

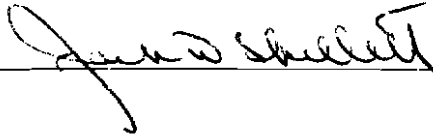
AN ABSTRACT OF THE THESIS OF

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In-service education, which is often referred to as "learning-on-the-job or learning-while-earning," elicits a variety of responses for a variety of reasons from different Unified School Districts. It should be observed that there is no one type of in-service training which is a panacea to all school settings. In-service education programs should be tailored to meet specific district goals and objectives. In addition, the basic concept of in-service education on the part of public school teachers, is in one sense a method to achieve the greatest degree of instructional competency and organization of curriculum contents around a variety of human knowledge.

The purpose of this study was to gain an in-depth knowledge of in-service education needs and attitudes of public school teachers toward in-service education in a Kansas Unified School District. A 20-item attitudinal questionnaire was designed and distributed to 250 randomly selected public school teachers. A total of 187, or 74.8 percent, was realized. Only the data that were returned by March 20th were used in the statistical part of the analysis. The responses were analyzed by utilization of the chi-square test. A contingency coefficient was used to discover if there was a significant relationship between the variables.

Findings indicated: There was no significant difference between the perceived attitudes of teachers who favor in-service education focusing on curriculum development and methodology and teachers favoring a focus on the development of behavioral objectives.

The most popular opinions were:

1. Teachers should have the major input in determining what their in-service education should be.
2. In-service education provides the opportunity to share ideas and information.
3. The central administration should be committed to the planning of the in-service program but should not play a dominant role.

IN-SERVICE EDUCATION AMONG PUBLIC
SCHOOL TEACHERS IN KANSAS

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This manuscript is humbly
dedicated to my sponsor
Professor U. U. Uche
Western House, 7th Floor
Lagos, Nigeria
and
my dear Mother
Nwadiya Ori Onyeukwu
Okon-Ohafia
Nigeria

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Chapter 1

INTRODUCTION

This study was designed to investigate the major specific approaches toward in-service education among public school teachers in Kansas. The study covered the organizational pattern of in-service education, in-service education development workshop, societal pressures, and demands for teacher "accountability" (Engelhart, 1972). Furthermore, the study illustrated that in-service education could never be overwhelmingly successful without the active support and full cooperation of the community, administrative staff, and students.

In general, Otto (1974) concluded:

In order to effect significant improvements . . . all the instructional staff including teachers, principals, central office personnel and other support staff must be involved in in-service efforts (p. 1).

This chapter has finally introduced the general nature and background of the study. In addition, the research problems, the null hypotheses, the purpose, method, and procedures used, have also been included. In order to make this study more understandable selected terms have been defined and clarified.

Theoretical Formulation

In the past decade, Americans have expressed greater and greater concern about their public school systems. Comprehensive studies and reviews of educational systems in America showed that teachers were confronted by a great number of societal pressures, especially in the sixties and seventies. The National Education Association (NEA, 1975) stated that the public felt educational results did not match the millions of dollars poured into it yearly. In addition, NEA (1975) further reported that taxpayers viewed education as an expenditure rather than an investment.

Haag (1982) wrote that:

Taxpayers feel our educational standards have eroded to the point where they are becoming somewhat belligerent about spending their tax dollars. Parents are demanding changes in nearly all aspects of education. They (parents) are demanding that state boards of education and state legislatures propose and enact laws that require school districts within their state to meet specific requirements mandated to guarantee that graduating students will, in fact, become more proficient in reading, writing and arithmetic (p. 2).

The public, therefore, demanded increased efficiency in the operation of public schools. The cry was couched under the broad umbrella of "back to basics," "increase discipline," and "eliminate frills."

Trump and Miller (1979) concluded that teachers were being challenged by a variety of circumstances, i.e., the move towards accountability, the interest in management by objectives, the tightening of the budget, the trend toward interdisciplinary studies, and the strong emphasis on the

basics. The public felt that the schools' output should be commensurate with their (schools') input. In this respect, the teachers' accountability, which gathered momentum in the early seventies, made the public school teachers, administrators, and paraprofessionals take a more significant turn toward in-service education training.

Purpose

The purpose of this study was to collect information from elementary and secondary school teachers in Kansas, and to discover their attitudes toward in-service education training. A 20-item questionnaire was developed and finalized by the researcher and a three-member committee. The attitude questionnaire passed through the central office and principals before reaching the public school teachers, who were selected by a systematic random sampling procedure. The questionnaires were returned to the researcher. The data were tabulated according to the independent variables and were further analyzed statistically by using chi-square and the analysis of variance.

When dealing with the purpose of in-service education, Smylie and Hawley (1982) emphatically stated that in-service training provides teachers with knowledge, insight, skills to cope with change, and combat rigidity in teachers' attitudes and instructional practices. Smylie and Hawley (1982) further said that in-service training facilitates the development

of flexibility in dealing with new instructional demands and changes in relations with students and colleagues.

The advent of in-service education training certainly helped educators cope with the changes in traditional and conventional methods of teaching in the public school system. The usefulness of in-service training is dependent on at least four factors. Smylie and Hawley (1982) listed the four factors as:

1. The nature in which the training is conducted.
2. The content of training.
3. What group participated.
4. Who conducted the training programs (pp. 5-6).

It should be emphasized that no one type of in-service training format is a panacea to all school settings. Therefore, program models should not be adopted simply because that model has been effective in a particular school district. Rather, in-service education programs should be tailored to meet a specific school district's needs and objectives. The basic concept of in-service education on the part of teachers was in one sense a method to achieve the greatest degree of instructional competency and organization of curriculum contents around a variety of human knowledge.

Finally, Smylie and Hawley (1982) concluded by saying:

The goals of in-service programs aim at enhancing students' achievements and discipline, promoting positive relations among students and stimulating curricula innovations (p. 5).

In-service education training varies from school district to school district and from state to state. It is believed by a few educators that in-service education training throughout

the United States is not generally supported by facts, but only by the logic of the process itself.

Problem

Kansas, like any other state in the United States, has encouraged and advised state legislative bodies to require, by law, the public schools to establish minimum competency programs in various subject areas. The minimum competency programs will help the students in the mastery of specific skills in both academic and life-survival areas needed by each student in order to survive in this "space age."

Luke (1980) took a stand when he wrote that it was the major concern of the National Education Association (NEA), National International Education (NIE), teachers, and administrators to add or sharpen an established array of teaching strategies and to find organized ways of learning and sharing with their colleagues. It is essential for teachers, administrators, and curriculum specialists to work in partnership for effective planning and implementation of in-service education.

Statement of the Problem

Is there a significant difference in the perceived attitudes of elementary (E), middle school (M), and secondary (S) teachers regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire?

Is there a significant difference in the perceived attitudes of male (M) and female (F) teachers regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire?

Is there a significant difference in the perceived attitudes of teachers having 0-4 years, 5-9 years, 10-19 years, and 20 or more years experience regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire?

Is there a significant difference between the perceived attitudes of teachers who favor in-service education focusing on curriculum development and methodology and teachers favoring a focus on the development of behavioral objectives?

Statement of the Hypotheses
(Null Form)

H_01 : There is no significant difference in the perceived attitudes of elementary (E), middle school (M), and secondary (S) teachers regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire.

Stated symbolically, the null hypothesis is:

$$H_01 : \mu_E = \mu_M = \mu_S$$

H_02 : There is no significant difference in the perceived attitudes of male (M) and female (F) teachers regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire.

Stated symbolically, the null hypothesis is:

$$H_{02} : \mu_M = \mu_F$$

while the alternative research hypotheses were as follows:

$$H_{12} : \mu_M < \mu_F$$

$$H_{22} : \mu_M > \mu_F$$

There is no significant difference in the perceived attitudes of teachers having 0-4 years, 5-9 years, 10-19 years, and 20 or above years experience regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire.

The null hypothesis was:

$$H_{03} : \mu_{0-4} = \mu_{5-9} = \mu_{10-19} = \mu_{20+}$$

H_{04} : There is no significant difference between the perceived attitudes of teachers who favor in-service education focusing on curriculum development and methodology (CDM) and teachers favoring a focus on the development of behavioral objectives (DBO).

Stated symbolically, the null hypothesis is:

$$H_{04} : \mu_{CDM} = \mu_{DBO}$$

while the alternative hypotheses were as follows:

$$H_{14} : \mu_{CDM} < \mu_{DBO}$$

$$H_{24} : \mu_{CDM} > \mu_{DBO}$$

Method and Procedures

This study investigated the effects of an in-service education program in the public schools. It further described the method and procedures used in dealing with this study. It has dealt with the following topics: a general description of the methods used for statistical analysis of the data, i.e.,

1. population and sampling
2. materials and instrumentation
3. design of the study
4. data collection, and
5. data analysis.

Population and Sampling

The subjects involved in this study were drawn from a Unified School District (USD) in Kansas with a population of about 28,000 people. The teachers used in this study consisted of males and females systematically and randomly selected from public schools. The sample was representative of public school teachers employed to teach in elementary, middle, and senior high schools in this particular school district.

Instrumentation

A survey method was used to collect the necessary data required for this investigation. The attitude questionnaire was the instrument used for this survey. The questionnaire

was constructed by the researcher and proofread by members of his thesis committee. It was analyzed and developed according to the suggestions of the committee members.

There were three parts in this attitude questionnaire. Part one dealt with the background information of public school teachers: their years of teaching experience, the level they taught, and development of behavioral objectives.

Part two surveyed the teachers' attitudes toward: motivation of students' interests, individualized teaching/procedures, and the impact of in-service training in the classroom. For the purpose of statistical analysis, the participants were asked to rate each statement numerically according to their degree of interest. The possible choices were:

1. I have no interest.
2. I have some interest.
3. I have much interest.

Part three of the questionnaire was designed to survey the respondent's level of agreement or disagreement on: teacher's input in determining what their in-service education program should be, planning of an in-service education, and the benefits a classroom teacher derives from the program. The desired attitude as much as their reaction of the participants to each statement was finalized for the instrument. The possible choices were as follows: SA = Strongly Agree; A = Agree; N = Neutral or No Decision; D = Disagree; SD = Strongly Disagree.

In addition to the questionnaire, a cover letter was sent to the principal of each of the schools explaining the purpose of the study (Appendix A, p. 61). The returned questionnaires were picked up by the researcher from the central office.

Design

It was hypothesized that there was no significant difference in the perceived attitudes of elementary (E), middle school (M) and secondary (S) teachers regarding the effectiveness of in-service programs as measured by their total score to the questionnaire. Thus, in this study, the independent variable was the perceived attitudes. This variable had three levels, i.e., elementary, middle school, and secondary school teachers. Then, the dependent variable was "the effectiveness of in-service." Furthermore, the moderator variable was in-service education participants with the two levels of those who participated in, and those who did not participate in, in-service programs.

From the effects of the independent and moderator variables on the observed phenomena, the intervening variable was inferred. Therefore, motivation, self-image, personality trait, perception, and learning formed the intervening variable. Finally, there were some factors which were controlled by the researcher in order to neutralize effects on the observed phenomena, i.e., public school teachers, in-service education, and students were such factors which formed the control variable.

Data Collection

The actual collection of data was done during January through March of 1983. Only those responses received by March 20 were used in the statistical analysis portion of this paper. A total of 250 questionnaires were delivered to the public school teachers through the central office and principals.

Data Analysis

The chi-square test and contingency coefficient were the main statistical techniques or tools utilized to analyze data collected from responses to each item of the questionnaire. Furthermore, analysis of variance (ANOVA) was employed to determine whether a significant difference among public school teachers existed in determining students' behavioral objectives. The contingency coefficient was used to obtain the degree of difference that existed between the independent and dependent variables. Together these tools provided the basis for testing the four hypotheses in Chapter 1 of this study. The description of the chi-square statistical tool is as follows:

Chi-Square (χ^2)

The chi-square test is one of the powerful nonparametric statistical tools that is used to analyze data. The chi-square is determined on the basis of the number of responses (observed frequencies). Thus, the chi-square is a nonparametric statistical tool which is employed to determine

whether there was a significant difference in responses made in each item of the questionnaire between the independent and dependent variables.

The formula (Downie & Heath, 1974) used for calculating the value of chi-square is:

$$\chi^2 = \sum \frac{(O_f - E_f)^2}{E_f}$$

where, \sum = Summation operation

O_f = Observed frequencies

E_f = Expected frequencies

The observed frequencies (O_f) are simply based upon the total number of respondents in each category (cell). The expected frequencies (E_f) for each cell are calculated on the basis of the row sums times the column sums divided by the total number of respondents (N) or (E_f) = (row sum) (column sums) ÷ N.

In testing the null hypothesis, the value obtained for chi-square is tested against a chi-square table. In reading from a chi-square table, the degrees of freedom (df) must be considered. The degrees of freedom are calculated by taking the number of rows (r) minus one, times the number of columns (c) minus one, or $df = (r-1) (c-1)$.

For this study the .05 level of significance was selected to test the null hypothesis. This may be interpreted as dependent upon whether the statistics (sample fact) fell within the established critical region or not.

In general, if the obtained value of chi-square was greater than or equal to the required table value of chi-square at the .05 level of significance, the chances were that 95 times out of 100 the obtained value of chi-square was not due to sampling error. Based on this criterion, if the obtained value of chi-square is significantly larger than expected, rejection of the null hypothesis is warranted.

The Contingency Coefficient (C)

The contingency coefficient is an index of measurement that is used to determine the degree of relationship or difference that exists between the independent and dependent variables. The magnitude of chi-square is a function used in the determination of the contingency coefficient. The contingency coefficient formula (Downie & Heath, 1974) is:

$$C = \sqrt{\frac{\chi^2}{N + \chi^2}}$$

where, χ^2 = obtained value of chi-square and

N = total number of respondents to each individual item.

For interpretation of the meaning of the contingency coefficient values; the comparison is analogous to obtaining a Pearson-product-moment coefficient or correlation (r). Like Pearson's r, the degree of relationship between the independent and dependent variables can be obtained.

Analysis of Variance (ANOVA)

A statistical analysis of variance was used to determine whether a significant relationship existed at the .05 level among the attitudes of secondary and elementary school teachers. Between-groups, within-groups, and total variances were calculated. It can be calculated from the formula (Downie & Heath, 1974):

$$SS_{\text{bet}} = \sum \frac{(\sum x_i)^2}{N} - \frac{(\sum x \text{ to } 1)^2}{N \text{ to } 1}$$

$\sum x_i$ = Sum of row scores in each group

$\sum x \text{ to } 1$ = Sum of total row score

The within-group-variance reflects the dispersion of scores within each treatment group. The within-group variance can be calculated by averaging the separate group variances. Thus, the total variance can be calculated by the formula:

$$SS_{\text{to } 1} = \frac{\sum x^2}{N}$$

$\sum x^2$ = Sum of the squared deviations from the mean, or

$$SS_{\text{to } 1} = SS_{\text{bet}} + SS_w$$

As with the chi-square, F-ratio may be tested for significance in a table of values. The .05 level of significance was selected to test attitudes of teachers-categories toward students' behavioral objectives and teaching methodology. This may be interpreted as showing whether the statistics

(sample fact) fall within the established critical region. In general, if the obtained value of \underline{F} -ratio is greater than or equal to the table value .01 level of significance with the corresponding degrees of freedom (df), the chances are that 99 out of 100 times the obtained value of \underline{F} -ratio is significantly larger than expected. Thus, rejection of the null hypothesis is warranted.

The obtained \underline{F} -ratio was found by dividing the mean square for between-groups by the mean square for within-groups. The \underline{F} -formula (Downie & Heath, 1974) is as follows:

$$F = \frac{ms_b}{ms_w}$$

where, ms_b = mean square (estimated variance) for between groups,

ms_w = mean square (estimated variance) for within groups, and

\underline{F} = obtained \underline{F} -ratio, or test statistic (sample fact).

If the obtained \underline{F} value was greater than or equal to the table value for the required degrees of freedom (df), rejection of the null hypothesis was most tenable.

Chapter 2

REVIEW OF RELATED LITERATURE

Luke (1980) reported that, of the more than 16,000 school districts in the United States, some have fewer than ten teachers while the large ones have more than 50,000. It has been a major concern of any school district, whether small or large, to give a higher priority to an in-service education program which aims at maximizing individual teacher involvement without corresponding increases in cost to the teacher or the district. In-service education has long been described as learning-on-the-job or learning while earning.

Regarding in-service education training, Luke (1980) declared:

Every teacher deserves an equal opportunity to increase his individual competency but should not pay out of his pocket to learn how to teach better. . . . It is more practical to learn about teaching while teaching than to spend several years learning about teaching outside the classroom (p. 59).

In-service education should be well organized.

Organizational Pattern and Planning

In order to effect a significant improvement and to achieve the paramount objectives of in-service education programs, the organization and planning should be a joint responsibility. Ideally this would be the task of a central

planning committee consisting of not only the instructional staff and the principal, but also the central office-personnel, specialists, and the paraprofessional staff.

It was emphatically stated (Campbell et al., 1977) that: "In-service education programs planned for the teachers solely by the administrators are doomed to failure before they begin." As a matter of fact, in-service education varies from district to district. The central planning committee should, therefore, consider the size of the school district, the philosophic notion, the availability of budget-resources, incentives, and the past success of the local association in ensuring meaningful teacher input. The central planning committee or team also has many responsibilities which include:

1. Setting of policy or defining the purpose.
2. Securing and operating of funds.
3. Demonstration of effective strategies to meet the aims and objectives of the in-service education.
4. Consulting the building level committees.
5. Disseminating information to everyone concerned in the in-service program.

It is very essential for all three teaching levels to be represented. Campbell et al. (1977), further commented that teachers should work in conjunction with the administrative and supervisory members of the central planning committee to interpret and implement the board's policy. Furthermore, an effective planning of in-service education aims at

putting together a number of different learning experiences into a coherent developmental pattern.

In-service education planning must be comprehensive and must have a long range projection of goals and objectives and a precise strategy. After analyzing individual and building goals and objectives, options for in-service activities must be considered. Once realistic options have been identified and agreed upon, it is good to match these options to the available resources. In-service education should be rewarding rather than penalizing to a staff member.

In-service education activities should be offered during regular working hours at convenient locations with little or no cost to teachers. Besides face-to-face discussions, teachers may be allowed to visit their neighborhood to discuss teaching techniques and strategies. The specialists or consultants should be available at all times. They should help teachers design and conduct an informal analysis--on what they have been working on. Individual teachers should have options in follow-up workshops, seminars, or conferences. In this regard, In-service Education Trends in School Policies and Programs (1974, p. 46) reports that maximum teacher involvement in the planning, content, and overall operations of the in-service education program is required. In-service education is "teacher-centered."

At the National Education Association (NEA) conference, John Sullivan (1975), NEA Director of Instruction and

Professional Development, reported his findings and recommendations to the members of the conference. He said:

1. Teachers must determine their own inservice needs
2. Teachers must be actively involved in program planning and operation
3. Teachers must receive inservice training as an integral part of their work day

The school system may set some general goals to be accomplished, but the question of how they are actually achieved should be determined by teachers (p. 46).

In-Service Education Plan of Action

Every school district should design an in-service education plan of action. Reference to In-Service Education, Current Trends in School Policies and Programs (1975), the Monticello, Iowa in-service education plan of action was summarized under these headings:

1. The participating faculty member will be able to keep abreast of rapidly changing educational technology.
2. Upon completion of each in-service course, each participating faculty member may apply for approved credit toward certificate renewal.
3. The participating faculty member may develop and use instruments which will help to evaluate all domains (affective, cognitive, and psycho-motor) of the child.
4. Students of the participating faculty members will be able to demonstrate behavioral changes such as: decreased frequency of discipline referrals and problems, truancy and tardiness, thereby increasing teacher-pupil interaction.

5. Participating faculty members will be able to improve the quality of instruction as measured by standards set forth in the locally approved teacher evaluation instrument.

It is believed that it would be best for teachers to have orientation workshops two to three days before the regular school semester begins. Such orientation would acquaint teachers with self-awareness and especially guide them to gain knowledge about human interaction (teacher-pupil relations, effective teaching procedure and professionalism). In conclusion, the In-service Education, Current Trends in School Policies and Programs (1975, p. 15) stated that: "In order to achieve the objectives (in-service education plan of action), teachers' needs and district goals should be well defined."

Goal Setting

The goal setting process of each school district must be meaningful to meet the expectations held by the districts for teachers. For that reason, several instructional building, district, and state goals are developed, discussed and a selection made. The relationship between goal setting of in-service and the appraisal process must be understood by all in-service education participants. Personal involvements, growths, and improvements are essential.

It is necessary to note that:

1. Goals should have a primary purpose involving teachers' skills and the instructional program, rather than being used for evaluating the performance of teachers.
2. Goals must be important and realistic (to the person setting them).
3. Goals must have the continuing involvement of the teachers in their development and selection.
4. Goals must relate to both personal and professional needs (of individuals setting them).
5. Goals should be an on-going process and not a process used only as difficulties arise.

In-service training should be continuous and incorporated as a component of total school or district functions.

The Usefulness of In-Service Training

Smylie and Hawley (1982) commented that the usefulness of in-service training in any school district depends on at least four factors. The four factors are:

1. the manner in which the training is conducted,
2. the contents of training,
3. what groups participate, and
4. who conducts the training program.

In addition, Smylie and Hawley (1982) reported that, teachers and administrators usually should participate in in-service programs together since they can reinforce the application of the training. In-service training should be designed to

encourage individual participation in programs, not merely attendance at them.

The Purpose of In-Service Education

The purpose of in-service education training is as varied as the school district. In general, the program should aim at increasing students' achievements, improving interpersonal relations, enhancing discipline and classroom management techniques, and stimulating curricular innovation. Therefore, it is the duty of the "task force" to develop the aims and objectives of the in-service program. According to In-Service Education, Current Trends in School Policies and Programs (1975, p. 46), it was reported that the task force of the Los Angeles Unified School District outlined a set of "purposes" which encompassed not only educational products, but also broad instructional process objectives. The Los Angeles Unified School District's set of purposes were:

1. To ensure the best possible educational program for all the pupils in the school district, any activity of the district must be structured with this in mind.
2. To provide for the continuing improvements of jobs skills needed by employees.
3. To enable employees to keep abreast of new information and current developments in their field of specialization.

4. To encourage effectiveness in interpersonal skills through a program of organizational development. A planned program of organizational development is the means toward addressing the growing need for the team building and higher levels of awareness and skills in staff, community/pupil relations.
5. To provide a variety of training opportunities reflecting the needs of individuals and local organizational units.
6. To effectively employ college, university, and other community resources to supplement the district program.
7. To ensure that the necessary training precedes the imposition of new requirements and the introduction of new and innovative programs.

Public school teachers should discuss and acquaint themselves with the aims and objectives developed around or even beyond the in-service education needs of their school district. Such enables them to become more familiar with "academic freedom" and teaching methodology.

Defining the Roles in In-Service Education

The Role of the School Board

It is the duty of the school board in collaboration with the Teachers' Association to provide guidelines or set policies designed to achieve the district goals and objectives. Under the active involvements and directions of the

superintendent, the board places top priority in schedule planning and budget formulation. The board expects periodic evaluation reports.

The Role of the Administration

Otto (1974) in his writing about the role of the administration, declared that the central office should supply extensive support and facilitative services but with limited directions. A division to take proper care of in-service education programs should be created within the central office. The principal should play an active but not dominant role. The administrator's duty also lies in motivating teachers to be more committed to in-service programs and to make the necessary logistic arrangements to support the program. The central office, whenever possible, should take appropriate steps to defray the cost of the in-service education program.

The Role of Teachers

In order to make effective changes in the educational process, Otto (1974) commented that adequate time must be allowed for in-service training of teachers. He (Otto) further said that teachers should play significant roles in planning, organization, and evaluation. Teachers should be realistic and competent in handling the in-service training program. Piphon (1978) emphasized; "the most effective

minimum competency programs are those that the teachers can call their own. Teacher input is vital to success."

Ryans (1960) assumed a positive stand on the matter when he said:

Good teachers pave the way for an enlightened and productive society by communicating the skills needed to succeed in daily life. Poor teaching is the significant contribution of ignorance; misunderstanding, and intellectual and cultural stagnation (p. 416).

Teachers in the public schools will not only continue to be the most important factor in developing in-service education programs but also be responsible for implementing the program. Ryans (1960) conducted a relative study to teacher's role and concluded:

Both the lay public and professional educators generally agree that the 'goodness' of an educational program is determined to a large extent by the teacher. If competent teachers can be obtained, the likelihood of attaining desirable educational outcomes is substantiated. . . . If teachers are indifferent to their responsibilities the whole program is likely to be ineffective and largely wasted (p. 416).

As a result of the survey conducted by Otto (1974) in Connecticut about teachers' roles, Otto confirmed that "in Darien, Connecticut the teachers' association appointed an in-service committee to work with the administration."

Program Evaluation

An overall evaluation is necessary to monitor and refine a developing program. The task force, composed of skillful personnel should design and manage the program evaluation.

As a result of Carey and Marsh's (1980) findings on in-service education program evaluation, Carey and Marsh reported:

In addition to the overall evaluation, design materials must be developed to train inservice implementors to collect data relevant to each part of the program. Program implementors must learn what data to collect and how to collect, summarize, and report this information so that each activity in the new program can be monitored and refined until it is successful. It is the role of the total program evaluation team to collect information from all facets of the new program and to synthesize and interpret this data. This activity should be included in the overall evaluation design. Those assigned this responsibility should be already prepared or trained to accomplish it (p. 85).

For the personal evaluation of the in-service education see the Appendix.

Assumptions of the Study

For the purposes of this study, the basic assumptions were that the teachers involved in this study were representatives of the total population of public school teachers in Kansas. Furthermore, the teachers used in the survey had participated in in-service training at least once. It was a mere assumption to say that there was no significant difference between male and female teachers in instructional methodology after both of them had participated in in-service education effectiveness in terms of participation, attitudes, behavior, or proficiency.

A research study was conducted by Weinberg (1977) regarding teachers' attitudes and participation in in-service education, Weinberg reported:

The most basic problem of existing research on in-service training is the failure to study the practical classroom applications of findings. Typically a summer workshop is held: participants are pre-tested and post-tested: a positive change in attitudes may be recorded. This outcome is hailed as evidence of successful experience. But no effort is usually made to discover whether the classroom teacher acts any differently when he or she returns to the classroom (p. 240).

Significance of Study

Follow-up studies indicated that there is a positive relationship between teachers, administrators, paraprofessionals, and students after in-service training programs. An illustrative example came from Little (1981) when he contended that "in-service training must focus on collegiality, experimentation and organizational change for schools to successfully deal with the challenges confronted by them" (p. 27). Hopefully, through this study, the teachers' accountability problems, back to basics, and management by objectives will be solved.

Generally, Luke (1980), after his study on in-service education, wrote:

In-service education for teachers does not imply that learning more about teaching and learning more about learning is not a responsibility of all educators. Attention is focused on teachers because they comprised nearly sixty percent of the school staff. Teachers are most visible to the community and maintain the closest contact with students (p. 10).

In that capacity, teachers have the greatest responsibility for what students learn in the classroom.

Limitations of the Study

This study has several limiting factors in terms of making any generalizations. The researcher selected only a few schools in Kansas public schools and limited his questionnaires to teachers within those schools. The sample response of those teachers surveyed may or may not be a true representation of the opinion of public school teachers on in-service education. The questionnaires passed through the central office and principals before getting to the teachers. Responses from these teachers might have been different if the questionnaires were administered to the teachers by the researcher, himself. The problem of less than 100% return of the questionnaire coupled with the unwillingness of some respondents to provide as much information as was needed, tended to limit the accuracy of the study.

Definition of Terms

Several terms used in this study were defined or explained within the context of the study.

Accountability

Owen et al. (1978), defined accountability to mean being responsible for something. In educational settings, administrators and teachers are answerable for the quality of instruction and for students' achievements. Owen et al. (1977), further commented that on January 20, 1977, the New York Times published a story in which parents of a high

school graduate planned to sue their school district for \$5,000,000 for failure to give reasonable education to their son, though the son was awarded a diploma.

Development

Luke (1980) wrote that "in human terms, it (education) implies growth. Development may come about as much from maturation as from an organized educational program."

Education

Luke (1980) further said that education generally means a teacher-student interaction in which a change in behavior, attitude, or skill is the desired outcome.

In-Service

Luke (1980) defined in-service to mean learning that occurs after formal undergraduate teacher preparation has been completed. It can also be interpreted to mean "learning-on-the-job or learning-while-earning."

Teacher-Accountability

Owen (1978) defined teacher accountability to mean the tendency to place the responsibility for students' inadequacies or learning outcome entirely on the teacher.

Public Schools

Landau (1975) said that the public school is a school maintained by public funds for the free education of the

children of the community. The public school includes elementary, middle, junior high, and senior high school.

Summary

This review of related literature examined the organizational pattern, goals and objectives, roles of the administrators, and program evaluation of an in-service education. Johnson's (1981) article published in The School Administrator stated that "the key to the in-service programs, then, is the basic commitment to the principle of individual fulfillment both personal and professional."

In order to allow teachers to become not only professionalized, but more individualized in their teaching career, adequate time must be allowed for in-service training. Otto (1974) provided strong evidence on in-service education, when he wrote:

What has long been established in the industrial realm must be established in the educational realm--effective productive, change can best be effected by providing for in-service training on "company time" (p. 1).

Taken at face value, a miscellaneous number of reforms have been tried and have altered education in the public schools during the past quarter century. In-service education has offered public school teachers fine opportunity to be more competent in their fields of endeavor and has enabled them to know more about teaching while teaching or earning while learning.

Means, standard deviations, chi-square, and the analysis of variance computations were completed by using standard computer programs at Emporia State University, program USSTOV06 and USSTOCHI, developed and written by Roscoe (1963), were the specific tests or programs used.

Chapter 3

ANALYSIS OF THE DATA

This study was designed to investigate the major specific approaches toward an in-service education training program among public school teachers in Kansas. This chapter, in particular, consisted of the presentation and interpretation of data received from a questionnaire used to survey the attitudes of public school teachers in Kansas unified school districts regarding in-service education. The major areas of the analysis have been included: response analysis and statistical analysis. The response analysis deals with the background knowledge and attitudes of the public school teachers toward in-service education. The data analysis section treats vividly the statistical results found in the study.

Response Analysis

Originally, 250 questionnaires were delivered to public school teachers who were randomly selected. The public school teachers returned 187 questionnaires through their building principals and/or their central office. The 187 returned questionnaires represented 74.8 percent of the original sample size of 250. Forty-nine (26.2%) of the

respondents were males, whereas 131 (70.1%) were females. Seven (3.7%) of the respondents did not indicate their sex.

Furthermore, of the total respondents, 59 (29.4%) came from secondary schools, 41 (21.9%) from middle schools, and 89 (47.6%) from elementary schools. In addition, two (1.1%) respondents did not indicate the level they taught. The mean for teaching experience of these respondents was ten years. Regarding the statement in Table 2, the participants were asked to rank in order of importance the planning of an in-service education program. One-hundred forty-eight participants, 79.1 percent of the original sample size of 250, ranked teachers first in the hierarchy. The result of the responses further indicated that Curriculum Specialists/Specialist Teachers (21 or 11.2%) were second in order of importance. Finally, both principals (8 or 4.3%) and the central office (4 or 2.2%) were placed at the lower level of the continuum. However, six participants (3.2%) could not be used in this part of the response analysis as they could not respond to the statement. Table 1 showed that two respondents did not indicate their years of teaching experience.

The data in Table 2 indicate the responses given by the public school teachers regarding the planning of in-service education. A conclusion could therefore be drawn that teachers should play the dominant role in planning of an in-service education program.

Table 1
 Number of Questionnaires Received
 from Public School Teachers

I.D. No.	Respondents	Number of Returns	Percentage of Returns
1.	Number of questionnaires distributed was 250	187	74.8
2.	Male	49	26.2
3.	Female	131	70.1
4.	Sex not indicated	7	3.7
5.	Secondary	55	29.4
6.	Middle	41	21.9
7.	Elementary	89	47.6
8.	Teaching level not indicated	2	1.1
9.	0-4 years experience	19	10.2
10.	5-9 years experience	61	32.6
11.	10-19 years experience	76	40.6
12.	20 years or over	29	15.5
13.	Years of teaching experience not indicated	2	1.1

Table 2

Ranking in Order of Importance (1 = Most Importance, Through 4 = Least Importance) the Planning of an In-Service Education Program

I.D. No.	Item Description	Number of Scores	Percentage of Scores
1.	Teacher	148	79.1
2.	Curriculum Specialists/ Specialist Teachers	21	11.2
3.	Principals	8	4.3
4.	Central Administration	4	2.2
5.	No response	6	3.2
	Total	187	100.0

Of the 187 respondents, 126 (67.4%) said that planning of in-service education should focus on curriculum development, while 29 (15.5%) favored an in-service education which deals with behavioral objectives. Thirty-two (17.1%) did not respond to the statement.

Whereas the data in Table 3 indicate a summary of Part II of the questionnaire, Table 4 is a conclusion of the responses of the public school teachers. According to this table, the most popular opinion in Part III of the questionnaires was that teachers should have the major input in determining in-service education programs.

Table 3

Responses to Each Topic According to the Degree of Interest: 1 = I Have No Interest; 2 = I Have Some Interest; 3 = I Have Much Interest

Item No.	Item Description	No 1	Some 2	Much 3	Total Respondents
1.	Students' Motivation	1 (0.6%)	24 (12.8%)	164 (86.6%)	187
2.	In-Service Teacher Training	34 (18.2%)	114 (60.9%)	39 (20.9%)	187
3.	Individualized Teaching and Learning	17 (9.2%)	101 (54.0%)	69 (36.9%)	187
4.	Professional Meetings	51 (27.3%)	107 (54.2%)	29 (15.6%)	187
5.	Dealing with Individual Differences	7 (3.7%)	83 (44.4%)	97 (51.9%)	187
6.	Teacher-Made Tests and Evaluation Procedures	28 (14.9%)	111 (59.4%)	48 (25.7%)	187
7.	Impact of In-Service Training in the Classroom	49 (26.2%)	31 (16.6%)	107 (57.2%)	187

Table 4

A Conclusion of the Responses of the Public School Teachers

I.D. No.	Item Description	SA	A	N	D	SD	Total Respond- ents
8.	Teachers should have major input in determining what their in-service education should be.	116 (62.0%)	61 (32.6%)	5 (2.7%)	3 (1.6%)	2 (1.1%)	187
9.	In-service education is of little value to me.	21 (11.2%)	43 (23.0%)	49 (26.2%)	65 (34.8%)	9 (4.8%)	187
10.	I like the planning of the in-service teacher training program.	7 (3.7%)	35 (18.7%)	95 (50.8%)	33 (17.7%)	17 (9.1%)	187
11.	In-service education is the basic individual fulfillment	5 (2.7%)	30 (16.0%)	58 (31.0%)	58 (31.0%)	36 (19.3%)	187
12.	In-service education is the integral part of program improvement.	13 (7.0%)	87 (46.5%)	36 (19.2%)	38 (20.3%)	13 (7.0%)	187

Table 4 (continued)

I.D. No.	Item Description	SA	A	N	D	SD	Total Respond- ents
13.	In-service provides the opportunity to share information and ideas.	40 (21.4%)	99 (52.9%)	19 (10.2%)	23 (12.3%)	6 (3.2%)	187
14.	I am interested in planning an in-service program.	16 (8.6%)	47 (25.1%)	76 (40.6%)	29 (15.5%)	19 (10.2%)	187
15.	In-service education does benefit the classroom teacher.	14 (7.5%)	80 (42.8%)	59 (31.5%)	20 (10.7%)	14 (7.5%)	187

In addition to Tables 1 through 4 which represent the responses given by public school teachers to the statements on the attitude questionnaire, teachers were given the opportunity to make observations and specific suggestions which they felt would be very useful for in-service education programs. Such representative comments are found in Appendix C of this study.

Statistical Analysis

This section deals with the presentation and interpretation of the data collected from public school teachers. Furthermore, the results of the statistical analysis are included. Fifteen item descriptions or statements were used in this statistical analysis. The first seven (Items 1-7) in statements in Table 3 had approximately three responses each, while the last eight (Items 8-15) in Table 4 had five possible responses each.

Hypothesis One (H_01)

The first hypothesis (H_01) of this study was: There is no significant difference in the perceived attitudes of elementary (E), middle school (M), and secondary (S) teachers regarding the effectiveness of in-service programs as measured by their total score to the questionnaire.

The one-way analysis of variance (ANOVA) was used (Table 5) to determine if there was a significant difference between the means of these three groups (elementary, middle

school, and secondary school teachers). Elementary (mean = 37.20) teachers were the most positive regarding in-service programs, while the middle school (mean = 36.46) and secondary (mean = 36.44) teachers were less positive.

Table 5

ANOVA Summary Table of Elementary, Middle School,
and Secondary Teachers in their Perception
of In-Service Programs

Source	df	Sum of Squares	Mean Square	F
Between Groups	2	21.63	10.81	0.60*
Within Groups	179	3,224.31	18.01	
Total	181	3,245.94		

* Not significant

An F-ratio of 0.60 was needed to reject the null hypothesis at the .05 level of significance, since the obtained F-value of 0.60 did not fall in the critical region the null hypothesis was retained,

$$\underline{F} (2,179) = 0.60, \underline{p} > .05$$

Level of Teaching

However, a chi-square test was also utilized to determine if there was a significant relationship between the teachers' level of teaching and the manner in which they responded to each of the fifteen items. Item #5 did reveal

a significant relationship with respect to the level of teaching (Table 6).

Table 6
Chi-Square and Contingency Coefficient Value
for Level of Teaching
Item #5

Statement	Much Interest	Some Interest	No Interest
Dealing with individual differences	<u>Elementary</u>		
	2.0*	30.0	22.0
	(2.1)**	(21.3)	(30.6)
	<u>Middle School</u>		
	4.0	17.0	18.0
	(1.5)	(15.4)	(22.1)
	<u>Secondary</u>		
	1.0	24.0	62.0
	(3.4)	(34.3)	(49.3)
Total	7.0 (12.0)	71.0 (71.0)	102.0 (102.0)

* O_f = Observed frequencies

N = 179

** E_f = Expected frequencies

χ^2 = 2.8696

df = 4

C = 0.1256

The chi-square criteria were used to determine if a relation existed. A chi-square value of 9.49 was needed to reject the null hypothesis (item analysis) at the .05 level of significance, while a chi-square value greater than or equal to 13.3 was needed at the .01 level. Since the obtained chi-square value of 2.8696 did fall within the

critical region it revealed that the level of teaching was related to the responses for Item #5 (dealing with individual differences) even though the null hypothesis was retained.

Hypothesis Two (H_02)

In this study Hypothesis Two was stated: There is no significant difference in the perceived attitudes of male (M) and female (F) teachers regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire.

The one-way analysis of variance (ANOVA) was used to determine if there was a significant difference between the means of these two groups (male and female teachers). According to the data in Table 7, female (mean = 36.70) teachers were more positive while male (mean = 36.65) were less positive in determining what their in-service education should be.

Table 7

ANOVA Summary Table of Male and Female Teachers in their Perception of In-Service Education

Source	df	Sum of Squares	Mean Square	F
Between groups	1	0.1250	0.1250	0.0069*
Within groups	175	3,152.2500	18.0128	
Total	176	3,152.3750		

* Not significant

An F -ratio of 0.0069 was needed to reject the null hypothesis at the .05 level of significance. Since the obtained F -value of 0.0069 did not fall in the critical region the null hypothesis was retained.

Furthermore, a chi-square test was also performed (Table 8) to determine if there was a significant relationship between male and female teachers regarding their perception of in-service education programs and the manner in which they responded to each of the fifteen items. Items #8 and #12 did reveal a significant relationship with respect to the level of teaching and focus on in-service education.

Table 8

Chi-Square and Contingency Coefficient Values
Determined from Male and Female Teachers
Concerning Item #8

Statement	SA	A	N	D	SD
Teachers should have the major input in determining what their in-service education should be.	<u>Male</u> 5.0*	20.0	12.0	7.0	0.0
	(4.8)**	(10.9)	(12.2)	(15.0)	(1.0)
	<u>Female</u> 14.0	23.0	36.0	59.0	4.0
	(14.2)	(32.1)	(35.8)	(44.0)	(3.0)
Total	19.0 (19.0)	43.0 (43.0)	36.0 (48.0)	59.0 (59.0)	4.0 (4.0)

* O_f = Observed frequencies

$N = 161$

** E_f = Expected frequencies

$\chi^2 = 17.1784$

df = 4

$C = 0.3105$

Using four degrees of freedom ($df = 4$) to show a significant relationship at the .05 level of significance, a table value of $\chi^2 \geq 9.49$ was needed while a chi-square value greater than or equal to 13.3 was needed at the .01 level. The obtained chi-square value for this table (Table 8) was determined to be 17.1784. The observed frequencies did not differ significantly from the expected frequencies, thus, the null hypothesis was retained.

Hypothesis Three (H_03)

The third hypothesis of this study was stated thus: There is no significant difference in the perceived attitudes of teachers having 0-4 years, 5-9 years, 10-19 years, and 20 or above years experience regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire.

The one-way analysis of variance (ANOVA) was used (Table 9) to determine if there was a significant difference between the means of these four groups (0-4 years, 5-9 years, 10-19 years, and 20 or above years of teaching experience).

According to this analysis teachers with 20 or above years (mean = 37.82) and those with 5-9 years (mean = 36.62) of teaching experience were the most positive regarding in-service education. Teachers with 10-19 years (mean = 36.50) and those with 0-4 years (mean = 36.00) of teaching experience were less positive.

Table 9

ANOVA Summary Table of Teaching Experience of
Public School Teachers Regarding their
Perception of In-Service Education

Source	df	Sum of Squares	Mean Square	<u>F</u>
Between groups	3	47.8750	15.9583	0.8970*
Within groups	177	3,148.8125	17.7899	
Total	180	3,196.6875		

* Not significant

An F-ratio of 0.8970 was needed to reject the null hypothesis at the .05 level of significance. The obtained F-ratio of 0.8970 did not fall in the critical region, hence, the null hypothesis was accepted.

Furthermore, chi-square criteria were also performed to determine if a significant difference existed. The data responses (Items #7, #8, #9, #12 and #15), relating to public school teachers' years of teaching experience yielded no significant difference at the .05 level of significance (Table 10).

Using twelve degrees of freedom ($df = 12$) to show a significant relationship at the .05 level of significance, a table value of $\chi^2 \geq 21.0$ was needed. The obtained chi-square value for this table (Table 11) was determined to be 21.5846. However, the observed frequencies did not differ

Table 10

Chi-Square and Contingency Coefficient Value of Teaching Experience of Public
School Teachers Regarding their Perception of In-Service Education

Statement	Much Interest	Some Interest	No Interest	df	χ^2	C
Impact of in-service training in the classroom.	<u>0-4 Years</u>					
	* O_f : 4.0	12.0	3.0	6	12.7547	0.0658
	** E_f : 4.8	11.0	3.1			
	<u>5-9 Years</u>					
	O_f : 18.0	28.0	14.0			
	E_f : 15.2	34.8	9.9			
	<u>10-19 Years</u>					
	O_f : 20.0	49.0	5.0			
	E_f : 18.8	42.9	12.3			
	<u>20 or More Years</u>					
	O_f : 4.0	16.0	8.0			
	E_f : 7.1	16.2	4.6			
	Total	46.0	105.0	30.0	(N = 181)	

* O_f = Observed frequencies

** E_f = Expected frequencies

Table 11

Chi-Square and Contingency Coefficient Value of Teaching Experience of Public
School Teachers Regarding their Perception of In-Service Education

Statement	SA	A	N	D	SD	df	χ^2	C	
In-service education is an integral part of program improvements.	<u>0-4 Years</u>								
	* O_f :	11.0	6.0	2.0	0.0	0.0	12	21.5846	0.1070
	** E_f :	12.0	6.0	0.6	0.2	0.1			
	<u>5-9 Years</u>								
	O_f :	44.0	14.0	1.0	1.0	0.0			
	E_f :	38.0	19.0	2.0	0.7	0.3			
	<u>10-19 Years</u>								
	O_f :	48.0	21.0	3.0	1.0	0.0			
	E_f :	46.2	23.1	2.4	0.8	0.4			
	<u>20 or More Years</u>								
O_f :	11.0	16.0	0.0	0.0	1.0				
E_f :	17.7	8.9	0.9	0.3	0.2				
Total	114.0	57.0	6.0	2.0	1.0		(N = 180)		

* O_f = Observed frequencies

** E_f = Expected frequencies

significantly from the expected frequencies, hence the null hypothesis was upheld. The statistical analyses of Items #7, #8, #9, #12, and #15 have been consolidated in Tables 10 and 11 of this study.

Hypothesis Four (H_{04})

The last yet not the least hypothesis in this study was: There is no significant difference between the perceived attitudes of teachers who favor in-service education focusing on curriculum development and methodology and teachers favoring a focus on the development of behavioral objectives.

The one-way analysis of variance (ANOVA) was used to determine if there was a significant difference between the means of these two groups of teachers, i.e., teachers who favored in-service education with emphasis on curriculum development and methodology, and teachers favoring a focus on the development of behavioral objectives. According to the ANOVA summary, Table 12 of this item analysis, teachers who favored in-service education with a development of behavioral objectives (mean = 52.76) were more positive than teachers on curriculum development and methodology (mean = 48.25).

A F -ratio of 0.5904 was needed to reject the null hypothesis at the .05 level of significance. Since the obtained F -value of 0.5904 did not fall in the critical region the null hypothesis was retained.

Table 12

ANOVA Summary Table Concerning Focus
of Teachers In-Service Education

Source	df	Sum of Squares	Mean Square	<u>F</u>
Between groups	1	478.4375	478.4375	0.5904*
Within groups	153	123,995.1875	810.4260	
Total	154	124,473.6250		

* Not significant

Focus of Teachers In-Service Education

However, a chi-square test was also utilized to determine if a significant relationship existed between teachers who favored in-service education focusing on curriculum development and methodology, and those (teachers) favoring development of behavioral objectives. Items #4, #10, and #13 did reveal a significant relationship regarding a focus of teachers in-service (Table 13).

A chi-square value of 2.1617 was obtained from the statistical analysis of Item 13. Using four degrees of freedom (df = 4), a table value of $\chi^2 \geq 9.49$ was needed to reject the null hypothesis (item analysis) at the .05 level of significance while a chi-square value greater than or equal to 13.3 was needed at the .01 level.

Table 13

Chi-Square and Contingency Coefficient Values
for a Focus of Teacher In-Service
Education, Item #4

Respondents	Much Interest	Some Interest	No Interest	Total
Teachers favoring curriculum develop- ment and methodology.	11.0* (11.4)**	67.0 (69.1)	48.0 (45.5)	126.0
Teachers favoring development of behavioral objectives.	3.0 (2.6)	18.0 (15.9)	8.0 (10.5)	29.0
Total	14.0	85.0	56.0	155.0

* O_f = Observed frequencies

N = 155

** E_f = Expected frequencies

$\chi^2 = 1.1287$

df = 2

C = 0.0850

Since the obtained chi-square value of 2.1617 did not fall within the critical region, regarding the responses for Item #13, the null hypothesis was retained (Table 14). In this case, the degree of relationship between the independent variable (perceived attitudes of teachers) and the dependent variable (their responses to Items #4 and #13) was determined by the contingency coefficient values of 0.0850 (C = 0.0850) and 0.1299 (C = 0.1299) respectively.

According to the information provided in Tables 13 and 14, a greater number of teachers tended to like in-service

Table 14

Chi-Square and Contingency Coefficient Values
for a Focus of Teacher In-Service
Education, Item #13

Respondents	SA	A	N	D	SD	Total
Teachers favoring curriculum development and methodology.	1.0* (1.7)**	3.0 (3.3)	22.0 (22.5)	38.0 (36.7)	41.0 (40.8)	105.0
Teachers favoring development of behavioral objectives.	1.0 (0.3)	1.0 (0.7)	5.0 (4.5)	6.0 (7.3)	8.0 (8.2)	21.0
Total	2.0	4.0	27.0	49.0	44.0	126.0

* O_f = Observed frequencies

N = 126

** E_f = Expected frequencies

$\chi^2 = 2.1617$

df = 4

C = 0.1299

education which focused on development of behavioral objectives. In conclusion, in-service education provides the opportunity to share information and ideas. In-service education is advantageous for participating teachers. Public school teachers tend to dislike an in-service training which yields no positive results, knowing very well that in-service training is an effective means of improving instructional procedure and development of behavioral objectives.

Chapter 4

FINDINGS AND INTERPRETATIONS

This study, as the name implies, "In-Service Education Among Public School Teachers in Kansas" was designed to investigate the needs of in-service education training to public school teachers in Kansas. The study was designed to investigate the attitudes of public school teachers toward in-service education training in Kansas unified school districts. A 20-item attitude questionnaire was developed and distributed to 250 randomly selected public school teachers. A return of 187 (74.8%) of the original sample size was realized.

For the analysis of data, comparisons were made using chi-square. Chi-square value was used to determine if any significant difference existed. In addition, the contingency coefficient value was calculated to determine the relationship between the variables. With regard to the number of teachers who will be willing to help in planning in-service education programs, the data in Table 4, Item 14 of page 38 showed that 187 teachers responded to the statement. Of this number, 16 (8.6%) strongly agreed, 47 (25.1%) agreed, 76 (40.6%) did not make their opinion known. Furthermore, while 29 (15.5%) disagreed to the statement, 14 (7.5%) responded "strongly disagree." As reflected in this table,

it is observable that the neutrality of 76 (40.6%) teachers in making their opinions known posed a great problem in analyzing the data.

At the onset of this study, the four null hypotheses generated were:

1. There is no significant difference in the perceived attitudes of elementary (E), middle school (M), and secondary (S) teachers regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire.

2. There is no significant difference in the perceived attitudes of male (M) and female (F) teachers regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire.

3. There is no significant difference in the perceived attitudes of teachers having 0-4 years, 5-9 years, 10-19 years, and 20 or above years experience regarding the effectiveness of in-service programs as measured by their total score responses to the questionnaire.

4. There is no significant difference between the perceived attitudes of teachers who favor in-service education focusing on curriculum development and methodology (CDM) and teachers favoring a focus on the development of behavioral objectives (DBO).

All four hypotheses were retained that in-service education training helps not only the elementary but also the secondary school teachers to be more creative and

productive with expertise in instructional program procedures. In the past decades, male and female teachers have made significant improvements in their instructional procedure due to the ongoing in-service training program. Both of them have contributed a great deal in their own respective fields of endeavor.

The public school teachers showed the greatest degree of interest in the following three statements.

1. Teachers should have the major input in determining what their in-service education should be (statement 8). Of 187 respondents, 116 (62.0%) and 61 (32.6%) responded "strongly agree" and "agree" respectively. As reflected in Table 4, 177 (94.7%) favored the statement (statement 8).

2. In-service education provides the opportunity to share ideas and information (statement 13). Of the 187 respondents, 139 (74.3%) favored the statement and 29 (15.5%) did not. The next favored statement was:

3. Please rank in order to importance (1 = most important, through 4 = least important) in planning an in-service education program. ___ teachers, ___ principals, ___ central administration, and ___ Curriculum Specialist/Specialist Teacher.

A majority of the respondents (148 or 79.1%) ranked teachers as the most important and the central office (4 or 2.2%) as the least important. According to this analysis, the central office should be committed in the planning of

the in-service program but should not play a dominant role. Teachers should be allowed to play the dominant roles.

When Roe and Drake (1980) were writing about in-service education, especially on what they called "The Teacher Center," Roe and Drake emphatically stated:

One of the maturing concepts in in-service education is the teacher center. Teacher-center education is rooted in the philosophy that a professional person can and should exercise responsibly the initiative for his or her own personal and professional development. The center is a central informal work place where teachers may meet together on their own to generate ideas, information, and materials to help them with their own classroom. . . . However, from the sharing of ideas and the identification of needs, programs may develop such as brain-storming sessions, interest groups, workshops, demonstrations, and even specially arranged seminars and workshops (p. 277).

A strong flexible in-service education program should aim at encouraging teachers to overcome their teaching deficiencies and utilize their potentialities.

Recommendations for Further Research

The results and conclusions of this study are the basis for the following recommendations. If the in-service education program rests upon the desire to improve the quality of instructional program procedures, the public school teachers' understanding of the aims and objectives of the in-service education must be increased. Public school teachers should not only reassess their attitudes toward in-service education, but may work in partnership with their building principals.

It would seem wise to determine the attitudes of the building principals and the paraprofessionals toward the

in-service education program. There should be further assessment of the roles and involvements of the community and the school board concerning in-service education.

The administrators should not forget to meet with the teachers to identify what is to be achieved within the school district. Goals and means of achieving the objectives should be clearly identified. In-service education of teachers should be an ongoing process.

There should be further research to ascertain reasons for the elicited responses: (1) teachers view in-service as an inconvenience, (2) in-service also seems a farce in light of the additional racquet ball games (male faculty and administration) that get played that day, and (3) in-service looks good only on paper.

It is important that teachers and administrators have a good understanding and favorable attitudes toward implementation of in-service education programs. It is no mere literalism, but a matter of fact, that teachers, administrators, and the community may work in partnership. By working together, we may be able to accomplish more than we have achieved in the past in the educational process.

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APPENDIXES

APPENDIX A

A Letter to the Principal

1119 Merchant #11
Emporia, Kansas 66801
February 8, 1983

Dear Principal:


I am currently working on a thesis for Master's Degree in Educational Administration from Emporia State University. My research problem is concerned with "Inservice Education Among Public School Teachers." It is my wish that you will be willing to assist me in collecting data for my research.

For this purpose one hundred copies of a questionnaire are in this envelope. This questionnaire is designed to sample the opinion of public school teachers about in-service education needs in our public schools. The teachers or evaluators must have attended an in-service teacher training program at least once during their employment period.

I know this time of the year is always a very busy period for you and your teachers, therefore the questionnaire is designed in the simplest form to take a minimum of their time. I'll assure you that all responses will be kept confidential and analyzed in grouping only. The name of the teacher-evaluators will be kept anonymous and in no case will their personal responses be discussed with anyone else.

Would you please, as a matter of urgency, get teachers from your school to complete and return the questionnaires to you on or before the end of this month. I shall come to your office in person to collect the questionnaires.

Your cooperation is greatly appreciated.

Sincerely yours,


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APPENDIX B

A Twenty-Item Questionnaire

QUESTIONNAIRE

I

Please check the appropriate space below by identifying your position and instructional level in the school.

How many years of teaching experience do you have?

0-4 years 5-9 years 10-19 years 20 or above

What level do you teach? Secondary Middle Elementary

Sex? Male Female

Please rank in order of importance (1 = most important through 4 = least important) in planning an in-service education program.

Teachers Principals Central Administration Curriculum Specialists/
Specialist Teachers

Teachers' in-service education should focus on:

Curriculum development and methodology Development of behavioral objectives

II

Please respond to each topic by circling the appropriate space according to your degree of interest: 1 = I have no interest, 2 = I have some interest, 3 = I have much interest.

	<u>No</u>	<u>Some</u>	<u>Much</u>		<u>No</u>	<u>Some</u>	<u>Much</u>
Motivation of students' interests	1	2	3	5. Dealing with individual differences	1	2	3
In-service teacher training	1	2	3	6. Teacher-made tests and evaluation procedures	1	2	3
Individualized teaching and learning	1	2	3	7. Impact of inservice training in the classroom	1	2	3
Professional meetings	1	2	3				

III

Please indicate your level of agreement or disagreement with each statement by using the following scale and circling your response to each sentence.

Strongly Agree; A = Agree; N = Neutral or No Decision; D = Disagree; SD = Strongly Disagree

Teachers should have the major input in determining what their in-service education program should be.	SA	A	N	D	SD
In-service education is of little value to me.	SA	A	N	D	SD
I like the planning of the in-service Teacher Training Program.	SA	A	N	D	SD
In-service education is the basic individual fulfillment.	SA	A	N	D	SD
In-service education is an integral part of program improvement change.	SA	A	N	D	SD
In-service education provides the opportunity to share information and ideas.	SA	A	N	D	SD
I am interested in helping plan in-service programs.	SA	A	N	D	SD
In-service education does benefit the classroom teacher.	SA	A	N	D	SD

If you wish to write more additional comments, please do not hesitate to do so.

Thanks for your time and cooperation.

APPENDIX C

Comments and Suggestions from
Public School Teachers

The following comments and suggestions were made by some of the public school teachers who participated in the attitude questionnaire.

Elementary

Grade level meetings are very useful, but are not held frequently. Elementary teachers need more grade level meetings to swap ideas and discuss problems and solutions. Grade level in-services would probably be most beneficial.

I feel that not every quarter should have an out of classroom in-service meeting. For example, at conference times, more time is needed in the classroom to prepare for these. I would suggest subject area meetings and meetings of special teachers.

In-service days are preplanned and usually not by request of teachers. Full attention would be given to planning for children or classroom instead of an organized in-service.

Middle School

In-service education is beneficial when there is teacher input as to the program and when it is used. Many a time, input occurs but it is ignored by administration. Teachers know their needs.

I feel that we should have input into the subjects covered and types of meetings. Time to plan is difficult to find.

In-service education is of little value to me, as it is in our district. In-service education does not benefit the classroom teacher.

Secondary School

Teachers resent in-service that is busy work. They want a work day. In-service education should be an integral part of program improvement change, if teachers are given adequate in-service to initiate any changes.

We have had a teacher administration committee to plan in-service but somehow the teachers' ideas always seem to be buried and lost.

Usually, teachers view in-service as an inconvenience, as they are trying to figure grades and fill out grade cards. Therefore, their attention is divided. In-service also seems a farce in light of the additional racquet ball-games (male faculty and administration) that get played that day. In-service looks good on paper.