such evidence contradicts the opinions of writers such as Burton et al. (1955) and Marks et al. (1971) regarding the potential value of the faculty meeting as a viable inservice practice. However, Wiles' (1967) assertions that teachers go to faculty meetings "with resentment. . . . listen with resistance. . . . forget without remorse (p. 69)" suggest that much remains undone in reconciling theory with practice. Lippitt and Fox (1971) seem to support this point of view when they suggest that there is a definite need to "explore the possibility of brief but focused in-service education projects (p. 175)" at faculty meetings to determine if this activity can shed its maligned image. A valid question seems to be: "Is the inservice function incompatible with the administrative nature of faculty meetings?" The findings of this study suggest that such an incompatibility does exist.

Packaged Inservice Programs. There were significant differences

between the perceptions of teachers and principals regarding the effectiveness of packaged inservice programs in Null Hypotheses 2, 3, and 4. These hypotheses dealt with methodology, individualization, and student motivation, respectively. This practice received uniformly low rankings from both sample groups; however, teachers evaluated packaged inservice programs to be of less value than principals in all five areas of teacher needs. These results seem to be inconsistent with the opinions of current educational writers. For example, Lippitt & Fox (1971) feel that the individualized study activities of teachers can be enhanced considerably through the use of packaged materials developed by "curriculum laboratories staffed by experts in retrieving the latest and most relevant conceptual and instructional materials (p. 149)." Because of the emerging status of this inservice practice, it might be conjectured that the limited implementation of these programs has resulted in minimal exposure to teachers. If this assumption is valid, respondents' marginal experience with and knowledge of this activity may have influenced their perceptions regarding its appropriateness. Regardless of the purported value of this emerging inservice practice, the findings of this research suggest the need to further investigate the viability of this model before its worth or promise can be substantiated.

Within School Visitations. There were significant differences between the perceptions of teachers and principals regarding the appropriateness of within-school visitations in Null Hypotheses 3 and 5. These hypotheses dealt with individualization and classroom management, respectively. This practice received a high rating from principals in

all five areas of teacher needs, whereas teachers uniformly considered it to be of less value. These findings seem to support the opinion of Allen (1971) that teachers are reluctant to observe the teaching of colleagues and "any attempts to do so are frequently viewed as threatening (p. 125)." Further, this disparity, in conjunction with other data, seems to suggest that teachers may be more skeptical regarding the school's capacity to provide instructional assistance than are principals. For example, whereas principals ranked within-school visitations and teacher-department chairman conferences to be the second and fourth most appropriate inservice practices, respectively, teachers' rankings identified practices external to the system as being most appropriate: workshops, visitations to other schools, professional conferences, institutes, professional reading, and formal academic study. However, it should be noted that with regard to visitations, the principals' perceptions may be influenced by practical as well as educational considerations. In consistently evaluating within-school visitations as being of greater value than visitations to other schools, the perceptions of principals may have been influenced by the economics of providing substitutes for those teachers visiting other schools. This is generally not the case when visiting the classrooms of colleagues.

Thus, it may be conjectured that teachers may be less confident of the system's resources for instructional improvement than are principals. The apparent reluctance of teachers to seek assistance from and to contribute to the professional growth of colleagues suggests at least two possibilities: (a) that within-school inservice practices

are, in fact, of marginal value, and/or (b) that factors associated with the informal structure of the organization tend to limit the use and effectiveness of this type of assistance. Regardless of the reasons, the findings seem to raise some question regarding the acceptance of a collegial approach to staff development. If this assumption is valid, the following question should be posed: "To what extent do organizational factions, biases, and climate limit the potential of certain inservice practices which may be internal to the system, e.g., within-school visitations, team teaching, supervisory conferences, departmental meetings, laboratory methods, and intensive group experiences?"

Consultancy Service. There were significant differences between the perceptions of teachers and principals regarding the appropriateness of consultancy services in meeting the teacher need of individualization as stated in Null Hypothesis 3. Teachers evaluated the practice less favorably than did principals in all five areas of teacher need, though it received a relatively low ranking from both sample groups. The services of specialists in specific instructional areas should be a source of much assistance to teachers, yet the relatively low ratings of this practice seem to refute this point of view. In a speculative sense, it could be suggested that many factors may contribute to its "marginal appropriateness" as an inservice practice:

1. Since educational consultants are generally employed by the administrative branch of the school system, their services could be perceived by teachers as an extension of the administrative function. If this is true, consultancy services could be evaluated by teachers in

the context of an authority relationship within a superordinate-subordinate structure, a relationship which Blumberg and others have found teachers tend to resent and resist.

2. The orientation and approach of the consultant may be more theoretical than practical, possibly being in conflict with the teachers' more immediate needs and expectations. If this assumption is true, it is possible that the "process" consultancy model as advocated by Shumsky (1958) may be in conflict with the more traditional task-oriented model described by writers such as Marks et al. (1971). The questionnaire used in this research did not provide for differentiation between these consultancy models. It would seem that further in-depth research pertaining to the perceptions of teachers regarding each model would be warranted and enlightening.

Educational Television. There were significant differences between the perceptions of teachers and principals regarding the appropriateness of educational television in meeting the teacher need of individualization as stated in Null Hypothesis 3. Both sample groups assigned a relatively low ranking to this practice; however, principals rated it of more value than did teachers in all five areas of teacher needs. It may be conjectured that the relatively marginal use of educational television at the secondary school level may have resulted in limited experience with the practice by sample groups, hence, biased responses. When comparing the higher value assigned to video-tape by both groups to the lower ratings of educational television, it seems that teachers and principals value the feedback potential of television

more than its modeling capacity through demonstration teaching. This conclusion supports the findings of Ishler (1967), Joyce (1967), and Limbacher (1969) regarding the effect of televised feedback on teaching performance. Further, it could be speculated that factors discussed earlier regarding authority relationships in the supervisory structure and the apparent reluctance of teachers to seek collegial assistance in their own professional development could obscure their perceptions regarding the value of demonstration teaching, either live or televised.

Laboratory Method. There were significant differences between the perceptions of teachers and principals regarding the appropriateness of laboratory methods in meeting the teacher need of student motivation as stated in Null Hypothesis 4. Both sample groups assigned a relatively low ranking to this practice, with principals, however, perceiving it of greater value in all five areas of teacher needs than did teachers. From these findings, and related data, it could be conjectured that the development of skills in interpersonal relations and increased sensitivity to the feelings and attitudes of others seem to be of low priority to practitioners. Similar rankings of other inservice activities, e.g., intensive group experiences and interaction analysis, whose goals deal with interpersonal competencies seem to lend support to this speculation. Although it is plausible that these inservice activities are inappropriate for the five areas of teacher needs used in the investigation, there are other possibilities. For example, it is possible that the goals of these activities may have been overlooked by respondents. A teacher's competency in interpersonal relations has a profound influence on the

educational environment of the classroom, especially in the areas of student motivation, individualization, and classroom management. A low rating of these inservice practices would result if teachers and principals did not either acknowledge the development of these skills as valid outcomes, or relate these outcomes to the five teacher needs. Similarly, low ratings could also be a result of teachers' experience with or knowledge of poorly planned or extreme applications of some practices, e.g., role playing and encounter groups.

Ancillary Questions

On the basis of the research findings the following conclusions were drawn about the ancillary questions:

1. No significant relationship could be found between teachers' years of experience and their perceptions regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties. However, some evidence suggests that as teachers become more experienced, they tend to be more skeptical of inservice education practices. Of 100 computed correlation coefficients, 81 were negative values. These data suggest that an inverse, though insignificant, relationship exists between the years of teaching experience and the perceived value of inservice practices.

2. No significant perceptual differences could be found between male and female teachers regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties.

3. No significant perceptual differences could be found between

teachers from different areas of teaching specialization regarding the appropriateness of inservice education practices in the amelioration of selected areas of instructional difficulties.

Thus, it may be concluded that when the appropriateness of inservice education practices is considered, teachers' perceptions tend to be modal in nature with no significant deviation in response because of experience, sex, or teaching specialization. In a speculative sense, the inverse relationship, though not significant, between the teachers' years of experience and the value they ascribe to inservice activity suggests at least two causal relationships:

1. As a teacher gains experience he also increases his involvement with and knowledge of inservice education programs. Through this exposure he becomes aware of the more common deficiencies of "inappropriate activities. . . . inappropriate purposes. . . . lack of skills among program planners and directors who design and conduct instructional improvement efforts (Harris & Bissent, 1969, p. 15)"; hence, a teacher's skepticism regarding the value of inservice education may increase as a result of his experience with ineffective inservice programs.

2. It may also be conjectured that the effect of socialization within the school structure affects teachers' perceptions regarding the appropriateness of inservice education practices. For example, if there is validity to the assumption by Bush (1971) that the "typical teacher is not extremely anxious to increase his competencies in in-service training (p. 56)," and if "the change potential of a teacher is determined in part by what he perceives to be the expectations of his

peers (Lippitt & Fox, 1971, p. 140)," it would follow that the perceptions of teachers regarding the appropriateness of inservice activities are influenced to some degree by the peer culture. The gradual acceptance of established group norms by the idealistic young teacher could be evidence of this socializing process.

General Observations

The following conclusions represent general observations regarding the research data:

1. Teachers and principals generally consider the workshop to be the most effective inservice practice. These findings support previous research by CTA (1949) and O'Hanlon (1967) regarding the use, effectiveness, and popularity of workshops.

2. Most of the selected inservice practices received less than "appropriate" ratings from respondent groups. An analysis of the composite rankings of inservice education practices by teachers in Table 18 revealed that they considered only two practices to be "appropriate." Fourteen practices were considered to be "marginally appropriate" and four practices were considered to be "marginally inappropriate." A similar analysis of principals' rankings of inservice education practices reveals that four practices were considered to be "appropriate," 15 were considered to be "marginally appropriate," and one was considered to be "marginally inappropriate."

3. Principals consistently perceived the 20 selected inservice practices to be of greater value than did teachers in meeting specific needs. Of 100 comparisons, principals' ratings were equal to or higher than teachers' in 86 cases, though only 16 were at the significant level.

It was concluded that had the research design employed the .05 level of significance, 14 additional elements of the null hypotheses would have been rejected. In each of these cases the principals placed a higher value on the effectiveness of the inservice practice than did the teachers, thus supporting the consistent trend established in the comparisons ascertained at the .01 level of significance. These combined results would have represented significant perceptual differences between teachers and principals in 30 percent of the study's comparisons.

Thus, it may be concluded that principals believe that effective assistance is available to teachers more so than teachers are willing to accept. This conclusion is consistent with the results of a study by O'Hanlon (1967), who found that teachers tend to be more skeptical than administrators regarding the value and effectiveness of inservice practices.

A further analysis of the response patterns of teachers and principals suggests close similarities in the relative rankings of inservice practices by each group. The existence of such similarities does not contradict the data supporting the existence of perceptual differences between groups, however. One possible explanation is that since principals were formerly teachers, they have been exposed to and involved with inservice programs in essentially a consumer role. During this period, perceptions undoubtedly developed regarding the relative effectiveness of inservice activities. It would be logical to assume that these perceptions would parallel the impressions of those currently teaching. However, when a teacher becomes interested in administration

and his new role in educational leadership, it would seem that he may adopt a more idealistic perspective and approach to what he may have formerly considered to be mundane, school-related considerations. Hence, while relative rankings by teachers and principals of inservice practices may vary only to a small degree, the perceived value ascribed by principals to each may increase significantly.

4. Teachers' perceptions as a group regarding the value of inservice practices varied to a greater degree than did those of principals. Of 100 comparisons the standard deviations derived from the teachers' group were greater than those of principals in 87 cases. Again, it could be conjectured that this may be a result of role orientation. As with the teacher, the expectations placed on the principal are many and varied but decidedly different from those of the teacher. His responsibility in the area of staff development would require a greater interest and knowledge of professional growth activities and related research. A more idealistic and theoretical approach in responding to the questionnaire may have contributed to a higher and more centralized response mode from the principals' group. On the other hand, a larger number of teachers may have responded on the basis of "experienced effectiveness" rather than "perceived appropriateness."

It is also possible that the greater variance in teachers' responses could be explained by the spectrum of perspectives represented therein. This continuum could range from a cynical perspective, where inservice efforts are considered a waste of time, money and energy, to a perspective of professional orientation, wherein teachers are open-

minded to the potential of growth opportunities available to them.

Recommendations

The following recommendations are based upon the review of the literature and the findings of the study. They are presented under the following headings: (a) inservice planning, (b) teacher training programs, (c) educational administration programs, and (d) future research.

Inservice Planning

This study has revealed certain inadequacies which may be ascribed to most inservice efforts. For example, the paucity of research pertaining to inservice programs and practices provides inservice planners with little more than testimonials on which to make decisions. It has also been maintained that a conflict between theory and practice may exist regarding the cooperative development of inservice programs by teachers and administrators. Further, it has been theorized that the existence of perceptual differences between teachers and principals regarding the appropriateness of inservice activities may impede the acceptance and effectiveness of this cooperative model.

With these considerations in mind, the following recommendations are made:

1. Teacher leadership must be encouraged and developed in the cooperative planning and evaluation of inservice programs. Only through such active interest and involvement will program considerations be able to draw on the system's total resources. Further, this involvement of teachers in the initiation, planning and organization phases of program

development should enhance the opportunity for shared interest as well as effort and, most important, peer support. It may be further speculated that through this process discrepancies, whether real or perceived, will be minimized and programs improved.

2. The expectations of certain supervisory functions should be clarified (e.g., teacher-principal conferences, faculty meetings). If their purposes include instructional assistance, this should be communicated to teachers and evaluated on that basis. Further, the evaluation of all inservice programs and practices must be comprehensive and ongoing.

3. The continuing education of teachers must accentuate the professional responsibilities of teachers. Lippitt & Fox (1971) have stated that the educational profession "has not developed norms or procedures that support and reward participation in continuing education (p. 146)." If this condition does exist, it is incumbent upon the profession to work toward the establishment of norms which support the professional growth of teachers. Inservice planners could contribute significantly to this movement by emphasizing a collegial approach to inservice training, wherein overt and continuing support is provided for the idealistic and professional stance of teachers as counterbalancing standards to the typical socialization patterns in schools.

Teacher Training Programs

The following recommendations are intended to contribute to the development of a continuum model of teacher preparation, one extreme being the initial education course taken by the prospective teacher at

the undergraduate level and the other extreme, teacher retirement:

1. Teacher training institutions and professional organizations must stress and accommodate the need for the continuing education of teachers. This emphasis must manifest itself through renewed awareness at the undergraduate level, research and development at the graduate level, and cooperative development of renewal programs at local, district, and regional levels.

2. Colleges must attempt to decrease the discontinuities between the pre-service and inservice preparation of teachers. The inclusion of viable inservice practices into the training program at the undergraduate and graduate levels would tend to add credence to the resources available to teachers once in service. Early exposure to effective inservice practices could lead to the eventual development of norms more supportive of professional growth efforts.

Educational Administration Programs

The selection and training of educational administrators must reaffirm the competencies required in the area of educational leadership. As specifically related to this research:

1. selection of administrators needs to be based more on instructional leadership as one criterion;
2. institutions of higher education must provide through their administrative training programs experiences and knowledge which will lead to the development of insights and skills associated with instructional supervision and inservice planning;
3. administrative renewal programs which are cooperatively

planned by universities and professional organizations must continue to be developed. The emphasis of these programs should be on the range of competencies required of the educational leader of the school unit. Again, the development of supervisory skills is of paramount importance.

Further Research

It is recommended that additional research be conducted to:

1. evaluate the effectiveness of current inservice programs at all educational levels: elementary, secondary, college;
2. determine to what extent inservice programs are cooperatively developed by teachers and administrators;
3. analyze the viability of the collegial approach to professional growth;
4. analyze in depth the supervisory relationship between teachers and principals;
5. further investigate perceptual relationships between teachers and administrators. Replication of this study statewide would also be enlightening;
6. ascertain the effect of the school's socialization process on the perceptions and attitudes of teachers;
7. analyze in depth the nature of the future professional growth needs of teachers and the status of current inservice practices in meeting these needs.

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APPENDIX A

LETTER OF ENDORSEMENT FROM SUPERINTENDENT,
SANTA CLARA COUNTY

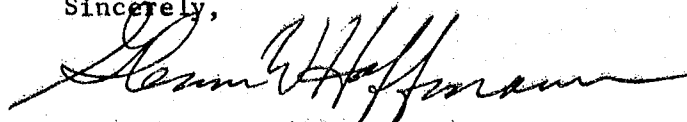
You are one of 225 randomly selected educators being asked to help assess the appropriateness of teacher inservice education practices in Santa Clara County. The investigation has been endorsed by the Santa Clara County Office of Education and the Association of California School Administrators. Project director is Mr. Dushan Angius, Principal, Los Altos High School.

The enclosed questionnaire can be completed in 10 to 15 minutes. All responses will be treated in strict confidence. Each questionnaire is coded for follow-up, if necessary, and so that the results of the study can be sent to you if you so desire.

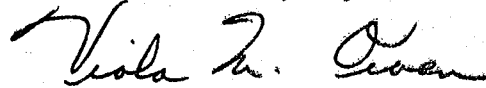
The County Superintendent's Office is assisting in the study for the same reason you are being asked to participate: the results may be of value in developing more effective programs of inservice education within the county. We urge you to respond with your ideas.

Please return the completed questionnaire by November 20, 1973 (envelope enclosed).

Sincerely,



GLENN W. HOFFMANN, Superintendent



VIOLA M. OWEN, Asst. Superintendent
Instructional Services

GWH/VMO/mjr
enclosures

APPENDIX B
DIRECTIONS FOR COMPLETION OF QUESTIONNAIRE

DIRECTIONS TO TEACHERS

DIRECTIONS

On the attached questionnaire please indicate (1) your present major teaching assignment (if you are assigned to more than one department, mark ONLY the department of your greater interest), (2) years of teaching experience, and (3) sex. If you wish a copy of the survey results, please so indicate in item (4).

Please rate the appropriateness of EACH inservice education practice (Column A) in meeting EACH of the stated teacher needs (Columns B–F) in the following manner:

1. Start with the **TEACHER NEED** as described in Column B and circle your response for each of the twenty inservice education practices according to the following scale:

1	2	3	4	5	6
Very Inappropriate	Inappropriate	Marginally Inappropriate	Marginally Appropriate	Appropriate	Very Appropriate

2. Please refer to the Descriptions of Twenty Inservice Education Practices (blue sheet) if clarification of practices in Column A is necessary.
3. When you have finished rating each inservice practice in Column B, move to Column C and repeat the procedure. Complete Columns D, E, and F in the same manner.

Please return the completed questionnaire in the enclosed envelope by November 20.

DIRECTIONS TO PRINCIPALS

DIRECTIONS

On the attached questionnaire please indicate (1) your former major teaching area, (2) total years of teaching experience (including administration), and (3) sex. If you wish a copy of the survey results, please so indicate in item (4).

Please rate the appropriateness of EACH inservice education practice (Column A) in meeting EACH of the stated teacher needs (Columns B–F) in the following manner.

1. Start with the TEACHER NEED as described in Column B and circle your response for each of the twenty inservice education practices according to the following scale:

1	2	3	4	5	6
Very Inappropriate	Inappropriate	Marginally Inappropriate	Marginally Appropriate	Appropriate	Very Appropriate

2. Please refer to the Descriptions of Twenty Inservice Education Practices (blue sheet) if clarification of practices in Column A is necessary.
3. When you have finished rating each inservice practice in Column B, move to Column C and repeat the procedure. Complete Columns D, E, and F in the same manner.

Please return the completed questionnaire in the enclosed envelope by November 20.

APPENDIX C

QUESTIONNAIRE:
A RATING OF INSERVICE EDUCATION PRACTICES

(1) Major teaching assignment:
 Art _____ Business _____ English _____ Homemaking _____
 Industrial Arts _____ Foreign Language _____ Mathematics _____
 Music _____ P.E. _____ Science _____ Social Science _____ Other _____
 (specify)

(2) Total years of teaching experience (do not include 1973/74): _____

(3) Sex: Male _____ Female _____

(4) Do you wish a copy of the results? Yes _____ No _____

Column A	Column B	Column C	Column D	Column E	Column F
INSERVICE PRACTICE	TEACHER NEED:	TEACHER NEED:	TEACHER NEED:	TEACHER NEED:	TEACHER NEED:
<u>Scale:</u> 1—Very inappropriate 2—Inappropriate 3—Marginally inappropriate 4—Marginally appropriate 5—Appropriate 6—Very appropriate	<u>Subject Matter Mastery</u> — to increase knowledge of the subject matter in a specific teaching area.	<u>Methodology</u> —to gain insights and skills which may lead to more effec- tive utilization of teaching techniques and materials.	<u>Individualization</u> — to gain insights and skills which may lead to a more per- sonalized approach to classroom instruc- tion.	<u>Student Motivation</u> — to gain insights and skills which may assist the teacher in increasing student motivation.	<u>Classroom Manage- ment</u> —to gain insights and skills which may lead to improved classroom discipline and a more effective learn- ing environment.
1. Formal Academic Study	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
2. Institute	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
3. Professional Conference	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
4. Workshop	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
5. Professional Reading	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
6. Consultancy Service	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
7. Meeting, Faculty	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
8. Meeting, Departmental	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6

(Please complete the reverse side)

Column A	Column B	Column C	Column D	Column E	Column F
INSERVICE PRACTICE	TEACHER NEED:	TEACHER NEED:	TEACHER NEED:	TEACHER NEED:	TEACHER NEED:
<u>Scale:</u> 1—Very inappropriate 2—Inappropriate 3—Marginally inappropriate 4—Marginally appropriate 5—Appropriate 6—Very appropriate	<u>Subject Matter Mastery</u> — to increase knowledge of the subject matter in a specific teaching area.	<u>Methodology</u> —to gain insights and skills which may lead to more effec- tive utilization of teaching techniques and materials.	<u>Individualization</u> — to gain insights and skills which may lead to a more per- sonalized approach to classroom instruc- tion.	<u>Student Motivation</u> — to gain insights and skills which may assist the teacher in increasing student motivation.	<u>Classroom Manage- ment</u> —to gain insights and skills which may lead to improved classroom discipline and a more effective learn- ing environment.
9. Teacher-Principal Conference	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
10. Teacher-Department Chairman Conference	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
11. Visitation, Within School	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
12. Visitation, Other School	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
13. Team Teaching	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
14. Educational Television	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
15. Video-Tape	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
16. Laboratory Method	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
17. Intensive Group Experience	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
18. Interaction Analysis	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
19. Packaged Inservice Programs	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6
20. Action Research	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6

APPENDIX D

DESCRIPTIONS OF TWENTY INSERVICE
EDUCATION PRACTICES

DESCRIPTIONS OF TWENTY INSERVICE EDUCATION PRACTICES

1. **Formal Academic Study:** College course work engaged in by the teacher. For the purpose of this study it includes sabbatical leaves for advanced study, summer school, extension courses, and correspondence courses.
2. **Institute:** A series of lectures, demonstrations, clinics, and discussions designed to provide teachers with as much information as possible in a relatively short period of time. Institutes are usually organized at local, county, or state levels. National Science Foundation Institutes are examples of federally supported programs.
3. **Professional Conference:** Professional meetings of teachers usually intended to inform them of trends and problems in a specific field. Teachers have the opportunity to exchange ideas with persons in positions similar to their own on a face-to-face basis.
4. **Workshop:** A cooperative approach to the solution of highly individualized problems. Components of most workshops include (a) a problem-centered format where groups of teachers have the opportunity to work together in areas of common interest, (b) moderate sized groups, (c) a free exchange of ideas among members, and (d) varied activities.
5. **Professional Reading:** The teacher's access to new knowledge and trends by keeping abreast of the professional literature in his field of specialization.
6. **Consultancy Service:** Contracting for the services of a qualified specialist possessing unique competence in a particular area. He is not regularly employed by the school district, but hired for specific purposes as the need arises.
7. **Meeting, Faculty:** Represents a medium for the exchange of ideas among a professional staff. It provides an opportunity for greater growth and understanding of teachers regarding the learning needs and progress of the entire school. Clearly recognized purposes relating to the teaching-learning situation should be democratically determined.
8. **Meeting, Departmental:** Provides an opportunity for departmental members to exchange ideas and to discuss curriculum, methodology, problems, and needs relating to their area of specialization.
9. **Teacher-Principal Conference:** Usually scheduled after a classroom visitation by the principal and designed to improve the teaching-learning situation. Mutual understanding and support as well as an informed and constructive exchange of ideas are necessary aspects of this meeting.
10. **Teacher-Department Chairman Conference:** Usually scheduled after a classroom visitation by the department chairman and designed to improve the teaching-learning situation. Mutual understanding and support as well as an informed and constructive exchange of ideas are necessary aspects of this meeting.
11. **Visitation, Within School:** An opportunity for teachers to develop new insights in classroom teaching through observing the on-going activities and teaching in classrooms other than their own—in their own school.
12. **Visitation, Other School:** An opportunity for teachers to develop new insights in classroom teaching through observing the on-going activities and teaching in classrooms other than their own—in another school.
13. **Team Teaching:** An assignment of two or more teachers to an instructional unit of a school. Among other benefits, it provides the opportunity for the exchange of ideas, joint planning, discussion of curriculum and methodology, and the observation of instruction by team members.

14. **Educational Television:** The use of television (open or closed-circuit) to provide teachers with carefully planned and presented examples (live or taped) of real or simulated teaching behavior. More common uses include demonstrations of teaching methods and instructional materials, equipment, and techniques.
15. **Video Tape:** An inservice approach wherein a teacher records and then plays back his own classroom teaching performance—thereby enabling him (a) to analyze his own teaching, (b) to have others critique it with him, or (c) to compare it to that of a master teacher.
16. **Laboratory Method:** Examples of various designs include role playing, reality simulation, brainstorming, buzz sessions, and group discussions. Group size and time requirements will vary according to the design. This approach usually results in a high level of group involvement, frequently in a simulated problem situation.
17. **Intensive Group Experience:** ~~Examples of various designs include encounter group, T group, and sensitivity training.~~ The group, usually consisting of 10-15 persons and a group leader, meets in an informal, relatively unstructured atmosphere. Group interaction in a climate of openness, risk-taking, and honesty is intended to provide the opportunity for individuals to come to know themselves and each other more fully than is possible in the usual social or working relationships.
18. **Interaction Analysis:** A method of analyzing classroom verbal interaction. Through the use of a teacher-observer the instructor is provided instant feedback regarding the nature of verbal interaction between teacher and student. Every three seconds the teacher-observer categorizes dialogue into one of ten categories: Teacher Talk (1) accepts feelings, (2) praises or encourages, (3) accepts or uses ideas of students, (4) asks questions, (5) lectures, (6) gives directions, (7) criticizes or justifies authority; Student Talk (8) student talk-response, (9) student talk-initiation. Category 10 is reserved for silence or confusion.
19. **Packaged Inservice Programs:** A self-instructional and self-paced approach to inservice education usually using tape and/or booklet modules. Many of the programs provide for a self-evaluation by the teacher of his present teaching competencies, a self-diagnosis of areas where further development is needed, and a modular approach for developing competencies in specific areas.
20. **Action Research:** A type of classroom research undertaken by teachers to improve instructional practices. As a researcher, the teacher focuses upon problem situations, formulates and tries alternate solutions, and evaluates the success of selected methods.

APPENDIX E
PANEL OF JUDGES

PANEL OF JUDGES

Dr. T. C. Coleman
Professor of Educational
Administration
University of the Pacific

Mrs. Jessie Kobayashi
Deputy Superintendent-Curriculum
Whisman School District
Mountain View, California

Dr. Robert Madgic
Vice Principal-Curriculum
Los Altos High School

Miss Viola Owen
Assistant Superintendent
Instructional Services
Santa Clara County
Office of Education

Dr. George Perazzo, Professor
Department of Educational
Administration
San Jose State University

Dr. Roger Reimer
Professor of Educational
Administration
University of the Pacific

Dr. William Theimer
Department of Educational
Research
University of Southern California

Dr. Hal Weatherbe
Research Division
California Teachers Association

APPENDIX F

LETTER OF APPRECIATION AND INSTRUCTIONS
TO PANEL OF JUDGES



LOS ALTOS HIGH SCHOOL
201 Almond Avenue
Los Altos, California 94022
(415) 948-6601

166

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Richard P. Alexander, M.D.
Mrs. Richard P. Wheat
Daniel L. Predovich, Superintendent

July 12, 1973

Thank you for assisting me in my doctoral study. Its central purpose is to determine the perceptions of high school teachers and principals in Santa Clara County regarding the appropriateness of selected inservice education practices in the amelioration of specific instructional difficulties.

The enclosed questionnaire was developed from a review of the research and literature supporting the objectives and rationale of this investigation. Included in the questionnaire are twenty-one traditional and emerging inservice practices which may be effective in meeting the five specified instructional needs of teachers. Your task as one of a "panel of experts" is to assist me in validating the instrument by responding to the following questions. To the best of your knowledge:

1. Are the five areas designated as Teacher Needs valid? Are there other areas associated with the classroom performance of teachers which should be included? Should any of the items identified as Teacher Needs not be included in the instrument?
2. Are the listed inservice education practices appropriate? Are there other activities which would be more appropriate when considering the nature of the identified instructional difficulties? Are there some activities included that do not seem appropriate for any one of the five Teacher Needs?
3. Are the directions clear? Is the questionnaire format acceptable? If not, what are your suggestions for modification? Does the "Description of Inservice Education Practices" provide you with adequate information? Should any of the descriptions be modified and if so, how?

If you have any questions please call me collect at (415) 948-6601. A response by mail or telephone prior to July 20 would be greatly appreciated. Thanks once again.

Sincerely,

APPENDIX G

DIRECTIONS FOR PILOT STUDY

DIRECTIONS FOR PILOT STUDY

1. Were the Directions clear? Suggestions for modification:

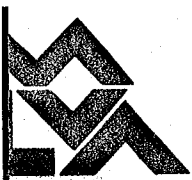
2. Were the "Descriptions of Twenty Inservice Education Practices" adequate? Suggestions for modification:

3. Did you encounter problems in completing the questionnaire? Suggestions for modification:

4. How long did it take you to complete the questionnaire?

APPENDIX H

CORRESPONDENCE TO PRINCIPALS REQUESTING CLERICAL
ASSISTANCE IN THE DERIVATION OF THE TEACHER SAMPLE



LOS ALTOS HIGH SCHOOL
201 Almond Avenue
Los Altos, California 94022
(415) 948-6601

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Mrs. Richard P. Wheat

Daniel L. Predovich, Superintendent

I am conducting a study designed to assess the appropriateness of teacher inservice education practices in Santa Clara County. It has been endorsed by the Santa Clara County Office of Education, the California Teachers Association, and the Association of California School Administrators.

An important aspect of the investigation is the derivation of a five percent stratified random sample of secondary school teachers in Santa Clara County. There are no data at the county level from which such a sample can be readily developed. For this reason I need and respectfully request your assistance.

The process I have chosen is simple -- AND WILL REQUIRE NONE OF YOUR TIME OR EFFORT. With your permission I would like to have your secretary assist me in randomly selecting from your school one teacher from each of the following departments to participate in the study:

The enclosed card indicates the nature of secretarial assistance being requested. It should not require more than five minutes of clerical time.

If my request meets with your approval would you please return the completed card to me by September 20, 1973. Your approval will assist me tremendously and be greatly appreciated.

Sincerely,

DUSHAN ANGIUS
Principal

DA:jt
Encl.

APPENDIX I

FORM GRANTING PERMISSION FOR CLERICAL ASSISTANCE
FROM PRINCIPAL

FORM GRANTING PERMISSION FOR CLERICAL ASSISTANCE
FROM PRINCIPAL

My secretary's name is: _____

Regarding your request for her assistance (check one of the following):

- She will send to you teacher rosters for the following departments:
- Please contact her. Rather than send to you departmental rosters, she will assist you via telephone.
- Sorry. We are unable to assist you in this study.

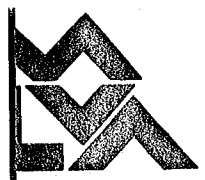
High School: _____

Total number of certificated staff: _____

Principal's signature: _____

APPENDIX J

FIRST FOLLOW-UP CORRESPONDENCE TO NON-RESPONDENTS



LOS ALTOS HIGH SCHOOL
201 Almond Avenue
Los Altos, California 94022
(415) 948-6601

174

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Mrs. Richard P. Wheat
Daniel L. Predovich, Superintendent

November 23, 1973

Would you please complete the enclosed questionnaire and return it to me by November 30. A copy of the original cover letter mailed to you on November 12 is attached to clarify the nature of the study.

Your response is important and will be greatly appreciated. I would like to thank you in advance for your anticipated assistance.

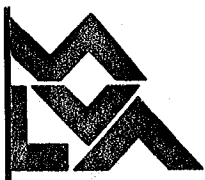
Sincerely,

DUSHAN ANGIUS
Project Director

DA:jt
Encl.

APPENDIX K

SECOND FOLLOW-UP CORRESPONDENCE TO NON-RESPONDENTS



LOS ALTOS HIGH SCHOOL
201 Almond Avenue
Los Altos, California 94022
(415) 948-6601

176

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Richard P. Alexander, M.D.
Mrs. Richard P. Wheat
Daniel L. Predovich, Superintendent

December 3, 1973

Your response to our county survey regarding inservice education (see attachment) would be greatly appreciated. Would it now be possible for you to spend 15 minutes in completing the enclosed questionnaire and returning it to me by December 7?

Thank you very much for your assistance.

Sincerely,

DUSHAN ANGIUS
Project Director

DA:jt
Encl.

APPENDIX L

THIRD FOLLOW-UP CORRESPONDENCE TO NON-RESPONDENTS

LOS ALTOS HIGH SCHOOL
201 Almond Avenue
Los Altos, California 94022
(415) 948-6601

178

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Richard P. Alexander, M.D.
Ms. Richard P. Wheat
Daniel L. Predovich, Superintendent

December 8, 1973

Your name has been randomly selected from the non-respondent category to a recent county study (original cover letter enclosed). Realizing that the original questionnaire could have reached you at a busy time, I hope that you may now have the time to respond to the following request: Would you please complete the enclosed questionnaire and return it to me by December 14?

The purpose of this phase of the research is to compare the perceptions of respondents with those of a sample from the non-responding category. As representative of the latter group, your response is very important and will be greatly appreciated.

I would like to thank you in advance for your anticipated assistance and to apologize for any inconvenience that this request may cause.

Sincerely,

DUSHAN ANGIUS
Project Director

DA:jt
Encl.

APPENDIX M

A SUMMARY OF PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS
ILLUSTRATING THE RELATIONSHIP BETWEEN YEARS OF TEACHING
EXPERIENCE AND TEACHERS' PERCEPTIONS REGARDING
THE APPROPRIATENESS OF INSERVICE EDUCATION PRACTICES

A SUMMARY OF PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS* ILLUSTRATING
THE RELATIONSHIP BETWEEN YEARS OF TEACHING EXPERIENCE AND TEACHERS'
PERCEPTIONS REGARDING THE APPROPRIATENESS OF INSERVICE EDUCATION PRACTICES

	Subject Matter Mastery	Method- ology	Individual- ization	Student Motiva- tion	Classroom Manage- ment
1. Formal Academic Study	0.020	-0.026	-0.004	0.123	0.054
2. Institute	0.013	0.009	-0.006	0.063	-0.023
3. Professional Conference	-0.025	-0.054	-0.013	-0.084	0.017
4. Workshop	-0.043	-0.120	-0.188	-0.187	-0.068
5. Professional Reading	-0.078	0.048	-0.095	0.035	-0.014
6. Consultancy Service	-0.066	0.024	-0.060	-0.024	0.048
7. Meeting, Faculty	0.047	-0.093	-0.156	-0.210	-0.193
8. Meeting, Departmental	0.023	-0.046	-0.061	-0.021	-0.073
9. Teacher-Principal Conference	-0.002	-0.089	-0.042	-0.070	-0.002
10. Teacher-Department Chairman Conference	-0.017	-0.016	0.016	-0.034	0.001
11. Visitation, Within School	0.071	-0.004	-0.064	-0.077	-0.032

A SUMMARY OF PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS* ILLUSTRATING
THE RELATIONSHIP BETWEEN YEARS OF TEACHING EXPERIENCE AND TEACHERS'
PERCEPTIONS REGARDING THE APPROPRIATENESS OF INSERVICE EDUCATION PRACTICES
(Continued)

	Subject Matter Mastery	Method- ology	Individual- ization	Student Motiva- tion	Classroom Manage- ment
12. Visitation, Other School	-0.101	-0.190	-0.199	-0.138	-0.087
13. Team Teaching	-0.112	-0.148	-0.086	-0.087	-0.065
14. Educational Television	0.040	-0.082	-0.141	-0.064	-0.085
15. Video-Tape	0.088	-0.137	-0.172	-0.102	-0.161
16. Laboratory Method	-0.037	-0.056	-0.081	-0.082	-0.054
17. Intensive Group Experience	-0.101	-0.118	-0.193	-0.183	-0.114
18. Interaction Analysis	-0.061	-0.064	-0.170	-0.178	-0.133
19. Packaged Inservice Program	-0.053	-0.121	-0.164	-0.114	-0.132
20. Action Research	-0.039	0.026	-0.006	-0.065	-0.051

* $p < .01$ ($r = 0.206$, D.F. = 150)

APPENDIX N

A SUMMARY OF T-RATIOS ILLUSTRATING THE DIFFERENCES
BETWEEN THE PERCEPTIONS OF MALE AND FEMALE
TEACHERS REGARDING THE APPROPRIATENESS OF
SELECTED INSERVICE EDUCATION PRACTICES

A. SUMMARY OF T-RATIOS* ILLUSTRATING THE DIFFERENCES BETWEEN THE PERCEPTIONS
OF MALE AND FEMALE TEACHERS REGARDING THE APPROPRIATENESS OF
SELECTED INSERVICE EDUCATION PRACTICES

	Subject Matter Mastery	Method- ology	Individual- ization	Student Motiva- tion	Classroom Manage- ment
1. Formal Academic Study	0.32	1.53	0.64	0.65	1.57
2. Institute	-0.84	0.66	-0.29	0.09	1.13
3. Professional Conference	-0.00	1.85	0.47	0.96	1.99
4. Workshop	0.87	1.13	1.74	1.11	2.19
5. Professional Reading	0.42	1.64	-0.14	0.69	0.17
6. Consultancy Service	-1.18	-0.24	-0.07	-1.68	-0.02
7. Meeting, Faculty	0.44	-0.23	0.35	-0.56	-0.89
8. Meeting, Departmental	0.28	0.04	0.58	0.21	0.04
9. Teacher-Principal Conference	0.82	1.34	1.64	1.06	0.35
10. Teacher-Department Chairman Conference	1.77	1.90	1.79	1.65	1.54
11. Visitation, Within School	0.79	1.57	2.17	1.57	1.58

A SUMMARY OF T-RATIOS* ILLUSTRATING THE DIFFERENCES BETWEEN THE PERCEPTIONS
OF MALE AND FEMALE TEACHERS REGARDING THE APPROPRIATENESS OF
SELECTED INSERVICE EDUCATION PRACTICES
(Continued)

	Subject Matter Mastery	Method- ology	Individual- ization	Student Motiva- tion	Classroom Manage- ment
12. Visitation, Other School	-0.79	0.95	0.70	0.54	1.50
13. Team Teaching	1.36	1.59	1.13	2.09	1.85
14. Educational Television	-0.01	-0.64	0.19	0.59	0.67
15. Video-Tape	0.68	-0.70	0.75	-1.05	0.58
16. Laboratory Method	1.41	1.39	1.10	1.61	1.57
17. Intensive Group Experience	0.56	-0.29	1.50	1.17	1.12
18. Interaction Analysis	0.51	-0.95	-0.20	-1.06	-0.66
19. Packaged Inservice Program	-0.62	-0.79	-0.48	0.04	0.75
20. Action Research	-0.41	-0.21	-0.04	-1.60	-1.22

* p < .01 (t = 2.96)

APPENDIX 0

A SUMMARY OF F-RATIOS ILLUSTRATING THE DIFFERENCES BETWEEN
THE PERCEPTIONS OF TEACHERS FROM DIFFERENT AREAS OF
TEACHING SPECIALIZATION REGARDING THE
APPROPRIATENESS OF SELECTED
INSERVICE EDUCATION PRACTICES

A SUMMARY OF F-RATIOS* ILLUSTRATING THE DIFFERENCES BETWEEN THE PERCEPTIONS OF
TEACHERS FROM DIFFERENT AREAS OF TEACHING SPECIALIZATION REGARDING THE
APPROPRIATENESS OF SELECTED INSERVICE EDUCATION PRACTICES

	Subject Matter Mastery	Method- ology	Individual- ization	Student Motiva- tion	Classroom Manage- ment
1. Formal Academic Study	1.183	0.913	0.959	0.479	0.846
2. Institute	1.164	2.075	1.853	0.714	0.672
3. Professional Conference	0.885	1.189	0.973	1.490	0.740
4. Workshop	0.837	1.113	1.527	1.189	0.306
5. Professional Reading	0.996	0.953	1.152	1.227	1.027
6. Consultancy Service	0.636	1.091	1.037	1.246	0.590
7. Meeting, Faculty	0.274	0.273	0.401	0.603	0.722
8. Meeting, Departmental	0.397	0.395	0.178	0.790	0.849
9. Teacher-Principal Conference	0.792	0.675	0.948	0.717	0.609
10. Teacher-Department Chairman Conference	0.451	0.413	0.400	0.918	0.786
11. Visitation, Within School	0.325	1.309	0.387	1.206	0.728

A SUMMARY OF F-RATIOS* ILLUSTRATING THE DIFFERENCES BETWEEN THE PERCEPTIONS OF
TEACHERS FROM DIFFERENT AREAS OF TEACHING SPECIALIZATION REGARDING THE
APPROPRIATENESS OF SELECTED INSERVICE EDUCATION PRACTICES
(Continued)

	Subject Matter Mastery	Method- ology	Individual- ization	Student Motiva- tion	Classroom Manage- ment
12. Visitation, Other School	1.998	1.671	1.234	2.120	1.362
13. Team Teaching	0.871	0.744	0.582	1.255	0.669
14. Educational Television	0.633	0.713	1.195	1.051	0.781
15. Video-Tape	0.854	0.835	0.796	1.106	0.212
16. Laboratory Method	0.906	1.300	1.601	1.849	1.072
17. Intensive Group Experience	0.421	0.537	1.143	1.741	0.734
18. Interaction Analysis	0.266	2.002	1.241	2.055	1.497
19. Packaged Inservice Programs	0.806	1.133	1.211	0.605	1.123
20. Action Research	0.275	1.614	1.570	1.114	0.858

* $p < .01$ ($F = 3.29$)