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A TEACHER EVALUATION OF SELECTED METHODS
OF IN-SERVICE EDUCATION

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A TEACHER EVALUATION OF SELECTED METHODS
OF IN-SERVICE EDUCATION

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CHAPTER I

THE STUDY

Introduction

Across the nation elementary school teachers are participating in ever expanding programs of in-service education. It is necessary in education, as in all professions, that growth and change take place. Often in public schools the process of change is made difficult by special interest groups within the community pressuring for conflicting changes.¹ The demand seems to be, "correct all deficiencies at once." The fact is that our schools have been in a constant state of change, but only in recent years has attention been directed to the necessity of education for national survival, solving social problems, and succeeding in an age of science and technology.²

¹Muriel Crosby, "New Demands for New Leadership," Curriculum Decisions--Social Realities, ed. by Robert R. Leeper, (Washington, D.C.: Association for Supervision and Curriculum Development, N.E.A., 1968), p. 1.

²William Van Til, "In a Climate of Change," Role of Supervisor and Curriculum Director in a Climate of Change. 1965 Yearbook of the Association for Supervision and Curriculum Development. (Washington, D.C.: Association for Supervision and Curriculum Development, N.E.A., 1965), pp. 8-12.

Today it is accepted that four or five years of pre-service education will not equip teachers to meet all the challenges of the future. Pre-service education, at best, only prepares teachers to begin teaching. Hass states it this way:

Undoubtedly, the characteristics and needs of the American public school cannot be determined except with reference to the unfolding social scene. The qualities, skills, and necessary preparation of a good teacher must also be determined in this light. Because of constant social change, the preparation needed by the professional educator is continuous throughout his professional career.¹

School systems often find it worthwhile to provide a program to introduce teachers to the special programs, community resources and expectations, administrative procedures, and methods of working with pupils and fellow teachers in individual schools.

Rapid changes in the social structure, science and technology, knowledge explosion, and newer understandings of learning processes make continuing education of teachers a critical need. Very few teachers educated in the 30's, 40's, or the 50's would be qualified to teach the pupils of the 70's without the growth provided by in-service education. Macdonald makes this point very well.

Some teachers are continually changing-growing toward better teaching. . . . If all teachers could grow in

¹Glen C. Hass, "In-service Education Today," In-Service Education, Fifty-sixth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1957), p. 17.

this way there might be no need for in-service education programs. The reality of the situation is that the majority of our teachers do not display a noticeable built-in professional-growth mechanism. Like the population at large, there seem to be relatively few self-educating people in teaching.¹

Changes are taking place at such a rapid rate today that elementary teachers, teaching all areas of the curriculum, are especially pressed in their efforts to keep up with change.

Many of the present-day critics of pre-service education state that there is no accepted curriculum for training teachers. The point is made that even the educators cannot agree on what is essential for prospective teachers.² Whether or not this is true the fact remains that many teachers need help with grouping children, discipline, understanding cultural and economic differences of children, and adapting to the philosophy of a school system.

Statement of the Problem

The problem of this study was to secure teachers' evaluations of selected methods of in-service education. The following problems were involved: (1) determine what methods of in-service education were used, (2) compare the evaluations of teachers with one year of experience, four to six

¹James B. Macdonald, "Helping Teachers Change," The Supervisor: Agent for Change in Teaching, (Washington, D.C.: Association for Supervision and Curriculum Development, N.E.A., 1966), p. 2.

²John I. Goodlad, Renata Von Stoephasius and M. Frances Klein, The Changing School Curriculum, (New York: The Fund for the Advancement of Education, 1966), pp. 108-11.

years of experience, and ten or more years of experience,
(3) evaluation of the methods of in-service education.

This research was intended to test the following two hypotheses:

H_1 There is no difference between the evaluations of teachers with one year, four to six years, and ten or more years of experience when evaluating the effectiveness of methods of in-service education.

H_2 There is no difference between the effectiveness of methods of in-service education, for specific purposes, as evaluated by teachers.

Statement of the Purpose

One purpose of this study was to determine whether teachers with different amounts of experience evaluated methods of in-service education differently. A second purpose was to determine if there were methods of in-service education teachers evaluated as more effective than others for achieving specific purposes of in-service education. A subordinate purpose was to determine the relative degree certain methods of in-service education were used. Finally, it was hoped that from the obtained information recommendations of methods of in-service education for the future could be made.

Need for the Study

Teachers often find there is just not enough time in the school year to keep abreast of the changes taking place in their own profession. Little time is left after making lesson plans, holding conferences with parents, supervising playgrounds and lunchrooms, reading and grading papers, while trying to have some home life of their own. These activities and many others are in addition to the five and one half hours in the classroom with from twenty-five to forty pupils. Time under these conditions becomes very valuable.

When in-service education is planned every effort should be made to insure that teachers' time is not wasted. Corey, discussing carefully planned and creative programs, has this to say: "There are many indications' that such programs are becoming increasingly common; but it is also apparent that much of what goes for in-service education is uninspiring and ineffective."¹

Corey² also tells us that in-service education is dependent upon attitudes, understandings, and skills that most of us have not mastered. We are not competent in

¹Stephen M. Corey, "Introduction" In-Service Education, Fifty-Sixth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1957), p. 1.

²Ibid., p. 9.

communication and co-operative skills and unless we learn and use these skills, instructional improvement will remain only a hope. Sir Alec Cleg expresses the same thought.

. . . We have not, as far as I am aware, a great deal of evidence of the effectiveness of our methods of communication and implementation. I must confess that I have not read the full report of the International Study of Achievement in Mathematics. Yet, I was talking to someone who knows a great deal about it and he told me that where there was much in-service training there was a comparatively low standard of achievement. The conclusion he drew from this was that the in-service training was being given where it was most needed but there was little evidence of its effectiveness.¹

Many school systems have programs of teacher evaluation. Some college professors ask students to evaluate the methods used on them. It is assumed that the purpose of these evaluations is improvement in instruction. In-service education fills such an important need in education today that it is folly to fail to make every effort to make it as effective as possible. Poor or ineffective methods may ruin rather than improve classroom instruction regardless of the quality of content. The old saying, "I can't hear what you are saying, because what you are doing speaks so loud," may apply to many in-service education programs. This may not be true, but it is an error to refuse to find out.

During the 60's television was used for in-service education in an ever expanding variety of ways. However,

¹Sir Alec Cleg, "Improving Methods of Communication and Implementation," The National Elementary Principal, XLVIII (February, 1969), p. 6.

only limited evaluations were made to determine the effectiveness of these programs, and these few evaluations were usually in terms of content. Questions about the degree of involvement, change in classroom instruction, and changes of attitude need to be explored. Clearly the methods used with teachers are as important as the methods teachers use with children. Muessig has supported this view.

My reading of material containing theorizing about and research on change leads me to believe that the most meaningful and enduring change comes from within an individual. He must struggle on his own or labor in voluntary concert with others, and must see a real, personal need if he is to alter his behavior or some portion of the human condition which touches his life directly. Changes forced upon a person from the outside--through coarse or refined coercion, indoctrination, inculcation, manipulation, or other means--are less likely to take root and to flourish than those the individual desires for himself.¹

During one school year elementary school staffs might study physical education, human relations, social studies, learning theory, foreign language, and arts and crafts in a series of in-service programs. Indications are that the number of in-service programs will remain at this high rate or increase in the near future. This suggests the need to evaluate all aspects of in-service education and make the changes indicated as a result of evaluation. Caswell says much the same thing when discussing the responsibilities of the instructional leader:

¹Raymond H. Muessig, "Change--the Only Constant," Educational Leadership, Vol. 26, No. 6, (March, 1969), pp. 543-4.

Administrative and supervisory officers generally are concerned with improving the work of teachers. Rarely do they give serious attention to improving their own competence as instructional leaders.¹

In summary there exists a need to evaluate methods of in-service education in order to (1) make wise decisions about the best use of teachers' time, (2) use methods that are effective, (3) determine whether or not new media is replacing older methods, (4) determine whether or not the methods are compatible with what is advocated for teacher use, and (5) find out if improvements in administrative methods of leadership are taking place.

Need for an Instrument

Evaluation of on-going processes is necessary if competence is to be maintained in a dynamic changing society. This is true for an organization just as it is true for an individual. Efforts to evaluate in-service education help clarify purposes, refine and improve the methods, and thus make more effective the total program. An instrument was required to proceed with this needed evaluation. The development of such an instrument involved the identification of the methods used in the Oklahoma City Public School System and the identification of the specific purposes of in-service education. A pilot study was then made to determine if

¹Hollis L. Caswell, "Foreward," Instructional Leadership, Gordon N. Mackenzi, Stephen M. Corey, et al. (New York: Bureau of Publications, Teachers College, Columbia University, 1954), p. v.

teachers had any difficulty understanding the methods, as described, or the purposes, as illustrated, in the instrument.

The literature is overflowing with statements to the effect that there is an outstanding need in the field of education for a critical, objective analysis of the effectiveness of particular techniques employed in the in-service education of teachers. Further, the point is made that any evaluation should be made in terms of the purposes of in-service education. Harris makes it clear that research is needed.

Instructional supervision is practiced as one of the oldest sub-professions in education. Its attainment of maturity through research is, for the most part, yet to be realized! The effectiveness of various supervisory activities and programs applied to influence persons and situations toward better instruction needs to be thoroughly researched.¹

Harris further tells us:

Exacting studies of supervision programs as distinguished from specific activities or isolated supervisory endeavors are almost nonexistent. Programs of curriculum development often lack sufficient specificity of purpose to permit adequate evaluation of outcomes.²

The total in-service education program is made up of a series of activities used during the school year as different methods are applied to different problems. Evaluation

¹Ben M. Harris, "Need for Research on Instructional Supervision," Supervision: Emerging Profession, ed. by Robert R. Leeper (Washington, D.C.: Association for Supervision and Curriculum Development, N.E.A., 1969), p. 99.

²Ibid., p. 100.

of selected methods in terms of how effectively each method achieves the specific purposes for which it was used provides a basis for selecting more effective methods in the future. Some methods of in-service education are probably more useful than others.

The in-service education program for any large school system is unique. Most systems have some common activities; however, the location, size, background, current resources, leadership, and community expectations all contribute to differences between school systems. Often the school system will be planning in-service education for an entire school year, several years, or perhaps longer.

No standardized instrument could be found for evaluating in-service education methods in terms of specific purposes. Therefore, it was necessary to develop an instrument for the purpose of evaluating methods which had been used in the in-service education program of the Oklahoma City Public School System. A description of the development of the instrument can be found in Chapter III.

Limitations of the Study

This study was limited to the methods of in-service education used in the elementary schools of the Oklahoma City Public School System between the years 1960 to 1969, as identified by educators in that system. It must be understood that this study did not examine the total in-service education

activities in the elementary schools, but only the methods and programs used on a system-wide basis. Activities that took place in only one or several schools were excluded.

The instrument, a questionnaire, has some limitations. One, the questionnaire was not standardized. Two, there is always the variation of interpretation of the items at the time of marking. Three, recent experiences may bias the respondent. Best,¹ however, makes it clear that a questionnaire also has some advantages.

Men teachers were excluded from the study for two reasons. First, the number of men teachers in the elementary schools was comparatively small and most of these were teaching either the fifth or sixth grades. Second, many of the men teachers desire to move into administrative positions and this might bias their evaluation of any administrative techniques and actions.

Definition of Terms

For the purpose of this study the following terms were defined in order to clarify meaning.

1. In-service education--Those experiences and activities organized within the school system to promote the growth of instructional staff members to make them more efficient and more effective.

¹John W. Best, Research In Education (Englewood Cliffs, N.J.: Prentice Hall, Inc., 1959), p. 151.

2. Elementary teachers--Women teachers of pupils in kindergarten through the sixth grade and special education at the elementary school level. Special teachers, such as string instrument, speech therapist, and visiting counselor are not included.

3. Curriculum change--Any change in organization of content, ideas about content, scope, sequence, or methods of teaching, that require in-service education for teachers.

4. Administrator--Superintendent, director of elementary education, director of curriculum, supervisors, and building principals are all included.

Method of Procedure

A questionnaire was developed to obtain data from which to determine practices, make evaluations and comparisons. A search of the literature was made in order to find methods of in-service education in use. A first questionnaire was developed and sent to a sample of directors of elementary education, directors of curriculum, and elementary principals. A second questionnaire was developed to be completed by elementary teachers and a pilot study was made. Elementary teachers were requested to indicate the relative degree of experience they had with each method of in-service education. The teachers were asked to indicate the effectiveness of each method for achieving the purposes of in-service education on a three point scale. These pilot studies are

described in Chapter III. From the responses received, the final instrument for the study was developed. This instrument is found in Appendix E. .

The population of this study was made up of the women elementary teachers in the Oklahoma City Public School System. A stratified random sample was used. The first sample was fifty teachers of the 165 with one year of experience in the system. The second sample was fifty teachers of the 188 with from four to six years of experience in the system. The third sample was fifty teachers of the 434 with ten or more years of teaching experience in the system. The use of three samples with different amounts of experience provided data for comparing the responses of more experienced teachers with the responses of those with less.

The questionnaire was sent through the school mail to the total sample after permission was obtained from the Research Committee of the Oklahoma City Public School System. The teachers were assured that no one would be identified and return envelopes were provided for returning the completed questionnaires through the school mail. A follow up was made with some questionnaires personally delivered. All questionnaires were returned.

Tables were devised to show the percentages of responses by each group to each method of in-service education. The statistical process of Chi-square was applied to the data received from the questionnaire to determine if

there were statistical differences between the responses of the three samples. The responses of the three samples were combined and reported by numbers and percentages for each method. The statistical process of Chi-square was applied to the combined responses and where significant differences between methods did occur for specific purposes of in-service education, they were reported. Finally, tables were devised to present the methods which were found to be significantly more effective than others. For the purpose of this study acceptance or rejection was made at the .05 level of confidence.

Basic Assumptions

For the purpose of this study, it was assumed that:

1. The pre-service education of teachers cannot equip teachers to meet all future professional demands. Continuing education is a necessity.
2. Teachers desire to grow and to improve in their professional competency.
3. Teachers will give honest, thoughtful responses to questions concerning in-service education programs.
4. Teachers are capable of and have a right to evaluate methods of in-service education which affect them.

Plan of Organization of Chapters

The report of the study was organized into five chapters in the following manner:

Chapter I presents the background, need, and a plan for the study.

Chapter II presents a review of related literature and research.

Chapter III describes the questionnaire, how it was developed, sources of data, and treatment of data.

Chapter IV contains the presentation of the data.

Chapter V contains a summary, conclusions, and recommendations from the study.

CHAPTER II

REVIEW OF RELATED LITERATURE

Historical Review of In-Service Education

The changing concepts of the aims and values of education, the roles of the teacher and the functions of the school have grave implications for in-service education. A brief look at in-service education of the past indicates just how much change has taken place and leads one to be aware of the increasing rate of change.

In-service education is thought of as a relatively new organizational device for improving the competency of the teacher in the classroom. Richey¹ traces the earlier efforts of in-service education back as far as 1845, when Horace Mann described and wrote about The Teachers' Institute. Teachers were brought together and taught much the same as children, they were formed into classes, exercised, questioned and drilled. This was needed because quite often the teachers had only a very limited education.

¹Herman G. Richey, "Growth of the Modern Conception of In-Service Education," In-Service Education, Fifty-Sixth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1957), pp. 35-66.

During the nineteenth century, in-service programs of teacher-training and ideas regarding them reflected, above all else, the prevailing and partially valid assumption that the immaturity, meager educational equipment, and inexperience of the teacher rendered him unable to analyze or criticize his own teaching, or unless given direction, to improve it.¹

Richey tells further that the teachers' institute was a product of the times and as such was well received.

Although the institute served a preservice teacher-training function, its value as an agency of in-service education accounted for its rapid and widespread adoption, gave it vitality to endure in recognizable form for a century, and led its proponents to exhaust superlatives in describing its beneficial effects.²

In-service education clearly had as its purpose the making up of deficiencies of teachers. From the period 1890 to 1930 changes in the concept of in-service education began to come about. This was caused by the increased competence of teachers and the improved educational requirements for obtaining a position in teaching. As educational opportunities improved, the education of prospective teachers became more adequate. The demand for greater skill in the classroom required greater preservice education. Richey³ points out that in 1890 relatively few teachers had received a high school education but that by 1911 states were beginning to require high school graduation as the minimum requirement

¹Ibid., p. 38.

²Ibid., p. 39.

³Ibid., p. 39.

for certification. Universities had begun to train students to teach.

Teachers' Reading Circles were created near the close of the nineteenth century and were organized in three-fourths of the states by 1910. They were easy to organize, administer and the cost was low. The reading circle, like the institute, was designed to advance the performance of teachers who were deficient in academic training and professional skills. Richey¹ maintains that "the lowly status of the teacher and inability to provide anything better were the only excuses for their existence."

In the late nineteenth century the summer school grew and expanded. In the earlier efforts the summer schools were independent of colleges and universities, offered work of less than college grade, and attempted to reach the same teachers which the institute served.

In the 1930's other changes began to take place. Richey makes the following comments concerning the newer and changing concept of in-service education during that period.

The teacher was no longer an elementary school graduate to be trained but a specialist to be consulted. Supervisory and administrative efforts previously directed toward teacher improvement could be more sharply focused on the promotion of pupil growth. Attempts by teachers, supervisors, administrators, and others to solve problems of common concern constituted in-service education, not of the teachers individually but of the teaching staff as a professional group. New programs of

¹Ibid., p. 46.

in-service education involving group activity, alternating leadership as it emerged from the staff, and freedom on the part of the teacher to experiment found expression in the organization of curriculum planning committees and policy-making boards, in the organization and development of workshops and in attempts by teachers singly and in groups to apply more and more the methods of research in the solution of their educational problems.¹

During the 50's and 60's many attempts were made to find more effective methods of improving instruction in the classroom. Teachers were better educated and this meant that any program or activity designed to create improvements needed to be well planned and of high quality. This quest for quality has found most school systems going in many different directions. Hass provides some interesting figures about attempts at in-service education.

A wide variety of activities are included in the in-service education programs which are reported in the nation-wide studies in this area. Workshops, teacher study groups, conferences, preparation of curriculum publications, seeing other teachers at work--all are included as kinds of activities which are highly valued and in which teachers in every section of the country are engaged. In 1954 McMahon found that six school systems which she surveyed had fifty-four different types of in-service education activity.²

Harris makes clear that, at the present, all the answers are not available on in-service education. While specifically discussing supervision, the activities Harris

¹Ibid., p. 58.

²Glen C. Hass, "In-Service Education Today," In-Service Education, Fifty-Sixth Yearbook of the National Society for the Study of Education, Part I (Chicago: University of Chicago Press, 1957), p. 32.

describes are in-service education activities used in many school systems. His comments are quite relevant to the in-service education programs of today.

Several decades of organized, specialized practice in school situations have produced an array of supervisory activities. Such activities as classroom observation, teacher-supervisor interviews, demonstration teaching, lecturing, and group discussions are all well known and widely used. The usefulness of these activities is not seriously questioned, yet little is known about the effectiveness of these and other activities in different situations, with different problems, and different personalities involved.¹

Teachers' Attitudes Toward In-Service Education

Is there a teachers' attitude toward in-service education programs that can be stated and relied upon? Are there some teachers who profit for any and all in-service activities and at the same time another body of teachers that do not profit from any such activity? Or could it be that some methods are highly effective with many teachers while other methods are highly ineffective? These are questions that appear easy to answer, yet little has been done to find the answers. Littrell raises similar questions about curriculum study.

How valuable do teachers actually believe their contributions are to the making of the curriculum? Are they satisfied with the results of their work? In their estimations, what personal values accrue to them?

¹Ben M. Harris, "Need for Research on Instructional Supervision," Educational Leadership, XXI (November, 1963), 129.

What do teachers really think about the methods used in the curriculum work in which they engage?¹

To ignore these questions or to fail to raise them is to make clear to everyone concerned that in-service education does not mean business. The teacher in the classroom works for, tests for, and expects to find growth. The teacher who is required to attend in-service activities may know that no growth is expected to take place. Much of the problem is presented by Ogletree and Edmonds.

Too frequently in-service educational practices are characterized by an aggregate of incidental activities, sporadic in occurrence, lacking in productive purpose, unorganized in structure and unsynchronized within the framework of a school district's total operation. Perhaps a staff does grow or improve through such activities; however, the evidence seems to indicate that the bird of chance wings high on the winds of such uncertainty.²

Harris, Bessent and McIntyre,³ in their book, give an answer to at least one of the questions raised about the possibility of some few methods of in-service education being effective for all programs. It is worth noting that as methods of in-service education are presented in the chapters of their book, a part of each chapter is given to

¹J. Harvey Littrell, "When Teachers Evaluate Curriculum Study," Educational Leadership, XXII (December, 1964), 173.

²James R. Ogletree and Fred Edmonds, "Programing for In-Service Growth," Educational Leadership, XXI (February, 1964), 288.

³Ben M. Harris, Wailand Bessent, and Kenneth E. McIntyre, In-Service Education: A Guide to Better Practice, (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969).

"Limitations of the Approach" or to "Cautions and Limitations." This would be a point well taken, there is no one method of in-service education that will meet all purposes of in-service education and that when this is ignored the present and future programs run the risk of being ineffective or, what is even worse, negative in outcomes.

Teachers' Favorable Attitudes

The quality of in-service education must receive much attention if present and future programs are to be effective. Teachers, as other professionals, grow in one direction or another. Teachers must be exposed to curriculum change and that exposure must be of high quality to produce change. Wiles gives an example.

During the past year, I saw my wife, an elementary school teacher undergo the process of being told that she must teach the new mathematics. I saw her resist it. As she underwent in-service preparation, I saw her begin to change her feelings about the new mathematics. Perhaps we have been making some false assumptions about autonomy and have expected intelligent choice and change when the range of alternatives was too limited. It could be argued that many have been rejecting what they do not know because they do not know it.¹

When resistance to in-service education takes place it might well be that it is not just a case of teachers not wanting to improve or learn. Barr, Burton, and Brueckner do warn against such a view.

¹Kimball Wiles, "Proposals of Strategies: A Summary," Strategy for Curriculum Change, ed. by Robert R. Leeper (Washington, D.C.: Association for Supervision and Curriculum Development, 1965), p. 72

It is a mistake to assume that teachers are not anxious to improve their effectiveness. As in all professional groups there are the incompetent, but these are the exception. The average classroom teacher is just as anxious to provide an effective service and grow in his ability to do so as are other school officials.¹

It is also pointed out that there are many factors operating on the teacher that are not effecting the advocates of change.

Teachers are frequently without the supervisor's background of experience and contacts. Teachers are, however, faced with the responsibility of putting educational theory into practice. Under these conditions they are naturally much more conservative and doubtful about change than are persons less well acquainted with the demands of the immediate situation.²

The prospect of teaching day in and day out with a feeling that the best is not being provided for the students is not a pleasant one. The problems of the teacher need solving and the only way of doing this must involve the teacher and an identification of problems that are in fact important to the teacher. Often the assumption is made that the teacher does not have any contribution to make or the teacher would have done something about the needs in the classroom.

It appears that teachers do want to teach better. They know they are not performing to capacity and

¹A. S. Barr, William H. Burton, and Leo J. Brueckner, Supervision (New York: Appleton-Century-Crofts, Inc., 1947), p. 566.

²Ibid., p. 594.

are aware of the nature of their deficiencies, and they have suggestions as to how they can improve.¹

In the classroom with live students in front of the teacher, the peculiar needs of the neighborhoods, city, state, the unique home backgrounds, the differences of the point in time, it is difficult to conceive of someone on the other side of town having a real awareness of the problems and needs of any one particular teacher. Failure to use all information available to solve educational needs is folly.

Teachers have expressed their desire to do better teaching and have indicated their need for improvement. They have demonstrated that they can and will identify their needs and will offer suggestions for improving their practices and their working conditions. Given leadership, encouragement, the opportunity for involvement, and improved instructional environments, teachers will improve their teaching. An in-service education program based on teachers' opinions of their teaching practices and conditions of work offers the means to accomplish professional growth and, thus, to improve instruction.²

This indicates that at least some of the writers in the field believe that teachers are not the sole reason for poor results of in-service education.

Teachers' Unfavorable Attitudes

Quite often negative attitudes of teachers toward in-service education, new programs, curriculum revision, and curriculum improvement, may be brought about by past

¹Walter S. Foster, "Teachers' Opinions: Their Implications for In-Service Education," The National Elementary Principal, XLV (April, 1966), 48.

²Ibid., p. 51.

experience. This attitude may be the result of learning at the school of hard knocks. There has been little evidence in the immediate past to indicate that society has been pleased with the job done by the teacher or even that the job was important. Wiles discussing the attitudes of the public toward schools and improvements prior to and after Sputnik has this to say:

The public at large was for the most part unconcerned. Citizens were satisfied with their schools and were making no real demands on school people to bring about major change. Since 1957 that condition no longer prevails.

After Sputnik the general public began to demand that the schools do a more effective job. The mass media were used by certain spokesmen to convince the public that the public school system was not satisfactory, that changes must be made. A demand for change in the curriculum of the public schools was created, and it was no longer necessary for ingenious educators to attempt to persuade boards of education to allow innovation.¹

Poor salaries, long hours, inadequate materials, and even sometimes dangerous facilities, can teach teachers that they do not deserve consideration or any voice in the decision-making process within the profession. It may be that this is an overstatement of the case. Mackenzie and Corey indicate these attitudes are held by some teachers.

A negative attitude toward improvement of teaching procedures often results when all proposals for curriculum study come from the administration and are felt by teachers to threaten their security. Frequently the introduction of new courses or the reorganization of the curriculum is strongly resisted.

¹Wiles, "Strategies of Change," p. 3.

Some teachers interpret the new program as growing out of the administrator's covert and unfavorable evaluation of their work, and therefore as an implied criticism.¹

When in-service education activities are marked by failure it is easy, but perhaps foolish, to conclude that the whole fault lies with the teachers. Many of the activities are poorly planned with little expectation of success. The classroom teacher, just as any other learner, should expect her time to be valued and not thrown away. Blumberg and Amidon conducted a study of teachers reactions to school faculty meetings and found that teachers' time was not well used, in the opinion of the teachers.

A casual look at the answers on the satisfaction question indicated that, in general, no groups of teachers in the study felt that faculty meetings were an effective use of time and energy. Answers to this question ranged from "faculty meetings were fairly satisfactory" to "faculty meetings were a waste of time." Only six teachers out of 40 included in the analysis thought that their faculty meetings were an effective use of time and energy, while 28 thought faculty meetings were a waste of time.²

Is there an end result of the feelings of teachers that they are being bypassed? Some writers believe that teachers may have quite a voice in the curriculum decision-making process in the very near future. Bishop points out

¹Gordon N. Mackenzie and Stephen M. Corey, Instructional Leadership (New York: Teachers College, Columbia University, Bureau of Publications, 1954), p. 62.

²Arthur Blumberg and Edmund Amidon, "Teacher Reactions to School Faculty Meetings," The Journal of Educational Research, LVI (May-June, 1963), 466-70.

that many of the "teacher proof" curriculum packages of the late 50's and early 60's failed because in-service support was not provided and teacher commitment was not present.

The early curriculum packages that were developed avoided in many cases the participants who should have been most involved--teachers, pupils, principals and supervisors. These were the days of the "teacher-proof" developments. Innovative imports tended to become curriculum dropouts because without in-service support and teacher commitment there were inadequate forces to continue.¹

Bishop goes on to say there will be some serious changes in the future educational planning and the in-service educational programs.

Teacher militancy and the spreading effects of the negotiation process will seriously codify the procedures and patterns for in-service education. Teachers are insisting that they be considered full-fledged members of the educational team. They are seeking to revise and in some cases upset the traditional hierarchies of supervision and administration to the effect that these persons become supportive rather than directive.²

Problems of In-Service Education

Refinement of the earlier in-service education practices has been taking place in the schools of the nation. Many of the earlier practices were discarded as the needs of teachers changed and it was discovered the old methods would no longer serve. The teachers' institute and the reading

¹Leslee J. Bishop, "In-Service Education: Balance and Thrust," Educational Leadership, XXVI (October, 1967), 10.

²Ibid., p. 11.

circle are but two examples of discarded in-service methods. With the rapid changes that are taking place within educational institutions, the high cost of providing any in-service program, and the improved competency of teachers, a constant evaluation and improvement of all methods of in-service education becomes a requirement of school systems trying seriously to provide for the children of the community.

In-service education that does not contribute to teacher education is more common than most educators believe. Flanders describes poor in-service education.

At its worst, in-service training is a gigantic spectator sport for teachers costing at least 20 million dollars annually. As spectators, teachers gather to hear speeches, usually choosing seats in the rear of the room. They play a passive role in which their own ideas and questions are not adequately considered. They react as one does to any performing art and are more impressed or disappointed by the quality of the performance than with how much they may have learned.¹

This description must come as a shock especially when it is remembered that some school systems are investing time, money and resources into programs such as these. Harris provides another surprise when he states, "Theories of learning have not generally been applied to the design of in-service programs for teachers."² There can be found little

¹Ned A. Flanders, "Teacher Behavior and In-Service Programs," Educational Leadership, XXI (October, 1963), 26.

²Harris, "Research on Instructional Supervision," p. 133.

justification for failing to use the best tools of an organization for the change and improvement of that organization.

The same principles of learning which are operative in classrooms also seem to be operative in in-service education. Learning becomes more effective when one can identify with the program in a personal way.¹

There was a time when an in-service education program could be put together and presented to teachers with little concern for the effectiveness of the program. If some teachers did not change, a similar program could be provided the next year, and the next, and the next. There did not exist the urgency that is so very prevalent today. Anderson gives reasons for the need for tooling-up for continuous change.

The things that children need to learn with the help of the schools are multiplying at an overwhelming rate, and this rate promises to increase. Conversely, many things that were once thought to be true and a necessary part of school learning are being discarded or modified at a very rapid rate. It is therefore urgently necessary to assemble the profession, both nationally and locally, for continuous and intensive reexamination of the curriculum and its objectives.²

Harris is in agreement that a period of continuous change is here to stay.

The development of instructional supervision as a field of professional endeavor geared to bring about improvements in classroom practices is more than a goal, it is an imperative need. There appears to be considerable new interest in supervisors, in-service education, and curriculum

¹John Guyot Savage, "A Comparison of Administrator-Teacher Perceptions of In-Service Education" (unpublished Ed.D. dissertation, University of Illinois, 1967), p. 47.

²Robert H. Anderson, Teaching in a World of Change (New York: Harcourt, Brace & World, Inc., 1966), p. 7.

development from the viewpoint of strategies for instructional change. Hopefully, we are past that period in which advocates of one curriculum project after another come forth to save our educational system. We seem to be moving, somewhat erratically, in the direction of organizing for continuous and rapid change on a broad front.¹

Just because there are needs for change does not make the job any easier. Change has been resisted by many in the past and is well described by Van Til.

Hard-bitten veterans of curriculum campaigns have even been heard to say that changing the curriculum is like moving a cemetery. Until you try it, you do not realize how many friends the dead still have.²

How serious are the problems of poor or ineffective in-service education programs? When studies have been made quite often the weaknesses were found in how programs were planned, consideration of teachers needs, selection of activities, and adequacy of staff and resources used.

A study was conducted in selected schools of Nebraska evaluating in-service education programs. For this study eighteen criteria of good in-service education were selected.

The findings have indicated that the selected schools of Nebraska generally have mediocre programs of in-service. There appears to be a kind of "token" performance of in-service education in most of the schools. Although programs are established in all of the schools, only half of these

¹Ben M. Harris, "Strategies for Instructional Change: Promising Ideas and Perplexing Problems," in The Supervisor: Agent for Change in Teaching, ed. James Rath and Robert R. Leeper (Washington, D.C.: Association for Supervision and Curriculum Development, N.E.A., 1966), p. 92.

²William Van Til, "In a Climate of Change," Role of Supervisor and Curriculum Director in a Climate of Change, 1965 Yearbook of the Association for Supervision and Curriculum Development (Washington, D.C.: ASCD, 1965), p. 23.

schools can measure favorably on eight of the established criteria.¹

An examination of what methods are used in successful programs may just provide clues that can be used elsewhere. Perhaps the methods used in art and music in-service activities can be applied to reading, social studies, and other programs. Berry found participation to be important.

It was the consensus of the respondents throughout the study that the practices which were the most effective were those which required group participation. The opportunity to learn by doing the things discussed seemed to be what the teachers were looking for rather than merely listening to someone tell them how it should be done. The music and art curriculum meetings were mentioned many times as being the most beneficial to teachers.²

When teachers have an active role in the in-service activity and that activity is appropriate for the task at hand there yet remains a serious problem of communication and leadership. It is difficult to find the right path if you do not know where you are going or why you are going. Littrell analysed teachers' evaluation of curriculum study and found that some participants did not have adequate understanding of the goals.

¹Arthur Carl Nicolai, "A Survey and Evaluation of In-Service Education Programs in Selected Schools of Nebraska" (unpublished Ed.D. dissertation, University of Nebraska, 1966), p. 136.

²Daryl Eugene Berry, "A Study of Selected In-Service Practices for Improvement of Instruction in the Public Schools of Topeka" (unpublished Ed.D. dissertation, University of Kansas, 1962), p. 151.

The study revealed that more than one-half of the teachers started the study without a clear understanding of its purposes. At the end of the study 15 percent still did not believe the purpose was completely clear to them. The implication for curriculum directors and consultants is very clear; there is a definite leadership responsibility in this area.¹

Providing in-service education that is needed and is effective requires the careful consideration of as much information as is possible. There are pitfalls at every step in the process. Harris lists three mistakes that he considers serious that do occur.

1. Failure to relate in-service program plans to genuine needs of staff participants.
2. Failure to select appropriate activities for implementing program plans.
3. Failure to implement in-service program activities with sufficient staff and other resources to assure effectiveness.²

By avoiding these mistakes the in-service education programs would have much greater successes at a time when failures present serious problems to school systems. A research summary by the National Education Association points out that new and different methods are being sought in efforts to improve the programs of the future.

In this study of inservice education programs for teachers, three patterns seem to emerge with respect to research. This change in research perspective has been growing over a period of time. Literature on inservice education was, at first, largely opinion

¹Littrell, "Teachers Evaluate Curriculum Study," p. 174.

²Harris, Bessent, and McIntyre, In-Service Education, p. 4.

and recommendation on forms and problems. The general trend, then, was toward a growing emphasis on teacher needs and toward a growing realization that inservice education could serve many purposes other than subject-matter orientation. Recent research illustrates the trend toward actual experimentation, and evaluation of inservice programs.¹

Many of the problems of in-service education have been examined in the preceding pages. Examination of both strengths and weaknesses might provide direction for the improvement of in-service education practices. Harris feels this examination is needed and that it has not been done.

Educational Leadership is rare among nationally circulated periodicals in being devoted primarily to supervision and curriculum development. Yet even this journal publishes few articles on supervision per se and few in supervision research. . . . Listings in Educational Index for the past ten years numbered only 36 per year on the average under the heading, "Supervision and Supervisors." In none of these years was more than a single article listed as supervision research.²

Searching the literature for studies that examine the effectiveness of methods of in-service education for achieving the specific purposes points up the serious lack of needed research. Harris states this is a need in light of the growing demands for continuous education.

The extensive concern for promoting the continued education of teachers beyond the four-year college program promises to place increasingly greater demands on in-service education. The

¹National Education Association, Research Summary: Inservice Education of Teachers, (Washington, D.C.: National Education Association, 1966), p. 17.

²Harris, "Research on Instructional Supervision," p. 136.

acceptance of this challenge is evidenced by the growing emphasis placed on extended in-service education programs. These programs have been organized in numerous ways, utilizing a variety of methods including lectures, child-study programs, action research, television, discussion groups, and classroom consultant services. The effectiveness of these methods of in-service education has been evaluated only casually. Curtis, Anderson, Johnson, and others have pointed out that an outstanding need in the field of education is a critical objective analysis of the effectiveness of particular techniques employed in the in-service education of teachers. Curtis noted further that little research has been reported in this area other than that which has analyzed statements by which teachers have indicated their preferences.¹

Macdonald indicates in strong language that because of lack of research in this area serious questions are unanswered.

Would schools be as effective without formal supervision? In what way or ways does supervision contribute to the total educational structure? What are the most effective procedures in supervision? These questions (and many others) are unanswered, at least in terms of research findings today. What do we know about supervision? Where is the research that provides knowledge about supervision process?

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Common sense tells us that teachers need and can use help and/or guidance, perhaps even direction. Research tells almost nothing about how to implement these aims. We are left with the still unanswered question of whether supervision has any value at all.²

There can be little question about the need for research of methods used in in-service education. Examination

¹Ben M. Harris, Supervisory Behavior in Education (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963), p. 457.

²James B. Macdonald, "Knowledge About Supervision: Rationalization or Rationale?" in Supervision: Emerging Profession, ed. Robert R. Leeper (Washington, D.C.: Association for Supervision and Curriculum Development, N.E.A., 1969), p. 110.

of in-service education need not be depressing if it is done for the purpose of finding ways of improvement. Flanders provides another view of in-service education with a note of optimism. Looking at in-service education need not be depressing if it is done for the purpose of finding ways of improvement. There is another view of in-service education presented by Flanders.

At its best, in-service training is the opposite of a spectator sport since the teachers leave the grandstand and join the arena of activities. The training becomes a problem solving process which explores new ways of teaching, new materials that can be used, new content that can be covered, and--perhaps most important--new ways of helping the teacher control his own behavior for professional purposes. It is not a single shot taken at the beginning of the year, but becomes a part of the teachers' professional responsibilities, directed by teachers, regularly scheduled during a week.¹

Much work has been done to make in-service education an effective tool of educational institutions. Progress has been found in attitudes toward the problems that do exist. Teachers, supervisors, directors of curriculum, and principals have been seeking solutions to the many problems they face together. In-service education has been providing at least an opportunity to solve problems. Hass² believes that in-service education is needed by the entire professional staff of the school system, not just the teachers. In order

¹Flanders, "Teacher Behavior and In-Service Programs," p. 26.

²Hass, "In-Service Education Today," In-Service Education, p. 13.

to keep up with the advances in subject matter and in the theory and practice of teaching all should be involved. Hass believes there is no one best method of in-service education and that many methods will be used by school systems.

It is important to keep in mind that there is no one best in-service education activity, and there is not one best way to get a program started. The approach in each school must be one which fits that particular situation and should emerge out of the problems of primary interest to the teachers, principals, and supervisors in the school system concerned. To the degree that all staff members have an opportunity to participate in planning and carrying out the in-service education program, advantage is taken of their interest and resources. This is increasingly the practice in developing these programs.¹

One final problem needs to be included in this area of problems. Quite often the in-service activities that are believed to be most effective are not compulsory for teachers. No study was found in the literature which examined the relationship between effectiveness and voluntary participation in in-service education activities. The National Education Association did present this position.

Except for basic preparation needed by the teacher and activities needed because of problems affecting the whole school, the teacher should be free to accept or reject any proposed plan for inservice education. The teacher should be willing to take part and recognize the usefulness of inservice programs. However, a teacher may have compelling reasons for avoiding such commitments.²

¹Ibid., p. 33.

²National Education Association, "Inservice Education for Teachers," p. 10.

The changes that are taking place in education require not only the attention of the educational profession, but that of the nation. Teachers, administrators, professional organizations, national and state governments, must provide whatever resources are needed to meet the challenge of the future.

The first revolution in American education was a revolution in quantity. Everyone was to be provided the chance for an education of some sort. That revolution is almost won in the schools, and is on its way in higher education. The second revolution is equality of opportunity. That revolution is under way. The next turn of the wheel must be a revolution in quality.¹

The quality of education will be determined by the competence of the teacher in the classroom, the program, and the materials. In-service education can have a significant effect on the teacher and the program. The quality of in-service education may be the most important factor in attempts made for providing quality education. It may be wise to remember that revolutions quite often are in full swing before many who are most effected know they have begun.

¹Francis Keppel, The Necessary Revolution in American Education (New York: Harper & Row, Publishers, 1966), p. 1.

CHAPTER III

INSTRUMENTATION, SOURCES AND TREATMENT OF DATA

Development of the Instrument

No standardized instrument could be found in the literature for evaluating in-service education methods in terms of specific purposes. Therefore, it was necessary to develop an instrument for the purpose of evaluating the methods which had been used in the in-service education program of the Oklahoma City Public Schools. Methods of in-service education had to be identified and purposes of in-service education had to be described.

Procedure for Identification of Items

Selection of methods of in-service education began with a search of the literature for the purpose of identifying these methods. Many suggestions were found such as workshops, conferences, faculty meetings, social gatherings, teacher evaluations, buzz sessions, and brain storming. However, these were all general suggestions, and no school system was identified that made use of all the methods.

The use of television for in-service education was seldom mentioned in the literature, perhaps because only a

small number of school systems had the facilities, perhaps because this was a relatively new media. The rapid changes that have taken place in education make reporting all experimental programs impractical.

It became apparent that a list of the methods of in-service education used in the Oklahoma City Public School System would have to be written because no such list was available. In informal conferences, elementary principals, supervisors and teachers were asked to recall methods used for in-service education between the years 1960 and 1969. A list of these methods were identified and described.

A list of seventeen methods of in-service education was prepared and sent to educators of the Oklahoma City Public School System to determine: (1) if these methods were used between the years 1960 and 1969, (2) if this list was complete, and (3) if the methods were adequately identified and described. (See Appendix B for methods.)

The list was sent to twenty of the forty-one elementary principals who had held that position for at least nine years, that is since or before 1960. The twenty were selected by listing the forty-one elementary principals as they appeared in the personnel directory and using the even numbered ones. The list was also sent to three educators who had been Director of Elementary Education and two educators who had been Director of Curriculum between the years 1960 and 1969. Conversations were held with many of the responders following

the return of the list of in-service methods. The responses of these educational leaders were used as a justification for listing the methods in the instrument.

The following conclusions were reached as a result of the returns and the discussions: (1) the list of methods of in-service education was complete, (2) the descriptions of the methods were adequate, (3) studies of in-service education are needed and the results should be used as a basis for improving the increasing in-service activities, (4) in-service education has grown in importance and will continue to do so in the future, (5) the quality of in-service education affects the quality of instruction provided in the classroom.

Identification of Purposes of In-Service Education

The basic purpose of in-service education is to improve instruction in the classroom. Every in-service education activity should contribute toward this goal. The improvement of instruction is brought about as a result of changing teachers--growth on the job, change in the way of thinking, change in the way of acting--and desire for change has to come from within the individual as a result of recognized need.

The purpose of an in-service activity should be more specific than improving instruction in the classroom. The development of instructional skills, transmission of information, improvement of understanding, value or attitude change,

and curriculum development are all purposes of in-service education that contribute to improved instruction. These purposes are different and the methods for bringing them about may be quite different and must be carefully planned for. Planning for one or two of these purposes may be more realistic than any attempt to provide for all in one sweeping in-service education activity.

In any attempt to evaluate a method the purpose of that method must be considered. Harris¹ has suggested four purposes of in-service education. They are: (1) skill development, (2) knowledge transmission, (3) improved understanding, and (4) value or attitude change. It was thought advisable to include curriculum development as a purpose of in-service education because many of the in-service activities take place for the specific purpose of developing the curriculum and it is through in-service education that curriculum changes are implemented. With some changes in terminology the four purposes of Harris were used. For the purpose of this study the term "knowledge transmission" was considered a limiting and confining term and was changed to "information transmission." Information transmission more accurately described the purpose of many in-service activities used in the Oklahoma City Public School System.

¹Ben M. Harris, Supervisory Behavior In Education (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1963), p. 70.

The Instrument Used in Pilot Study

The instrument listed and described seventeen methods of in-service education. Five purposes of in-service education were listed and both general and specific examples were provided for each purpose. Space was provided for the responders to indicate the degree of their experience with each method listed. Without experience evaluation would have little or no meaning, therefore the responders were directed to evaluate only the methods with which they had experience.

Experience was reported as (M) much, (S) some, or (N) none. Next the responder was asked to indicate the effectiveness of each method as (1) very effective, (2) average, or (3) ineffective in terms of its potential for meeting each purpose of in-service education. (See Appendix C for copy of instrument used in the pilot study.)

The Pilot Study

A pilot study was made for the purpose of determining whether teachers had any difficulty understanding the instrument. Answers to the following questions were sought. Were the methods and descriptions adequately clear? Were the purposes adequately defined and understandable? Would recent experience with in-service education activities bias the responders? How long would it take to complete the instrument? Would teachers complete and return the instrument?

The instrument was given to the staffs of three elementary schools in the Oklahoma City Public School System. The schools were Davis, Ross, and Stand Watie. Specifically, the problem was to secure an evaluation of the instrument, not the in-service techniques. For this reason, no attempt was made to select the schools in a random manner for the pilot study.

The instrument was given to forty-one teachers. Thirty-nine were returned and of those thirty-eight were usable. This was a ninety-three percent usable return. The teachers were then asked to respond to five written questions about the instrument and group faculty meetings were held to discuss the instrument and the study.

As a result of the responses to the instrument, answers to the follow-up questions, comments made in discussions with faculty groups, and the percentage of returns, the following conclusions were drawn. (1) The methods were adequately described. (2) The purposes of in-service education were adequately defined and understood. (3) Recent in-service education experience did bias the responders, but if administered early in the school year that effect might be eliminated. (4) The average time for completion of the instrument was thirty minutes. (5) Teachers would complete and return the instrument. Teachers felt that in-service education was important and if there was any chance that the results would be used for future in-service programs they

would respond. (See Appendix C for follow-up questions on pilot study.)

Refinement of Instrument

Visual inspection of the responses led to the conclusion that elimination of the middle choice "average" from the instrument would make the evaluation more meaningful. This would also make the statistical treatment of data more understandable. Reporting experience with methods as much, some, or none did not have the same meaning to all teachers. On the final instrument the responders either indicate no experience with each method or evaluate that method.

In the discussions with the staffs it was suggested that underlining a few of the key descriptive differences between methods of in-service education would help the responders. Also adding the phrase "in a nearby school" would strengthen items five and six. The words "to be instructed by" were eliminated from items four, five, and six, while "curriculum director" was added to items five and six. (See Appendix D for final instrument.)

Sources of Data

The population of this study was the elementary teachers in the Oklahoma City Public School System. The Oklahoma Annual Personnel Report for the year ending July 30, 1970, from Oklahoma City, County 55, District Number I-089 was the source of subjects for the sample. This report was

completed and sent in October 1, 1969. The personnel office provided a copy of this report for use in this study. This report listed all teachers in the school system, teaching assignments, experience, sex, and building assignments.

Written permission was secured from Dr. William L. Shell, Director of Research and Statistics in the Oklahoma City Public School System, to carry on the study in the system. (See Appendix A.)

The population was stratified into three groups. One group was made up of those teachers with only one year of experience in the system, a second group included all the teachers with from four to six years of experience in the system, and a third group included all teachers with ten or more years of experience in the system. There were 165 teachers in the first group, 188 in the second group, and the third group contained 434 teachers. Fifty subjects were drawn, using random sample methods, from each group. This produced a total stratified random sample of 150 subjects to receive the questionnaire.

The sample was drawn and questionnaires were put into the school mail November 3, 1969. A response of seventy-two percent of those questionnaires were completed and returned. A follow-up letter and another copy of the questionnaire was sent December 1, 1969. These were delivered by hand where there were two or more subjects in one building, sent through the school mail if there was only one subject in the building.

Several teachers on the staff of Stand Watie Elementary School called by telephone those subjects and urged them to complete and return the questionnaires. At this time it was learned that two of the subjects had left the school system since October 1, 1969, and that one subject had died.

On December 23, 1969, 147 questionnaires had been returned. Subtracting the three who were no longer in the system to receive the questionnaire this represents a return of one hundred percent.

Treatment of Data

The first step after tabulating the responses by experience groups, was to report the responses in percentages. Because the number reporting any one in-service method varied, comparisons of the responses of the three groups was more meaningful as percentages. (See Appendix E for numerical responses.)

The second treatment of the data was computing two-by-three chi-square tests for differences between the three experience groups for each of the five purposes for each of the seventeen methods of in-service education.

The third step involved reporting the total responses of the three groups for each method of in-service education in percentages. In reporting this data the five purposes of in-service education were reported separately.

Step three led to step four which consisted of ranking the seventeen methods for the five purposes according to

percentage of effective responses. This made it possible, regardless of the number reporting, to determine which methods were more effective for specific purposes of in-service education.

Step five presents the chi-square tests for differences between each of the seventeen methods of in-service education for each of the five purposes. In this treatment 136 tests were conducted for each of the five purposes of in-service education. Method number one was tested against each of the sixteen other methods for the purpose "skill development," then method number two was tested against all other methods, then method number three. A total of 680 tests were made for the five purposes of in-service education. These tests produced chi-square values which were used to determine whether the differences between the methods were significant for the specific purposes of in-service education.

The sixth and final step in treatment of the data involved bringing together the information obtained in step four and step five. Where significant differences were found between methods of in-service education, the ranking of methods made it possible to determine which of the two methods was the more effective.

For all chi-square tests the .05 level of confidence was accepted as the statistical significant point. For the purposes of this study the .05 level of confidence provided useful information.

This research was intended to test the following two hypotheses:

H_1 There is no difference between the evaluations of teachers with one year, four to six years, and ten or more years of experience when evaluating the effectiveness of methods of in-service education.

H_2 There is no difference between the effectiveness of methods of in-service education, for specific purposes, as evaluated by teachers.

CHAPTER IV

FINDINGS

Findings are presented in six ways. First, tables summarize in percentages all responses of the three groups of teachers to the questionnaire. Second, the results of the Chi-square test for differences among the groups are reported. Third, tables summarize in percentages all responses of the total sample. Fourth, the rank order of methods by per cent of positive responses for each purpose is recorded. Fifth, the Chi-square values between each of the methods for each purpose of in-service education are presented, and where significant differences were found at the .05 level or .01 level, these are indicated. Finally, methods evaluated significantly more effective than others are reported.

The Sample

In the Oklahoma City Public School System during the 1969-1970 school year there were approximately 1,587 elementary teachers. This study was concerned with women who had had one, four, five, six, or ten or more years of experience in the Oklahoma City Public Schools. This population totaled 787. This population, from which the sample was drawn, was

stratified into three groups based upon experience. Those with one year of experience numbered 165; with four to six years of experience, 188; and with ten or more years of experience, 434. From each group fifty subjects were selected using simple random sample methods. This produced a sample of 150 subjects.

Between the time the sample was selected and the follow-up questionnaires were sent, two of the teachers had left the system and one had died. This reduced the sample to 147. From this sample a return of 100 per cent was received.

Percentages for Groups

Each of the seventeen methods of in-service education was experienced in varying degrees by the three groups. No method of in-service education was reported by more than 132 subjects. No method was reported by fewer than forty subjects. For this reason use of percentages provides more meaningful information than numbers. However, the numbers reporting for each group must be considered.

Table 1 summarizes in percentages the three groups' evaluation of the curriculum guide as an in-service education method. The purpose of value or attitude change was rated lowest by all three groups. The number reporting indicates that some teachers in the system did not have curriculum guides in their classrooms. Some teachers indicated that they had heard there were guides, but they had not seen any.

TABLE 1

EVALUATIONS OF THE CURRICULUM GUIDE FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	38
4 to 6	82	18	82	18	68	32	47	53	74	26	44
10 or more	73	27	91	9	80	20	55	45	80	20	44
	77	23	86	14	82	18	64	36	77	23	

+ indicates method evaluated effective
 - indicates method evaluated ineffective
 All evaluations are in percentages.

In Table 2 the results of the three groups' evaluation of working on a curriculum guide committee are given in percentages. Few teachers had worked on such a committee, but fourteen teachers with only one year of experience reported such an activity. It was found that these committees had worked at the building level and several teachers reported that this was an excellent method of helping the newer teacher feel she was a member of the staff and that she had a contribution to make.

The results found in Table 2 indicate that working on a curriculum guide committee was evaluated as effective for most of the purposes of in-service education. The three groups did not agree on how well this method achieved skill development. This method was least effective in producing value or attitude change.

TABLE 2

EVALUATIONS OF THE CURRICULUM GUIDE COMMITTEE FOR
MEETING THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	93	7	93	7	78	21	57	43	86	14	14
4 to 6	62	38	85	15	85	15	69	31	77	23	13
10 or more	75	25	70	30	75	25	65	35	80	20	20

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

In Table 3 the results of the three groups' evaluations of the faculty meeting are given in percentages. The faculty meeting is perhaps better known to all teachers than any other form of in-service education. However, only 129 teachers reported experience with this method of in-service education. This fact leads one to conclude that the faculty meeting either has not been used for the purposes of in-service education in all buildings, or that when used for these purposes not all teachers were aware of the purposes. In Table 3 many teachers agree that the faculty meeting was more effective for information transmission than any other in-service education purpose.

TABLE 3

EVALUATIONS OF THE FACULTY MEETING FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	44
4 to 6	59	41	82	18	70	30	68	32	64	36	42
10 or more	57	43	86	14	76	24	67	24	67	33	43
	65	35	81	19	81	19	77	23	65	35	

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

The evaluations in Table 3 were highly consistent and for most of the purposes of in-service education the faculty meeting was not evaluated as an effective method.

Table 4 shows that 107 of the 147 teachers reported experience with grade level meeting. The percentages of effective ratings were high enough to suggest consideration of this method whenever planning in-service education. While this was true for many of the methods, it must be pointed out that teachers with one year of experience found this method highly effective, and perhaps this group has special needs.

Table 5 gives in percentages the results of the three groups' evaluations of the grade level area meeting. Teachers with four to six years of experience and ten or more years of experience evaluated the grade level area meeting less

effective for value or attitude change and for curriculum development than for any other purpose. This method was found to be effective for certain in-service education purposes, but the results make clear that planning for in-service education must include awareness of the unique limitations of methods.

TABLE 4

EVALUATIONS OF THE GRADE LEVEL MEETING FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	31
4 to 6	87	13	81	19	87	13	87	13	81	19	37
10 or more	76	24	89	11	78	22	70	30	68	32	39
	74	24	87	13	82	18	79	21	77	23	

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

In Table 6 the results from all groups indicate the area meeting was ineffective for achieving any purpose of in-service education. In the area meeting teachers from all grade levels were called together for the in-service activities.

TABLE 5

EVALUATIONS OF THE GRADE LEVEL AREA MEETING FOR
MEETING THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	18
4 to 6	78	22	78	22	89	11	78	22	78	22	32
10 or more	72	28	75	25	72	28	59	41	66	34	41
	73	27	80	20	78	22	59	41	71	29	

+ indicates method evaluated effective
 - indicates method evaluated ineffective
 All evaluations are in percentages.

TABLE 6

EVALUATIONS OF THE AREA MEETING FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	9
4 to 6	22	78	56	44	33	67	33	67	44	56	29
10 or more	34	66	45	55	34	66	21	79	28	72	34
	38	62	59	41	53	47	41	59	38	62	

+ indicates method evaluated effective
 - indicates method evaluated ineffective
 All evaluations are in percentages.

In Table 7 the results from the three groups are given in percentages for observation of the teacher in the classroom.

Of the sample, twenty teachers reported they had not experienced this method. The consistently negative evaluations of this method would indicate that any merit the method may have is not in the area of in-service education.

TABLE 7
EVALUATIONS OF THE OBSERVATION FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	41
4 to 6	66	34	71	29	76	24	63	37	54	46	43
10 or more	58	42	49	51	56	44	51	49	37	63	43
	44	56	51	49	60	40	47	53	40	60	

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

In Table 8 the results of evaluation of intervisitation are given in percentages. Intervisitation was rated effective in all areas with curriculum development the weakest. The number reporting indicates this method of in-service education was not used as much as its effectiveness might justify.

Table 9 indicates the television lecture or panel discussion was evaluated as ineffective. Even in the area of information transmission the evaluations were poor. The teachers with ten or more years of experience evaluated this

method more effective than the other two groups, but even their responses were not encouraging.

TABLE 8
EVALUATIONS OF THE INTERVISITATION FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	21
4 to 6	86	14	76	24	90	10	86	14	71	29	31
10 or more	74	26	87	13	90	10	87	13	65	35	37
	86	14	84	16	89	11	92	8	73	27	

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

TABLE 9
EVALUATIONS OF THE TELEVISION LECTURE OR PANEL DISCUS-
SION FOR MEETING THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	45
4 to 6	44	56	58	42	44	56	38	62	40	60	45
10 or more	52	47	62	37	67	32	52	47	50	50	40

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

Table 10 shows that the three groups, in their evaluations of the television demonstration as a method of in-service education, did not show a great deal of differences. The purpose of curriculum development was rated low by all the groups with a spread of only four percentage points among the three groups. This evaluation when considered with the number reporting gives useful information. This method was reported by more teachers than any other method and yet the effectiveness would suggest that the television demonstration did not get the results of other methods.

TABLE 10

EVALUATIONS OF THE TELEVISION DEMONSTRATION FOR
MEETING THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	43
4 to 6	49	51	56	44	53	47	47	53	44	56	45
10 or more	60	40	60	40	53	47	58	42	47	53	44
	57	43	61	39	59	41	43	57	43	57	

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

The evaluations recorded in Table 11 indicate the summer demonstration school was very effective. While the number reporting experience with the method was small, the teachers with one year of experience responded more favorably

than any other group. It should be remembered that attendance for this method was voluntary.

TABLE 11

EVALUATIONS OF THE SUMMER DEMONSTRATION SCHOOL FOR
MEETING THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	14
4 to 6	93	7	86	14	93	7	93	7	86	14	34
10 or more	79	21	82	18	79	21	68	32	74	26	37
	84	16	84	16	86	14	76	24	76	24	

+ indicates method evaluated effective

- indicates method evaluated ineffective

All evaluations are in percentages.

The results in Table 12 are given in percentages for the three groups' evaluation of the one day workshop. The one day workshop was evaluated as more effective by the group with one year of experience than by the other groups of teachers. With this method attendance was voluntary, and only nineteen of the group with one year of experience had participated. They may have taken special needs to this in-service program.

In Table 13 it is reported that few teachers with one year of experience had participated in a five day workshop. Other teachers were very consistent in evaluating this method as effective. It is worth noting that value or attitude

change and curriculum development were both rated high with this method of in-service education, and for the other three purposes the method was evaluated even higher.

TABLE 12

EVALUATIONS OF THE ONE DAY WORKSHOP FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	19
4 to 6	84	16	84	16	84	16	84	16	84	16	30
10 or more	63	37	70	30	63	37	60	40	47	53	33

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

TABLE 13

EVALUATIONS OF THE FIVE DAY WORKSHOP FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	6
4 to 6	83	17	67	33	67	33	83	17	67	33	27
10 or more	93	7	93	7	93	7	81	19	85	15	34

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

Table 14 shows that the one-two day workshop was evaluated as highly effective. The teachers with one year of experience did not find this method as effective as the groups with more experience. All three groups were consistent in their responses to the purpose value or attitude change.

TABLE 14

EVALUATIONS OF THE ONE-TWO DAY WORKSHOP FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	16
4 to 6	69	31	87	13	81	19	75	25	75	25	
10 or more	84	16	92	8	92	8	76	24	88	12	25
	91	9	91	9	94	6	84	16	87	12	32

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

In Table 15 the evaluations of the helping teacher in the area skill development were interesting especially as reported by the teachers with one year of experience and those with four to six years of experience. With this method the more experienced teachers reported the least amount of participation. The helping teacher had been used for only two years and was used in Title I schools only. With this method teachers work with only one individual and never in groups.

Often the helping teacher is requested by the teacher, sometimes by the building principal. The teacher having trouble may not want anyone in the room, or may not be aware of any need to change, thus attitude would influence the effectiveness of in-service education regardless of method.

TABLE 15

EVALUATIONS OF THE HELPING TEACHER FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	22
4 to 6	86	14	68	32	68	32	64	36	68	32	17
10 or more	76	24	65	35	65	35	76	24	71	29	12
	67	33	67	33	67	33	67	33	58	42	

+ indicates method evaluated effective
- indicates method evaluated ineffective
All evaluations are in percentages.

Table 16 indicates the evaluations of the demonstration as a method of in-service education was effective for all groups. Teachers with one year of experience found this method very effective for skill development and improved understanding. The evaluations for this method suggest this method be considered whenever planning in-service education.

TABLE 16

EVALUATIONS OF THE DEMONSTRATION FOR MEETING
THE PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	92	8	85	15	92	8	85	15	77	23	13
4 to 6	85	15	80	20	70	30	80	20	75	25	30
10 or more	73	27	86	14	82	18	68	32	73	27	22

+ indicates method evaluated effective
 - indicates method evaluated ineffective
 All evaluations are in percentages.

In Table 17 the number reporting experience with the field trip was small. The field trip was used by a few principals, but not as a system wide in-service activity. While the number reporting was small the teachers with one year of experience indicated this method was very effective. The effectiveness of this method may become limited with overuse or when the need for this experience has been met. Planners need to be aware of limitations of methods and perhaps limitations of ability to profit from some types of experiences.

TABLE 17

EVALUATIONS OF THE FIELD TRIP FOR MEETING THE
PURPOSES OF IN-SERVICE EDUCATION

Teaching Experi- ence (Years)	Purposes of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
1	+	-	+	-	+	-	+	-	+	-	6
4 to 6	76	24	86	14	76	24	71	29	67	33	21
10 or more	46	54	62	38	69	31	62	38	46	54	13

+ indicates method evaluated effective
 - indicates method evaluated ineffective
 All evaluations are in percentages.

Chi-Square Test for Differences Among Groups

Each of the seventeen methods of in-service education was evaluated on how effectively five purposes of in-service education were achieved. Tables 1 through 17 presented in percentage figures the responses of the three groups of teachers with different amounts of experience. The statistical process of chi-square was used to determine if the differences between the responses were significant. The .05 level of confidence was selected as the point of acceptance for these tests. With two degrees of freedom a value of 5.99 was needed to be significant at the .05 level.

In table 18 the chi-square values are presented. Significant differences were found in one day workshop for the purpose of curriculum development, and in the field trip for the purpose of skill development.

TABLE 18

CHI-SQUARE VALUES FOR DIFFERENCES AMONG GROUPS

Method of In-Service Education	Skill Dev.	Infor. Trans.	Improv. Undstd.	Val. Att. Change	Curr. Dev.
Curriculum Guide	1.10	1.70	1.96	2.43	.27
Curriculum Guide Committee	3.42	2.94	.74	.63	1.01
Faculty Meeting	.59	.59	1.00	1.56	.21
Grade Level Meeting	2.74	1.38	1.00	3.04	2.12
Grade Level Area Meeting	.44	.32	2.01	2.66	.89
Area Meeting	.63	1.03	2.09	2.66	1.24
Observation	4.04	4.79	3.61	2.50	2.52
Intervisitation	1.84	.55	.00	1.20	.75
Television Lecture or Panel Discussion	1.50	.48	4.87	3.52	1.37
Television Demon- stration	1.29	.20	.55	2.35	.18
Summer Demonstration School	.78	.00	1.72	3.16	.58
One Day Workshop	2.82	1.21	2.77	3.97	7.73*
Five Day Workshop	.69	2.13	2.13	2.63	1.43
One-Two Day Workshop	2.59	.00	.93	1.39	1.83
Helping Teacher	1.48	.00	.00	.49	1.71
Demonstration	2.12	.70	2.98	1.74	.00
Field Trip	6.49*	3.24	1.83	3.36	2.25

*Significant at or beyond the .05 level of significance.

Much of the data on the Personal Data sheet of the instrument was collected for the purpose of understanding differences among the three groups. Since only two tests were significant no use was made of this data. Therefore, the null hypothesis that there is no difference between the evaluations of teachers with one year, four to six years, and ten or more years of experience, must be rejected for these two tests where significant differences were found. The null hypothesis must be accepted for the other eighty-three tests where no significant differences were found.

Total Responses for In-Service Purposes
in Percentages

The responses of the total sample are reported in Tables 19 through 23 by percentages. Each table gives the percentage of effective and ineffective responses, with the total number reporting for that method, for one of the five purposes of in-service education.

While the per cent of positive responses would appear to identify effective methods of in-service programs, it is worthwhile to consider the number reporting for each method. Some of the methods were required by principals, some were required by the central office, while some were offered on a voluntary basis.

In Table 19 the in-service purpose, skill development, is reported for the seventeen methods of in-service education. The five day workshop was very effective for the limited

TABLE 19

TOTAL RESPONSES EVALUATING METHODS OF IN-SERVICE
EDUCATION FOR ACHIEVING SKILL DEVELOPMENT

Method of In-service Education	Effective (per cent)	Ineffective (per cent)	Number Reporting
1. Curriculum Guide	77	23	126
2. Curriculum Guide Committee	77	23	47
3. Faculty Meeting	60	40	129
4. Grade Level Meeting	79	21	107
5. Grade Level Area Meeting	74	26	91
6. Area Meeting	35	65	72
7. Observation	56	44	127
8. Intervisitation	82	18	89
9. Television Lecture or Panel Discussion	45	55	130
10. Television Demonstra- tion	55	45	132
11. Summer Demonstration School	84	16	85
12. One Day Workshop	71	29	82
13. Five Day Workshop	94	6	67
14. One-Two Day Workshop	84	16	73
15. Helping Teacher	78	22	51
16. Demonstration	82	18	55
17. Field Trip	70	30	40

number reporting. The summer demonstration school and the one-two day workshop were evaluated as effective by teachers who had attended them. Each of these methods of in-service education was offered on a voluntary basis to teachers who were interested.

The number reporting shows that the most used methods of in-service education were the television demonstration, television lecture or panel discussion, faculty meeting, observation, curriculum guide, and the grade level meeting. The evaluations for the grade level meeting and the curriculum guide suggest that skill development did take place for rather large numbers of teachers, but that for this purpose the other much used methods were ineffective for many teachers.

In Table 20 the responses of the total sample of teachers is reported for the in-service education purpose of information transmission. It is worth noting that the faculty meeting while evaluated as not very effective for skill development, in Table 19, was found to be effective for information transmission. The five day workshop and the one-two day workshop were the most effective with the curriculum guide and grade level meeting evaluated as effective also.

The area meeting, observation, and television demonstration were found to be the most ineffective for information transmission. It appears that information transmission, like other purposes, can take place by some methods better than others.

TABLE 20

TOTAL RESPONSES EVALUATING METHODS OF IN-SERVICE EDUCATION FOR ACHIEVING INFORMATION TRANSMISSION

Method of In-service Education	Effective (per cent)	Ineffective (per cent)	Number Reporting
1. Curriculum Guide	87	13	126
2. Curriculum Guide Committee	81	19	47
3. Faculty Meeting	83	17	129
4. Grade Level Meeting	86	14	107
5. Grade Level Area Meeting	78	22	91
6. Area Meeting	53	47	72
7. Observation	57	43	127
8. Intervisitation	83	17	89
9. Television Lecture or Panel Discussion	62	38	130
10. Television Demonstration	59	41	132
11. Summer Demonstration School	84	16	85
12. One Day Workshop	77	23	82
13. Five Day Workshop	93	7	67
14. One-Two Day Workshop	90	10	73
15. Helping Teacher	67	33	51
16. Demonstration	84	16	55
17. Field Trip	80	20	40

Table 21 presents the responses of the total sample of teachers to the purpose of improved understanding. The five day workshop, intervisitation, and one-two day workshop, all received a large percentage of the positive responses. It appears that the area meeting was very ineffective for achieving improved understanding. The television demonstration and television lecture or panel discussion were found to be ineffective for this purpose of in-service education.

The faculty meeting and the grade level meeting were two methods leading to improved understanding by a high percent of the teachers. These methods can be used with some degree of speed when needed. This advantage of time must be an important consideration when planning any in-service education activity.

In Table 22 the methods of in-service education are evaluated for the purpose value or attitude change. Inspection of this table makes it clear that this is a difficult purpose to achieve. The intervisitation and five day workshop were found by teachers to be highly effective for this purpose, while the area meeting was effective for only 32 percent of the teachers who had experience with that method. The use of television lecture or panel discussion and television demonstration were reported by large numbers and were found to be effective by small numbers. The grade level meeting was the most successful method that had been used by large numbers of teachers.

TABLE 21

TOTAL RESPONSES EVALUATING METHODS OF IN-SERVICE
EDUCATION FOR ACHIEVING IMPROVED UNDERSTANDING

Method of In-service Education	Effective (per cent)	Ineffective (per cent)	Number Reporting
1. Curriculum Guide	77	23	126
2. Curriculum Guide Committee	79	21	47
3. Faculty Meeting	76	24	129
4. Grade Level Meeting	82	18	107
5. Grade Level Area Meeting	78	22	91
6. Area Meeting	43	57	72
7. Observation	64	36	127
8. Intervisitation	90	10	39
9. Television Lecture or Panel Discussion	55	45	130
10. Television Demonstra- tion	55	45	132
11. Summer Demonstration School	85	15	85
12. One Day Workshop	73	27	82
13. Five Day Workshop	93	7	67
14. One-Two Day Workshop	90	10	73
15. Helping Teacher	67	33	51
16. Demonstration	80	20	55
17. Field Trip	77	23	40

TABLE 22

TOTAL RESPONSES EVALUATING METHODS OF IN-SERVICE EDUCATION FOR ACHIEVING VALUE OR ATTITUDE CHANGE

Method of In-service Education	Effective (per cent)	Ineffective (per cent)	Number Reporting
1. Curriculum Guide	56	44	126
2. Curriculum Guide Committee	64	36	47
3. Faculty Meeting	71	29	129
4. Grade Level Meeting	79	21	107
5. Grade Level Area Meeting	63	37	91
6. Area Meeting	32	68	72
7. Observation	54	46	127
8. Intervisitiation	89	11	89
9. Television Lecture or Panel Discussion	41	59	130
10. Television Demonstration	49	51	132
11. Summer Demonstration School	75	25	85
12. One Day Workshop	72	28	82
13. Five Day Workshop	88	12	67
14. One-Two Day Workshop	79	21	72
15. Helping Teacher	69	31	51
16. Demonstration	76	24	55
17. Field Trip	72	27	40

It is interesting to note the responses reported in Table 22, value or attitude change, and Table 23, curriculum development, were more negative than responses to the other three purposes of in-service education. With the rapid rate of change in all areas of living and the needs for flexibility, these purposes must be achieved.

In Table 23 the total responses of the sample evaluating methods of in-service education are presented for the achieving of curriculum development. No method was found to be effective with more than 85 per cent of the teachers. The methods most used were not the most effective, in fact the two most used were among the least effective. The five day workshop, one-two day workshop, and the curriculum guide committee were highly effective. The curriculum guide, reported by 126 teachers, was effective with 77 per cent of the teachers but 21 teachers reported that curriculum guides were not available.

Rank Order of Methods for In-Service Education Purposes

The evaluations of the seventeen methods were ranked in order of the per cent of effective evaluations for specific purposes. When ranked the more effective methods were found to be effective for more than one purpose of in-service education, while some of the methods were found to be very ineffective for any purpose.

TABLE 23

TOTAL RESPONSES EVALUATING METHODS OF IN-SERVICE
EDUCATION FOR ACHIEVING CURRICULUM DEVELOPMENT

Method of In-service Education	Effective (per cent)	Ineffective (per cent)	Number Reporting
1. Curriculum Guide	77	23	126
2. Curriculum Guide Committee	81	19	47
3. Faculty Meeting	65	35	129
4. Grade Level Meeting	75	25	107
5. Grade Level Area Meeting	70	30	91
6. Area Meeting	35	65	72
7. Observation	43	57	127
8. Intervisitiation	70	30	89
9. Television Lecture or Panel Discussion	42	58	130
10. Television Demonstra- tion	45	55	132
11. Summer Demonstration School	76	24	85
12. One Day Workshop	65	35	82
13. Five Day Workshop	85	15	67
14. One-Two Day Workshop	85	15	73
15. Helping Teacher	67	33	51
16. Demonstration	75	25	55
17. Field Trip	62	38	40

In Table 24 the methods of in-service education are ranked by the per cent of effective responses for each of the five purposes. The method numbers used in this table refer to the methods of the same number in Table 23. Methods number 13 and 14 are among the first four in rank for all purposes. Numbers 6, 7, 9, and 10 are evaluated as the four most ineffective methods for all purposes, with method 6 clearly the least effective.

Results of Chi-Square Tests for Differences
Between Methods

Tables 25 through 29 present the chi-square values for tests used to determine whether the differences between the evaluations of the methods were significant. The .05 level was selected as the confidence level for rejecting the null hypothesis that there are no differences between methods of in-service education when evaluated by teachers for effectiveness. It was found that differences were often significant at a much higher level of confidence than the .05 level and even the .01 level.

Tests of method against method were made for each of the five purposes of in-service education. For each purpose 136 tests were completed. This produced 680 chi-square values for the five tables.

In Table 25 the chi-square values are presented for differences between each method of in-service education and all other methods for the in-service education purpose skill

TABLE 24

RANK ORDER OF METHODS BY EFFECTIVE RESPONSES FOR
FIVE PURPOSES OF IN-SERVICE EDUCATION

Rank Order	Skill Dev.	Infor. Trans.	Improved Undstd.	Val. Att. Change	Curriculum Dev.
	Method Number				
1.	13	13	13	8	14
2.	14	14	8	13	13
3.	11	1	14	4	2
4.	8	4	11	14	1
5.	16	11	4	16	11
6.	4	16	16	11	4
7.	15	3	2	12	16
8.	1	8	5	17	5
9.	2	2	1	3	8
10.	5	17	17	15	15
11.	12	5	3	2	12
12.	17	12	12	5	3
13.	3	15	15	1	17
14.	7	9	7	7	10
15.	10	10	9	10	7
16.	9	7	10	9	9
17.	6	6	6	6	6

TABLE 25

CHI-SQUARE VALUES AND SIGNIFICANT LEVELS COMPARING METHODS
FOR THE PURPOSE SKILL DEVELOPMENT

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1		.00	8.82	.10	.41	35.72	11.97	.62	28.18	13.51	1.08	.95	9.07	.92	.05	.61	.92
2			4.41	.17	.17	20.26	6.03	.84	14.07	5.97	1.53	.67	7.99	.90	.00	.24	.23
3	**	*		9.61	4.09	12.47	.57	10.82	6.19	.57	13.27	2.17	25.20	11.07	5.89	7.51	1.26
4			**		.45	35.24	13.01	.52	28.37	14.71	.55	1.85	6.75	.59	.00	.17	.74
5			*			25.92	6.58	2.04	19.45	6.93	2.16	.12	11.34	2.31	.66	1.46	.18
6	**	**	**	**	**		8.72	38.09	2.22	8.60	36.97	20.58	54.69	37.03	22.72	29.16	12.63
7	**	**		**	*	**		16.82	3.05	.00	17.42	4.17	30.73	16.22	7.50	11.26	2.19
8			**	*		**	**		31.48	16.45	.16	3.28	5.82	.18	.19	.00	1.89
9	**	**	*	**	**			**		3.02	32.42	13.56	46.15	28.59	15.86	20.59	8.37
10	**	**		**	**	**		**			19.45	5.35	30.13	15.92	9.27	11.10	3.34
11			**			**	**		**	**		3.42	4.08	.00	.85	.21	3.63
12						**	*		**	*			14.34	3.63	.67	2.59	8.19
13	**	**	**	**	**	**	**	*	**	**	*	**		4.52	7.94	5.27	11.29
14			**			**	**		**	**			*		.90	.24	3.78
15			*			**	**		**	**			**			.23	.95
16			**			**	**		**	**			*				2.19
17						**			**			**	**				

*Significant at or beyond the .05 level of significance.

**Significant at or beyond the .01 level of significance.

development. The chi-square values are found in the upper right half of the table and the levels of confidence are located in the lower left half of the table. One asterisk indicates the value equals or exceeds the .05 level of confidence but is less than the .01 level of confidence. Two asterisks indicate the chi-square value for differences between the two methods equals or exceeds the .01 level of confidence.

In Table 25 method number 3, the faculty meeting, was evaluated significantly different from all methods except 7, 10, 12, and 17. Method number 6, the area meeting, was found to be significantly different from all methods except number 9, the television lecture or panel discussion, and all the differences were on or beyond the .01 level of confidence. Methods 7, 9, 10, and 13 all were found to be highly different from most of the other methods.

Of the 136 tests conducted, seventy-three produced chi-square values that were significant. Sixty-one of these values were on or beyond the .01 level of confidence, while twelve were on or beyond the .05 level but less than the .01 level. Therefore the null hypothesis that there are no differences between the methods of in-service education when evaluated by teachers must be rejected for the seventy-three tests where significant differences were found.

In Table 26 the chi-square values for differences between methods of in-service education are presented for the

TABLE 26

CHI-SQUARE VALUES AND SIGNIFICANT LEVELS COMPARING METHODS
FOR THE PURPOSE INFORMATION TRANSMISSION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1		.91	.48	.00	2.12	25.51	28.04	.61	20.71	25.19	.63	3.54	1.99	.81	8.62	.21	1.04
2			.20	.95	.19	9.74	8.05	.22	6.34	8.02	.23	.20	2.99	2.76	1.89	.27	.00
3				.52	1.10	21.12	21.47	.00	15.08	19.01	.00	1.15	3.09	1.56	5.81	.00	.22
4					2.23	22.84	23.74	.15	16.80	21.19	.16	2.33	2.11	.85	8.91	.21	1.07
5						11.22	12.34	.57	7.09	8.28	.59	.13	6.95	4.49	2.56	.72	.20
6	**	**	**	**	**		.35	17.37	1.47	.00	17.41	9.35	27.97	26.67	2.20	14.29	8.13
7	**	**	**	**	**			17.06	.52	.27	17.50	8.78	27.23	25.72	1.81	11.48	6.87
8						**	**		11.00	14.79	.00	1.33	3.72	1.91	4.33	.00	.24
9	**	**	**	**	**			**		.29	11.29	5.78	21.93	18.03	.35	9.58	4.28
10	**	**	**	**	**			**			15.15	7.12	24.23	22.83	1.03	11.45	5.13
11						**	**		**	**		1.30	2.21	1.98	4.42	.00	.25
12						**	**		.	**			7.20	4.09	1.44	.75	.12
13					**	**	**		**	**		**		.37	11.07	2.95	3.33
14					.	**	**		**	**		.			10.43	1.15	3.10
15	**		*	**				*			*		**	**		3.27	2.07
16						**	**		**	**							.29
17						**	**		.	.							

*Significant at or beyond the .05 level of significance.

**Significant at or beyond the .01 level of significance.

in-service education purpose information transmission.

Methods 6, 7, 9, and 10 were found to be different from all methods except each other and method 15. Most of the differences were at the .01 level. Method number 15 was different from many of the other methods also. Only four other values were found to be significant between methods of in-service education.

In Table 26 there were eight values at the .05 level and fifty-one values at the .01 level of confidence. Therefore, the null hypothesis that there are no differences between the methods of in-service education when evaluated by teachers must be rejected for the fifty-nine tests where significant differences were found.

In Table 27 the chi-square values are presented for differences between each method of in-service education and all other methods for the in-service education purpose improved understanding. There are sixty-seven values at the .05 level of confidence or beyond. Fifty-two of these are on or beyond the .01 level.

Methods number 6, the area meeting, number 9, the television lecture or panel discussion, and number 10, the television demonstration, were found to have values at the .01 level except with each other and methods 7, the observation, and number 15, the helping teacher. Methods number 13, the five day workshop, and number 14, the one-two day workshop, were different from most of the methods at either the

TABLE 27

CHI-SQUARE VALUES AND SIGNIFICANT LEVELS COMPARING METHODS
FOR THE PURPOSE IMPROVED UNDERSTANDING

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1		.17	.08	.95	.11	24.54	4.85	6.43	13.56	13.53	1.98	.43	7.67	5.29	2.31	.14	.00
2			.16	.20	.00	14.37	3.35	2.38	7.83	7.61	.93	.70	5.12	2.55	1.83	.00	.00
3				2.70	.10	21.14	4.75	6.24	13.36	11.47	1.93	.11	7.48	6.84	1.23	.59	.00
4					.51	30.15	10.38	2.68	19.76	19.76	.15	2.03	3.30	2.95	4.06	.18	.21
5						20.82	5.71	4.12	13.71	11.79	1.34	.50	6.95	4.49	2.56	.16	.00
6	**	**	**	**	**		8.80	42.44	2.15	3.09	29.09	15.56	37.62	36.00	6.58	19.08	12.73
7	*		*	**	*	**		19.47	2.32	1.70	11.79	2.27	19.76	16.04	.12	4.38	2.39
8	*		*		*	**	**		31.84	28.19	.82	7.73	.32	.00	13.28	2.18	2.43
9	**	**	**	**	**			**		.60	19.72	6.83	29.72	28.10	1.79	10.97	6.67
10	**	**	**	**	**			**			19.75	6.81	29.65	28.03	1.79	10.94	6.65
11						**	**		**	**		3.61	2.29	.91	6.61	.86	1.02
12						**		**	**	**			8.97	8.33	.62	.60	.20
13	**	*	**		**	**	**		**	**		**		1.37	11.07	4.68	5.72
14	*		**		*	**	**		**	**		**			10.43	2.35	2.80
15				*		*	*	**			*		**	**		3.12	.86
16						**			**	**			*				.25
17						**			**	**			*				

*Significant at or beyond the .05 level of significance.

**Significant at or beyond the .01 level of significance.

.05 level or the .01 level. Methods 13 and 14 were not significantly different from each other, nor were they for number 4, the grade level meeting, number 8, the intervisitation, and number 11, the summer demonstration school. Therefore, the null hypothesis that there are no differences between the methods of in-service education when evaluated by teachers must be rejected for the sixty-seven tests where significant differences were found.

In Table 28 the chi-square values are presented for differences between each method of in-service education and all other methods for the in-service education purpose value or attitude change. Methods 6, 9, and 10 tend to agree with each other, while number 6, the area meeting, was found to be significantly different at the .01 level fourteen times and at the .05 level one time. Methods 7, and 1, the observation and the curriculum guide, each produced values at the .05 level twice and number 7 produced nine values at the .01 level, while number 1 produced eight such values.

Methods 8 and 13 appear to agree with each other, both were significantly different twelve times. Method 14 was found to be different at the .01 level only five times and these were with 1, 6, 7, 9, and 10.

Therefore the null hypothesis that there are no differences between the methods of in-service education when evaluated by teachers must be rejected for the seventy-three tests where significant differences were found.

TABLE 28

CHI-SQUARE VALUES AND SIGNIFICANT LEVELS COMPARING METHODS
FOR THE PURPOSE VALUE OR ATTITUDE CHANGE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1		1.07	6.73	13.04	1.25	10.60	.06	24.94	5.08	.99	8.50	5.46	20.27	11.40	2.84	7.08	3.42
2			.53	4.00	.00	11.53	1.89	13.25	7.45	2.90	1.43	.62	22.31	2.84	.18	1.70	.85
3	**			2.23	1.35	28.58	8.03	11.01	22.57	12.50	.38	.10	8.03	1.78	.14	.52	.16
4	**	*			6.34	38.64	14.82	3.68	33.82	20.83	.48	1.06	2.64	.00	1.39	.15	.78
5				*		14.33	1.92	17.34	10.77	3.68	3.81	1.67	13.25	5.77	.53	3.33	1.43
6	**	**	**	**	**		8.76	57.33	1.47	5.09	29.99	23.56	43.02	32.33	16.26	25.16	15.61
7			**	**		**		28.55	4.01	.56	10.11	6.82	22.71	13.32	2.82	8.80	4.86
8	**	**	**		**	**	**		49.46	36.55	10.28	7.36	.00	3.06	10.17	3.48	4.11
9	*	**	**	**	**		*	**		2.22	25.40	20.42	40.66	27.97	10.91	20.30	13.10
10			**	**		*		**			13.58	9.83	27.74	17.39	5.38	12.69	6.45
11	**					**	**	**	**	**		.14	4.30	.58	.63	.00	.20
12	*					**	**	**	**	**			5.92	1.26	.16	.16	.00
13	**	**	**		**	**	**		**	**	*	*		1.88	7.73	3.75	4.40
14	**				*	**	**		**	**					1.59	.18	.88
15						**		**	**	*			**			.77	.22
16	**					**	**		**	**							.22
17						**	*	*	**	*			*				

*Significant at or beyond the .05 level of significance.

**Significant at or beyond the .01 level of significance.

In Table 29 the chi-square values for differences between methods of in-service education are presented for the in-service education purpose curriculum development. Methods 6, 7, 9, and 10 are significantly different from all other methods except each other and method 17, the field trip, at .01 level of confidence. Method 6, the area meeting, was different from method 17 at the .01 level.

Methods 13, the five day workshop, and number 14, the one-two day workshop, were different at the .05 level or .01 level from methods 3, 5, 6, 7, 8, 9, 10, 12, 15, and 17. There were only two other values in Table 29 that were significantly different, and those were at the .05 level. They were methods 12 and 2, and 1 and 3.

There are sixty-five values in Table 29 that are critical at the .05 level or beyond. Fifty-five of these values are beyond the .01 level of confidence. Therefore, the null hypothesis that there are no differences between the methods of in-service education when evaluated by teachers must be rejected for the sixty-five tests where significant differences were found.

Combination of Percentages and Chi-Square Tests for More Effective Methods

Tables 30-34 bring together information found in Table 24, reporting the rank order of methods, and Tables 25-29, reporting the significant levels between methods, for the purpose of identifying the more effective methods of

TABLE 29

CHI-SQUARE VALUES AND SIGNIFICANT LEVELS COMPARING METHODS
FOR THE PURPOSE CURRICULUM DEVELOPMENT

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1		.18	4.88	.09	1.59	33.24	29.07	1.59	31.36	28.61	.00	3.61	2.24	2.15	2.30	.14	2.65
2			3.45	.68	1.51	23.86	19.79	1.51	19.65	19.61	.20	4.02	.26	.24	1.89	.89	3.70
3	*			2.90	.76	17.09	12.34	.35	13.97	10.41	3.31	.00	9.07	8.70	.12	1.89	.14
4					.41	27.67	22.87	.41	25.10	22.53	.12	2.58	2.33	2.24	1.30	.00	2.73
5						19.67	14.92	.00	16.91	14.70	1.04	.42	5.18	4.98	.15	.15	.66
6	**	**	**	**	**		1.44	19.83	1.43	2.21	26.83	12.62	34.43	37.03	13.43	18.51	7.70
7	**	**	**	**	**			15.08	.05	.06	23.09	9.71	30.32	32.12	8.11	15.06	4.74
8						**	**		14.91	12.84	1.05	.43	5.20	5.00	.15	.57	.67
9	**	**	**	**	**			**		.24	25.54	9.62	33.28	35.02	8.86	14.95	4.71
10	**	**	**	**	**			**			20.23	7.93	29.98	31.75	6.96	14.90	3.26
11						**	**		**	**		2.89	1.52	1.44	1.42	.17	2.92
12		*				**	**		**	**			8.97	8.66	.15	1.28	.16
13			**		*	**	**	*	**	**		**		.00	4.87	1.88	8.12
14			**		*	**	**	*	**	**		**			4.72	1.81	7.92
15						**	**		**	**			*	*		.73	.20
16						**	**		**	**							1.84
17						**	*		*				**	**			

*Significant at or beyond the .05 level of significance.

**Significant at or beyond the .01 level of significance.

in-service education. Where differences between methods were found to be significant, Table 24 was used to determine which of the methods was evaluated the more effective.

In Table 30 the more effective method is identified and the methods found to be significantly less effective are listed with the .01 and .05 level of confidence indicated. Method 13, the five day workshop, is the most effective method of in-service education for the purpose of skill development. Methods 6, 9, and 10 were not more effective than any method, while method 7 was found to be more effective than method 6.

In Table 31 the more effective methods for information transmission are listed and methods found to be significantly less effective are listed with the .01 and .05 level of confidence indicated. Methods 13 and 14 are both more effective than any of the other methods. Methods 6, 7, 9, and 10 are clearly ineffective. Methods number 1 and 4 were found to be more effective than five of the other methods at the .01 level of confidence.

In Table 32 three methods were found to be very effective for the in-service education purpose improved understanding. Again methods number 6, 7, 9, and 10 were found not effective. Method 11, the summer demonstration school, and number 4, the grade level meeting, were found to be significantly more effective than five other methods and no method was significantly more effective than either 11 or 4.

Methods 8 and 14 were both more effective than nine other methods.

TABLE 30

METHODS OF IN-SERVICE EDUCATION EVALUATED SIGNIFICANTLY
MORE EFFECTIVE AND METHODS WHERE DIFFERENCES
WERE FOUND FOR SKILL DEVELOPMENT

More Effective Method	Less Effective Methods Level of Confidence	
	.01	.05
13	1, 2, 3, 4, 5, 6, 7, 9, 10, 12, 15, 17	8, 11, 14, 16
8	3, 6, 7, 9, 10	4
14	3, 6, 7, 9, 10	
11	3, 6, 7, 9, 10	
16	3, 6, 7, 9, 10	
4	3, 6, 7, 9, 10	
15	6, 7, 9, 10	3
1	3, 6, 7, 9, 10	
2	6, 7, 9, 10	3
12	6, 9, 10, 17	7
5	6, 9	3
17	6, 9	
3	6	9
7	6	

In Table 33 methods 8 and 13 are found to be more effective methods of in-service education for the purpose

value or attitude change. Methods 4, 14, and 16 were evaluated as more effective than some methods and no method was significantly more effective at the .01 or .05 level of confidence. Method number 11 was less effective at the .01 level and the .05 level when tested against methods 8 and 13 in that order.

TABLE 31

METHODS OF IN-SERVICE EDUCATION EVALUATED SIGNIFICANTLY
MORE EFFECTIVE AND METHODS WHERE DIFFERENCES
WERE FOUND FOR INFORMATION TRANSMISSION

More Effective Method	Less Effective Methods Level of Confidence	
	.01	.05
13	5, 6, 7, 9, 10, 12, 15	
14	6, 7, 9, 10, 15	5, 12
1	6, 7, 9, 10, 15	
4	6, 7, 9, 10, 15	
11	6, 7, 9, 10	15
16	6, 7, 9, 10	
3	6, 7, 9, 10	15
8	6, 7, 9, 10	15
2	6, 7, 9, 10	
17	6, 7	9, 10
5	6, 7, 9, 10	
12	6, 7, 10	9

TABLE 32

METHODS OF IN-SERVICE EDUCATION EVALUATED SIGNIFICANTLY
MORE EFFECTIVE AND METHODS WHERE DIFFERENCES
WERE FOUND FOR IMPROVED UNDERSTANDING

More Effective Methods	Less Effective Methods	
	Level of Confidence	
	.01	.05
13	1, 3, 5, 6, 7, 9, 10, 12, 15	2, 16, 17
8	6, 7, 9, 10, 12, 15	1, 3, 5
14	3, 6, 7, 9, 10, 12, 15	1, 5
11	6, 7, 9, 10	15
4	6, 7, 9, 10	15
16	6, 9, 10	
2	6, 9, 10	
5	6, 9, 10	7
1	6, 9, 10	7
17	6, 9, 10	
3	6, 9, 10	7
12	6, 9, 10	
15		6
7		6

In Table 34 two methods were found to be more effective at a significant level than ten of the other methods for the in-service education purpose curriculum development. Methods number 2, the curriculum guide committee, and 1, the

curriculum guide, were more effective than five other methods at a significant level of confidence.

TABLE 33

METHODS OF IN-SERVICE EDUCATION EVALUATED SIGNIFICANTLY
MORE EFFECTIVE AND METHODS WHERE DIFFERENCES
WERE FOUND FOR VALUE OR ATTITUDE CHANGE

More Effective Methods	Less Effective Methods Level of Confidence	
	.01	.05
8	1, 2, 3, 5, 6, 7, 9, 10, 11, 12, 15	17
13	1, 2, 3, 5, 6, 7, 9, 10, 15	11, 12, 17
4	1, 6, 7, 9, 10	2, 5
14	1, 6, 7, 9, 10	5
16	1, 6, 7, 9, 10	
11	1, 6, 7, 9, 10	
12	6, 7, 9, 10	1
17	6, 9	7, 10
3	1, 6, 7, 9, 10	
15	6, 9	10
2	6, 9	
5	6, 9	
1	6	9
7	6	
10		6

TABLE 34

METHODS OF IN-SERVICE EDUCATION EVALUATED SIGNIFICANTLY
MORE EFFECTIVE AND METHODS WHERE DIFFERENCES
WERE FOUND FOR CURRICULUM DEVELOPMENT

More Effective Methods	Less Effective Methods Level of Confidence	
	.01	.05
14	3, 6, 7, 9, 10, 12, 17	5, 8, 15
13	3, 6, 7, 9, 10, 12, 17	5, 8, 15
2	6, 7, 9, 10	12
1	6, 7, 9, 10	3
11	6, 7, 9, 10	
4	6, 7, 9, 10	
16	6, 7, 9, 10	
5	6, 7, 9, 10	
8	6, 7, 9, 10	
15	6, 7, 9, 10	
12	6, 7, 9, 10	
3	6, 7, 9, 10	
17	6	7, 9

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The problem of this study was to secure teachers' evaluations of selected methods of in-service education. This involved: (1) identifying the methods of in-service education used in the Oklahoma City Public School System, (2) comparing the evaluations of teachers with one year of experience, four to six years of experience, and ten or more years of experience, and (3) evaluation of the effectiveness of methods for achieving the specific purposes of in-service education.

One purpose of this study was to determine whether teachers with different amounts of experience evaluate methods of in-service education differently. A second purpose was to determine if there were methods of in-service education teachers evaluated as more effective than others for achieving specific purposes of in-service education. A subordinate purpose was to determine the relative degree certain methods of in-service education were used. Finally, it was hoped that from the obtained information recommendations of methods of in-service education for the future could be made.

Seventeen methods of in-service education were evaluated for the effectiveness of achieving five purposes of in-service education. The four most effective methods for achieving skill development were: (1) the five day workshop, (2) the one-two day workshop, (3) the summer demonstration school, and (4) the intervisitation. The percentages of effective evaluations for these four methods ranged from 94 per cent to 82 per cent. It is worth noting that all four of these methods were offered to teachers on a voluntary basis, as experienced by this researcher.

For the purpose of information transmission the four most effective methods of in-service education revealed by the data of this study were: (1) the five day workshop, (2) the one-two day workshop, (3) the curriculum guide, and (4) the grade level meeting. The percentage of effective evaluations ranged from 93 per cent to 86 per cent. Teachers sent some notes written on the instrument stating they had heard there were curriculum guides in the school system but they had not seen any. Yet 126 of 147 teachers reported experience with curriculum guides. Grade level meetings have been required in the school system, but with forty teachers reporting no experience with this method it was assumed that building principals did not require attendance, teachers were not informed of these meetings, or these meetings were not provided for every grade level.

The four most effective methods of in-service education for achieving the purpose of improved understanding, as evaluated by teachers were: (1) the five day workshop, (2) the intervisitation, (3) the one-two day workshop, and (4) the summer demonstration school. The same four methods were found to be most effective for the purpose of skill development, but in a different order.

For the purpose of value or attitude change the four most effective methods revealed by the data were: (1) the intervisitation, (2) the five day workshop, (3) the grade level meeting, and (4) the one-two day workshop. It was interesting to observe the lower percentages of the effective evaluations for this purpose of in-service education. Here the range was from 89 per cent to 79 per cent. It appears that value or attitude change was less effected by in-service education than was skill development, information transmission, or improved understanding.

The four most effective methods for achieving the purpose of curriculum development were evaluated as effective by lower percentages than the most effective for any other purpose. They were: (1) the one-two day workshop, (2) the five day workshop, (3) the curriculum guide committee, and (4) the curriculum guide. The range of effective responses by percentages was from 85 per cent to 77 per cent. The curriculum guide committee was among the most effective methods for this purpose only.

It was interesting to note that not one of the four most used methods of in-service education was among the four most effective methods for any purpose of in-service education. The four most used methods were: (1) the television demonstration, (2) the television lecture or panel discussion, (3) the faculty meeting, and (4) the observation.

The least effective methods of in-service education, as revealed by this research, were the same four methods for all five of the purposes. They were: (1) the area meeting, (2) the television lecture or panel discussion, (3) the television demonstration, and (4) the observation. The area meeting was evaluated as the least effective for all purposes of in-service education. The three other methods changed positions but remained among the bottom four. It should be noted that the other three methods were among the four most used methods of in-service education.

Conclusions

It must be recognized that in-service education was considered important by both teachers and administrators. One hundred per cent of the teachers responded to this research. This alone leads to the conclusion that teachers recognize the importance of this area of professional activity. The variety of methods and the number of teachers reporting experience with each method must lead one to be aware that administrators placed a high value on the worth of in-service education.

While teachers and administrators alike recognized the importance of in-service education, there was almost an inverse relationship found between the extent of use and the effectiveness of methods. Evaluation did not appear to be a part of the program. Effective feedback from teachers to the planners of programs either had not taken place, or had been ignored. Until this is changed the in-service education programs in the Oklahoma City Public School System will be less effective than they might be.

The methods found to be most effective were, for the most part, methods which required maximum teacher participation and teacher involvement. At the same time the most ineffective methods placed the teacher in a passive, non-participant role. It has been advocated for many years that children learn best by doing. An examination of the findings of this study leads to the conclusion that this applied to teachers also. The five day workshop, one-two day workshop, intervisitation, grade level meeting, summer demonstration school, and the curriculum guide committee, all tend to develop interaction between people. These methods require the participants to invest a part of themselves in the activity.

The methods found to be most effective were also, for the most part, voluntary, as experienced by this researcher. The least effective methods were required in-service activities. In a school system the size of the Oklahoma City Public

School System the needs and problems in all schools cannot be met with the same in-service programs. Some teachers may find a program very effective, while others may find nothing in the same in-service program that relates to their teaching situation. This means their time is wasted.

The responses to the area meeting indicate teachers of kindergarten, grades one through six, and special education, felt this was a most ineffective method of meeting individual needs. All teachers are aware they would be rated low if they presented the same material to all the children in one school, ignoring individual needs, abilities, backgrounds, and interests. Therefore, no one should be surprised at their evaluation of the effectiveness of this method.

There were enough methods evaluated effective to provide clues for improving the quality of the in-service education programs. Methods that were evaluated highly effective provide evidence that attempts have been made to improve the program for teachers. By having faith in the teachers' desire to provide the very best for children, using all information possible, investing time and resources in programs, involving teachers in the planning and implementing, in-service education can meet its purposes.

Recommendations

As a result of this research, the following recommendations are made.

Planning an in-service education program should begin with a survey of teacher needs and problems. This would require open-ended questions rather than selection from a prepared list. Suggestions for methods of attacking the problems would be included in this survey. The individual teacher should feel free to indicate that at this time in-service education would not be helpful. The more honest the responses of teachers to this survey, the better the chances will be for effective preparation.

Teachers and administrators should work together as equals in planning the in-service activities. The first program should be directed to the single most requested need of teachers. Administrators need to be alert to the fact that regardless what the in-service area selected, it is an expression of teachers needs, and must be treated in the most serious manner.

Whenever practical, teachers should be assured that participation will be voluntary. Even when participation is not required, complete data should be kept on who does attend. This would provide needed information for a follow-up on an individualized, personalized basis, and would provide channels for feedback and evaluation of the program.

The most complete resources possible should be put into this program. The message to teachers should be, "this is serious business and the system will do everything possible to insure that this program makes a difference for you."

There will be restrictions on how much money can be used, how professional personnel can be used, and how much time can be used. This information should be made known to the participants along with the options that exist.

Finally, in the planning for in-service education programs the purposes or goals should be clearly identified. Methods should be selected which are effective for specific purposes. It is possible to determine methods which are maximally effective for different purposes.

Any of the above recommendations could be implemented independently of the others and make the in-service education programs more meaningful and effective. Evaluation is essential from beginning to end of programs.

School systems are caught up in a rapidly changing world. Efforts to provide a degree of stability in this very unstable world will be more and more difficult. There is much talk of the changing curriculum, changing society, changing moral values, changing living style, and caught up in the center of all this change stands the public schools. Methods must be found for helping teachers retool with speed and ease.

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APPENDIX A

AUTHORIZATION TO CONDUCT STUDY

Oklahoma City Public Schools
900 North Klein
Oklahoma City, Oklahoma 73106

March 17, 1969

Mr. Allen R. Clark
3140 S. W. 71 Street
Oklahoma City, Oklahoma

Dear Mr. Clark:

The Research Committee has approved your request to conduct research in the Oklahoma City Public Schools according to the application you recently submitted.

We request that you coordinate the activities in connection with the study with Mr. Bill Coffia, Research Associate.

We would appreciate receiving a copy of the completed study for our files.

Sincerely yours,

William L. Shell
Director
Research and Statistics

WLS/ys

cc: Mr. Bill Coffia

APPENDIX B

INSTRUMENT USED TO SURVEY EXISTING
IN-SERVICE METHODS

February 26, 1969

Dear Principal:

I am preparing a questionnaire to send to a sample of elementary teachers in the Oklahoma City Public School System. This questionnaire will attempt to determine if certain methods of in-service education are of greater value than others. This study is being made as partial requirements for the Ed.D. degree.

Would you please help? Principals selected for this request have all been principals since at least 1960. In their positions as knowledgeable leaders, these principals will constitute a justification for the instrument.

Please examine the following methods of in-service education and indicate (a) since 1960 you do recall that this method of in-service education has been used, (b) you are sure this method has not been used, or (c) you do not recall or are not sure. If you think any of the methods should be reworded please make a note of it at the end of the methods. Should you feel that some method has not been included, please describe that method or methods.

Thank you for your time and assistance.

Allen Clark
Principal
Stand Watie School

SELECTED METHODS OF IN-SERVICE EDUCATION

- A. Since 1960 this method of in-service education has been used.
- B. You are sure this method has not been used.
- C. You do not recall or you are unsure.

Check only one column for each method.

Method of In-service Education	(A)	(B)	(C)
	Used	Not Used	Do Not Recall
1. Curriculum guide--subject matter guide(s) available that specify the scope and sequence for the year			
2. Curriculum guide committee--you worked with a committee to write a curriculum guide			
3. Faculty meetings--major portion of faculty meeting is given to providing instruction, understanding, finding materials, and sharing ideas for curriculum change and improvement			
4. Grade level meeting--all teachers in the system, teaching on a common grade level meet to be instructed by supervisors and/or curriculum director			
5. Grade level area meeting--teachers from six to twenty schools, teaching on a common grade level meet to be instructed by supervisors			
6. Area meeting--all teachers from six to twenty schools meet to be instructed by supervisors			
7. Observation--systematic observing of a teacher, by supervisor or principal, for purposes of analyzing his work			
8. Intervisitation--one teacher observes in the room of another teacher			

	Used	Not Used	Do Not Recall
9. Television lecture or panel discussion--follow-up discussion in faculty meeting			
10. Television demonstration--teacher demonstrates with pupils in classroom situation			
11. Summer demonstration school--school staffed by supervisors and teachers, all teachers are invited to observe and learn how to implement curriculum			
12. One day workshop--limited representation from all schools, to learn skills and activities to take back to buildings and share with others			
13. Five day workshop--workshop in arithmetic, reading, spelling, etc.--title 1--specialist from outside system and/or curriculum director and/or supervisors instruct			
14. One-two day workshop--specialist, often from outside school system, provides leadership and ideas for curriculum development, such as social studies, early childhood development, science, etc.			
15. Helping teacher--helping teacher works with the regular classroom teacher for from one day to one month to improve instruction			
16. Demonstration--teachers observe, supervisor or teacher demonstrates with a group of children			
17. Field trip--staff members make a trip away from the school to see on-going operations which are related to their jobs			
18. Please describe any other method of in-service education you have seen used since 1960.			

APPENDIX C

INSTRUMENT USED IN PILOT STUDY

EVALUATION OF SELECTED METHODS OF IN-SERVICE EDUCATION

- I. Indicate the degree of experience you have had with each method of in-service education. (M) Much, (S) Some, (N) None
- II. Indicate the effectiveness of each method of in-service education for bringing about (a) skill development, (b) information transmission, (c) improved understanding, (d) value or attitude change, and (e) curriculum development.
Evaluate each method in terms of its potential for meeting each of the purposes of in-service education.
(1) Strong, (2) Average, (3) Weak

The following general and specific examples are provided to clarify meaning. They are only examples and should not be considered limiting or complete.

Purposes of In-Service Education

- A. Skill Development: Help teachers develop or improve instructional skills. e.g. motivating pupils, planning units of study, asking open-ended questions, explaining, evaluating pupils, and evaluating self.
Specific application: (1) Teachers observe another teacher planning with children a social studies unit.
(2) A small group of teachers meet with the principal to learn how to operate the new Thermo-Fax copying machine.
- B. Information Transmission: Presenting to teachers information about the community, school system, building unit, etc. e.g. resources available, central office decisions, plans for the future, services available, and results of research.
Specific applications: (1) Teachers see and examine resources of a library or media center.
(2) Superintendent uses television to inform teachers of the importance of a scheduled bond election.
- C. Improved Understanding: Help teachers understand the complex interrelationships between the teachers, the pupils, the community, and the curriculum. e.g. explaining why some decision was made, discussing the implications of research, and expanding concepts of non-gradedness.
Specific applications: (1) Kindergarten teachers hear a social worker and school psychologist discuss

the impact of the community upon the development of young children.

(2) Entire staff discuss the particular safety problems of the students in the neighborhood.

- D. Value or Attitude Change: Encourage and assist teachers to try constructive procedures in dealing with pupils, and to develop deep concern for human relationships. e.g. teachers learn to seek alternatives in reacting to the withdrawn child, stealing, cheating, etc.
Specific applications: (1) Teachers and professional psychologist discuss and interact on motivating the underachiever.
(2) Entire staff socialize informally, get to know one another better, before any formal faculty meeting takes place.

- E. Curriculum Development: Provide opportunities for teachers, supervisors, and administrators to work as a team to improve the teaching-learning process. e.g. examine and recommend texts or materials, select in-service education problems, work on curriculum study committees.
Specific applications: (1) Teachers examine science texts or materials for the purpose of selecting for building use.
(2) Teachers, administrators, and supervisors work as a committee to evaluate and make recommendations on the social studies program for the school system.

EVALUATION OF SELECTED METHODS OF IN-SERVICE EDUCATION

- I. Indicate the degree of experience you have had with each method of in-service education. (M) Much, (S) Some, (N) None (circle one for each method)
- II. Indicate the effectiveness of each method for bringing about the purposes of in-service education. Please respond only to methods with which you have had experience. (1) very effective, (2) average, (3) ineffective (circle one for each purpose of the method)

I. Experience	Method of In-Service Education	II. Purposes of In-Service Education				
		Skill Development	Information Transmission	Improved Understanding	Value or Attitude Change	Curriculum Development
M S N	Curriculum guide--subject matter guide(s) available that specify the scope and sequence for the year	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Curriculum guide committee--limited number of teachers work with a committee to write a curriculum guide	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Faculty meeting--major portion of faculty meeting is given to providing instruction, understanding, finding materials, and sharing ideas for curriculum change and improvement	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

Experience	Method of In-Service Education	Skill Development	Information Transmission	Improved Understanding	Value or Attitude Change	Curriculum Development
M S N	Grade level meeting--all teachers in the system, teaching on a common grade level meet to be instructed by supervisors and/or curriculum director	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Grade level area meeting--teachers from six to twenty schools teaching on a common grade level meet to be instructed by supervisors	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Area meeting--all teachers from six to twenty schools meet to be instructed by supervisors	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Observation--principal or supervisor observe a teacher for purpose of analyzing his work	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Intervisitation--teacher observes in the room of another teacher	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Television lecture or panel discussion--teachers observe, then follow-up with discussion in faculty meeting	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Television demonstration--teachers observe another teacher in classroom situation (not viewed by pupils)	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

Experience	Method of In-Service Education	Skill Development	Information Transmission	Improved Understanding	Value or Attitude Change	Curriculum Development
M S N	Summer demonstration school--all teachers invited to observe and learn how to implement curriculum--school staffed with supervisors and teachers	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	One day workshop--limited representation from all schools learn skills and activities to take back to buildings and share with others	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Five day workshop--workshop in arithmetic, reading, spelling, etc.--title I--specialist from outside system and/or curriculum director and/or supervisors instruct	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	One-two day workshop--social studies, early childhood development, science, etc., specialist, often from outside school system provides leadership and ideas for curriculum development	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Helping teacher--helping teacher works with the regular classroom teacher for from one day to one month to improve instruction	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
M S N	Demonstration--teachers observe in own building, supervisor or teacher demonstrates with a group of children	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

Experience	Method of In-Service Education	Skill Development	Information Transmission	Improved Understanding	Value or Attitude Change	Curriculum Development
M S N	Field trip--staff members make a trip away from the school to see on-going operations which are related to their jobs	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3

How many years have you taught in the Oklahoma City elementary schools? (Count this year) _____

Information About the In-Service Instrument
Used in Pilot Study*

1. If you received this study in the school mail with a cover letter, after looking it over, would you complete it?
Yes 13, No 9, (qualified--if asked by principal 7 of this 9 would complete instrument)
2. Did the examples of the purposes of in-service education seem clear? Yes 19, No 4
3. Do you think your experiences of the past few months with in-service education biased your responses?
Yes 13, No 10
4. Were the methods clear? Yes 20, No 2
5. About how long did it take to complete the instrument?
30 min.

Thank you for your time and consideration in helping me. I know this is a busy time for you to take just one more job to do. It is my hope that the results of this study will be used to improve our in-service education program in Oklahoma City.

Allen R. Clark

*This information was obtained by visiting with the staffs after the questionnaires had been completed and returned. Twenty-three of the teachers responded in writing to these questions. All of the teachers participated in a discussion of the study.

APPENDIX D

INSTRUMENT USED IN STUDY

Dear Teacher:

Would you give about thirty minutes to evaluate the in-service education methods used in the Oklahoma City Public School System? The need for evaluation by the most concerned and effected, the teacher, is needed. As in the classroom, improvements can only be made in the light of information.

Dr. John Brothers and Mr. Earl Martin have expressed sincere concern for improving in-service education. Mr. Otis Lawrence is now faced with decisions of how to best serve and assist our entire staff in providing quality education for our children. Dr. Gene Shepherd and Dr. Jack Parker told me that when they were in the system in-service education was one of their most serious concerns and they were always seeking improvements. I have been asked to join the In-Service Education Committee since I began work on this study and the Department of Research and Statistics has requested a copy when complete.

Teachers have indicated that they feel the need for help in many areas of teaching, but their time is just too valuable to be wasted. If in-service education is to be of help it must accomplish the purposes for which it is intended. Quality in-service education is needed.

This questionnaire is being sent to one hundred fifty elementary teachers in our system, fifty with one year of experience, fifty with four to six years experience, and fifty with ten or more years of experience. Please be assured that no teacher will be identified. The purpose of this study is to make judgements and draw conclusions about in-service education. This means it is important that each questionnaire be completed and returned.

I hope you share with me the belief that this is important. You must believe, as I do, that teachers have a right to, and will evaluate methods that effect us all. It is my hope that the results of this study will be used to improve our in-service education activities.

Sincerely yours,

Allen R. Clark
Principal
Stand Watie Elementary

EVALUATION OF SELECTED METHODS OF IN-SERVICE EDUCATION

Directions

- I. If you have had no experience with the in-service education method named and described please circle the N under No Experience and go to the next method.
- II. If you have had any experience with the method named and described indicate the effectiveness of that method of in-service education for bringing out (a) skill development, (b) information transmission, (c) improved understanding, (d) value or attitude change, and (e) curriculum development.
Evaluate each method in terms of its potential for meeting each of the five purposes of in-service education. Circle either "1" or "2."
(1) = effective, (2) = ineffective

The following general and specific examples are provided to clarify meaning. They are only examples and should not be considered limiting or complete.

Purposes of In-Service Education

- A. Skill Development: Help teachers develop or improve instructional skills. e.g. motivating pupils, planning units of study, asking open-ended questions, explaining, evaluating pupils, and evaluating self. Specific applications: (1) Teachers observe another teacher planning with children a social studies unit. (2) A small group of teachers meet with the principal to learn how to operate the new Thermo-Fax copying machine.
- B. Information Transmission: Presenting to teachers information about the community, school system, building unit, etc. e.g. resources available, central office decisions, plans for the future, services available, and results of research. Specific applications: (1) Teachers see and examine resources of a library or media center. (2) Superintendent uses television to inform teachers of the importance of a scheduled bond election.
- C. Improved Understanding: Help teachers understand the complex interrelationships between the teachers, the pupils, the community, and the curriculum. e.g. explaining why some decision was made, discussing

the implications of research, and expanding concepts of non-gradedness.

Specific applications: (1) Kindergarten teachers hear a social worker and school psychologist discuss the impact of the community upon the development of young children.

(2) Entire staff discuss the particular safety problems of the students in the neighborhood.

- D. Value or Attitude Change: Encourage and assist teacher to try constructive procedures in dealing with pupils, and to develop deep concern for human relationships. e.g. teachers learn to seek alternatives in reacting to the withdrawn child, stealing, cheating, etc.
- Specific applications: (1) Teachers and professional psychologist discuss and interact on motivating the underachiever.
- (2) Entire staff socialize informally, get to know one another better, before any formal faculty meeting takes place.
- E. Curriculum Development: Provide opportunities for teachers, supervisors, and administrators to work as a team to improve the teaching-learning process. e.g. examine and recommend texts or materials, select in-service education problems, work on curriculum study committees.
- Specific applications: (1) Teachers examine science texts or materials for the purpose of selecting for building use.
- (2) Teachers, administrators, and supervisors work as a committee to evaluate and make recommendations on the social studies program for the school system.

PERSONAL DATA

1. Highest degree held: Bachelor degree____, Masters degree____, Other (specify) _____.
2. Date last course was taken for college credit. _____
3. Total number of years teaching experience (do not include present year). Years_____.
4. Number of consecutive years teaching experience in Oklahoma City Public Schools including 1968-69. _____Years
5. Current teaching position: Kindergarten____, Primary____, Intermediate____, Special Education Primary____, Special Education Intermediate____, Other (Specify) _____
6. Do you desire or plan to change your position in public education to: No Change____, Supervisor____, Administrator____, Counselor____, Secondary Teacher____, Other (specify) _____.
7. Do you have children of public school age or younger? Yes____, No____. If yes, how many? Number_____.

EVALUATION OF SELECTED METHODS OF IN-SERVICE EDUCATION

I. Circle the "N" if you have not had experience with the method described. If "N" is circled please do not evaluate that method. Do evaluate all methods with which you have had experience.

II. Indicate the potential effectiveness of each method for each of the five purposes of in-service education by circling "1" if effective or "2" if ineffective.

I. No Experience	Method of In-Service Education	II. Purposes of In-Service Education				
		Skill Development	Information Transmission	Improved Understanding	Value or Attitude Change	Curriculum Development
N	Curriculum guide--subject matter guide is available specifying scope, sequence, activities, etc.	1 2	1 2	1 2	1 2	1 2
N	Curriculum guide committee--limited number of teachers work as a committee to write a curriculum guide	1 2	1 2	1 2	1 2	1 2
N	Faculty meeting--major portion of faculty meeting is given to providing instruction, understanding, finding materials, and sharing ideas for curriculum change and improvement	1 2	1 2	1 2	1 2	1 2
N	Grade level meeting--teachers in the system, <u>teaching on a common grade level</u> meet with supervisors and/or curriculum director	1 2	1 2	1 2	1 2	1 2

No Experience	Method of In-Service Education	Skill Development	Information Transmission	Improved Understanding	Value or Attitude Change	Curriculum Development
N	Grade level area meeting--teachers from <u>six to twenty schools teaching on a common grade level</u> meet in a nearby school with supervisors and/or curriculum director	1 2	1 2	1 2	1 2	1 2
N	Area meeting-- <u>all teachers</u> from six to twenty schools meet in a nearby school with supervisors and/or curriculum director	1 2	1 2	1 2	1 2	1 2
N	Observation--principal or supervisor observe a teacher for <u>purpose of analyzing</u> her work	1 2	1 2	1 2	1 2	1 2
N	Intervisitation--teacher observes in the room of another teacher	1 2	1 2	1 2	1 2	1 2
N	Television lecture or panel discussion--teachers observe, then follow-up with discussion in faculty meeting	1 2	1 2	1 2	1 2	1 2
N	Television demonstration--teachers observe another teacher in classroom situation (not viewed by pupils)	1 2	1 2	1 2	1 2	1 2
N	Summer demonstration school--teachers observe and learn how to implement curriculum--school staffed with supervisors and teachers	1 2	1 2	1 2	1 2	1 2
N	One day workshop--limited representation from all schools learn skills and activities to take back to buildings and share with others	1 2	1 2	1 2	1 2	1 2

No Experience	Method of In-Service Education	Skill Development	Information Transmission	Improved Understanding	Value or Attitude Change	Curriculum Development
N	Five day workshop--teachers attend workshop in arithmetic, reading, spelling, etc.--directed by specialist from outside system and/or curriculum director and/or supervisors	1 2	1 2	1 2	1 2	1 2
N	One-two day workshop--teachers attend workshop in social studies, early childhood development, science, etc.--specialist, often from outside system provides leadership and ideas for curriculum development	1 2	1 2	1 2	1 2	1 2
N	Helping teacher--helping teacher works with the regular classroom teacher for from one day to one month to improve instruction	1 2	1 2	1 2	1 2	1 2
N	Demonstration--teachers observe in own building supervisor or teacher working with a group of children	1 2	1 2	1 2	1 2	1 2
N	Field trip--staff members make a trip away from the school to see on-going operations which are related to their jobs	1 2	1 2	1 2	1 2	1 2

APPENDIX E

RESPONSES TO THE METHODS OF IN-SERVICE EDUCATION

RESPONSES TO THE METHODS OF IN-SERVICE EDUCATION*

Curriculum Guide

Teaching Experi- ence (Years)	Purpose of Method								Number Report- ing		
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change			Curric- ulum Dev.	
	+	-	+	-	+	-	+	-		+	-
1	31	7	31	7	26	12	18	20	28	10	38
4 to 6	32	12	40	4	35	9	24	20	35	9	44
10 or more	34	10	38	6	36	8	28	16	34	10	44
Totals	97	29	109	17	97	29	70	56	97	29	126

Curriculum Guide Committee

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	13	1	13	1	11	3	8	6	12	2	14
4 to 6	8	5	11	2	11	2	9	4	10	3	13
10 or more	15	5	14	6	15	5	13	7	16	4	20
Totals	36	11	38	9	37	10	30	17	38	9	47

*The responses presented in this Appendix E are the actual numbers reported by each group and totaled. Throughout Appendix E the + will indicate effective responses, and the - will indicate not effective.

Faculty Meeting

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	26	18	36	8	31	13	30	14	28	16	44
4 to 6	24	18	36	6	32	10	28	14	28	14	42
10 or more	28	15	35	8	35	8	33	10	28	15	43
Totals	78	51	107	22	98	31	91	38	84	45	129

Grade Level Meeting

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	27	4	25	6	27	4	27	4	25	6	31
4 to 6	28	9	33	4	29	8	26	11	25	12	37
10 or more	29	10	34	5	32	7	31	8	30	9	39
Totals	84	23	92	15	88	19	84	23	80	27	107

Grade Level Area Meeting

Teaching Experi- ence (Years)			Purpose of Method								Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	14	4	14	4	16	2	14	4	14	4	18
4 to 6	23	9	24	8	23	9	19	13	21	11	32
10 or more	30	11	33	8	32	9	24	17	29	12	41
Totals	67	24	71	20	71	20	57	34	64	27	91

Area Meeting

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	2	7	5	4	3	6	3	6	4	5	9
4 to 6	10	19	13	16	10	19	6	23	8	21	29
10 or more	13	21	20	14	18	16	14	20	13	21	34
Totals	25	47	38	34	31	41	23	49	25	47	72

Observation

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	27	14	29	12	31	10	26	15	22	19	41
4 to 6	25	18	21	22	24	19	22	21	16	27	43
10 or more	19	24	22	21	26	17	20	23	17	26	43
Totals	71	56	72	55	81	46	68	59	55	72	127

Intervisitation

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	18	3	16	5	19	2	18	3	15	6	21
4 to 6	23	8	27	4	28	3	27	4	20	11	31
10 or more	32	5	31	6	33	4	34	3	27	10	37
Totals	73	16	74	15	80	9	79	10	62	27	89

Television Lecture or Panel Discussion

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	17	28	29	16	24	21	15	30	17	28	45
4 to 6	20	25	26	19	20	25	17	28	18	27	45
10 or more	21	19	25	15	27	13	21	19	20	20	40
Totals	58	72	80	50	71	59	53	77	55	75	130

Television Demonstration

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	21	22	24	19	23	20	20	23	19	24	43
4 to 6	27	18	27	18	24	21	26	19	21	24	45
10 or more	25	19	27	17	26	18	19	25	19	25	44
Totals	73	59	78	54	73	59	65	67	59	73	132

Summer Demonstration School

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	13	1	12	2	13	1	13	1	12	2	14
4 to 6	27	7	28	6	27	7	23	11	25	9	34
10 or more	31	6	31	6	32	5	28	9	28	9	37
Totals	71	14	71	14	72	13	64	21	65	20	85

One Day Workshop

Teaching Experi- ence (Years)	Purpose of Method								Number Report- ing		
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change			Curric- ulum Dev.	
	+	-	+	-	+	-	+	-		+	-
1	16	3	16	3	16	3	16	3	16	3	19
4 to 6	19	11	21	9	19	11	18	12	14	16	30
10 or more	23	10	26	7	25	8	25	8	23	10	33
Totals	58	24	63	19	60	22	59	23	53	29	82

Five Day Workshop

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	5	1	4	2	4	2	5	1	4	2	6
4 to 6	25	2	25	2	25	2	22	5	23	4	27
10 or more	33	1	33	1	33	1	32	2	30	4	34
Totals	63	4	62	5	62	5	59	8	57	10	67

One-Two Day Workshop

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	11	5	14	2	13	3	12	4	12	4	16
4 to 6	21	4	23	2	23	2	19	6	22	3	25
10 or more	29	3	29	3	30	2	27	5	28	4	32
Totals	61	12	66	7	66	7	58	15	62	11	73

Helping Teacher

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	19	3	15	7	15	7	14	8	15	7	22
4 to 6	13	4	11	6	11	6	13	4	12	5	17
10 or more	8	4	8	4	8	4	8	4	7	5	12
Totals	40	11	34	17	34	17	35	16	34	17	51

Demonstration

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	12	1	11	2	12	1	11	2	10	3	13
4 to 6	17	3	16	4	14	6	16	4	15	5	20
10 or more	16	6	19	3	18	4	15	7	16	6	22
Totals	45	10	46	9	44	11	42	13	41	14	55

Field Trip

Teaching Experi- ence (Years)	Purpose of Method										Number Report- ing
	Skill Dev.		Infor. Trans.		Im- proved Undstd.		Val. Att. Change		Curric- ulum Dev.		
	+	-	+	-	+	-	+	-	+	-	
1	6	0	6	0	6	0	6	0	5	1	6
4 to 6	16	5	18	3	16	5	15	6	14	7	21
10 or more	6	7	8	5	9	4	8	5	6	7	13
Totals	28	12	32	8	31	9	29	11	25	15	40