THE EFFECTS OF AN EDUCATION SERVICE CENTER CURRICULUM

STUDY ON TEACHER PARTICIPANT ATTITUDES

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THE EFFECTS OF AN EDUCATION SERVICE CENTER CURRICULUM
STUDY ON TEACHER PARTICIPANT ATTITUDES

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By

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CHAPTER I

INTRODUCTION TO THE PROBLEM

Education Service Centers in Texas, since their establishment in March, 1967, have attempted to provide school districts across the state with a wide variety of educational services. One service being provided by the Region IX Education Service Center in Wichita Falls, Texas, is what James C. McBride, Executive Director, calls a "curriculum study" (4).

One of the purposes of the curriculum study—a form of inservice education—as McBride sees it, is "to help teachers examine some innovative concepts and teaching techniques that have proved successful elsewhere" (4, p. 2). The curriculum study also attempts to help teachers "examine the concepts to be taught, the materials to be used, and the activities to be engaged in" (4, p. 2).

The demand for these curriculum studies is brought about by the belief among school superintendents that this form of inservice training will in some manner prove beneficial to the school district. The expectation is that faculty examination of innovative concepts, teaching techniques, concepts to be taught, materials to be used, and activities to be engaged in will result in some degree of change in the teaching staff. For instance, a better understanding of
techniques, materials, and concepts in teaching might produce a somewhat better teacher; or it might, on the other hand, produce a negative attitude from the teacher because a teacher who resents being forced to participate in any form of inservice training might have an increased anxiety level as a result of the study.

Tension and feeling are important influences affecting group learning (7), and although competencies and skills are an important result of the educational process, other important outcomes include "the needs, feelings, and goals of the learners and participants" (7, p. 284). The educational classroom leader, the teacher, may become a better leader as a result of a study of the curriculum, but if the study has forced his anxiety level to increase sharply the teacher may be a weakened leader, for there is evidence that high or low extremes of anxiety can be significantly correlated with failure and lack of confidence (8).

An increased appreciation of the curriculum study as a worthwhile inservice procedure may well be a result of the curriculum study, but on the other hand, it may cause teachers to resent this form of inservice education. Whether it produces positive or negative results, the curriculum study, as perceived by members of the Region IX Education Service Center, is an attempt at bringing about changes in a school faculty. However:

Change is painful—we are always more comfortable with what we know and with what we can do best.
But the world in which we live is in constant change; no two periods are the same. We find a solution that works. After the solution will come another problem (2, p. 6).

Resistance to change is a well established characteristic of American educators. As far back as 1870, a teacher was so upset over the changes taking place in the classroom that he was moved to declare

The old-time schoolhouse . . . is giving place to finer buildings . . . we have improved desks and settees, improved maps and charts, improved slates and globes, and improved textbooks. . . . We are certainly far in advance of anything in our past, and are said to be far in advance of other nations.

But just here, it seems to me, in the line of our greatest excellence, lies our greatest defect and our greatest danger. In looking so closely after the mechanism of education, we have lost something of the life and spirit of our teaching. Our methods are . . . mechanical and superficial. . . . So long as people like showy mechanism in our schools, so long they will have it (1, p. 28).

Educational resistance to change, no doubt, began before the 1800's and has continued to the present. Reducing this resistance to change is one hopeful outcome of the curriculum study. However, there is reason to doubt whether the curriculum study actually brings about reduced resistance to change in teachers or any measurable change whatsoever. In fact, such a study, though it is often thought to be a means of reducing faculty resistance to any proposal of rationally grounded change, may actually bring about increased resistance to any type of change.
Purpose of the Study

Inservice education in many forms, including the curriculum study, has been utilized as a means of effecting faculty change. In carefully examining objectives and techniques through a curriculum study, the faculty is expected to undergo changes in attitude toward teaching procedures and become less resistant to new educational concepts. Knowing that resistance to change is a long-standing characteristic of American educators, however, raises doubts that a curriculum study has any effect on teachers; thus there is doubt concerning the worthwhile nature of the curriculum study. Therefore, the purposes of this study were threefold: (1) to test the assumption that a curriculum study produces change in a school faculty in conservatism-radicalism, in anxiety, in leadership behavior, and in attitude toward the curriculum study; (2) to investigate the relationships between effects of a curriculum study on conservatism-radicalism, anxiety, leadership behavior, attitude toward the curriculum study and age, sex, and years of teaching experience of the teachers; and (3) to create a model from which replications can be made by Texas Education Service Centers.

Statement of the Problem

Previous studies have dealt with teacher attitudes regarding different forms of inservice education, and there
have been studies concerned with conservatism-radicalism, while others have dealt with leadership behavior, and still others with teacher anxiety. It has been shown that most teachers favor some type of inservice education (5), and there have been studies that indicate that the degree of conservatism or radicalism in an individual is subject to change (6); other studies have shown that leadership is desirable or perhaps necessary for effective learning (9); still other studies indicate that extremes of anxiety can affect the degree of learning (8).

The problem in this study was to determine whether changes result in four areas as a result of the methods employed in a Region IX Education Service Center curriculum study. The four areas of concern were (1) degree of conservatism-radicalism in the faculty, (2) degree of anxiety in the faculty, (3) degree of leadership behavior in the faculty, and (4) attitude of the faculty toward a curriculum study.

A subproblem for which no hypotheses were stated was the determination of relationships between the four areas of concern and the age, sex, and years of teaching experience of the participants.

Hypotheses

Changes resulting from a Region IX Education Service Center faculty curriculum study were investigated with
respect to conservatism-radicalism, anxiety, leadership behavior, and attitude toward a curriculum study. The following hypotheses were tested in this study:

I. There will be an increase in radicalism measured on the C-R Opinionnaire scale following a curriculum study.

II. There will be a decrease in anxiety measured on the IPAT Anxiety Scale following a curriculum study.

III. There will be an increase in leadership behavior measured on the Guilford-Holley L Inventory following a curriculum study.

IV. There will be a more favorable attitude toward a curriculum study measured on the Scale for Measuring Attitudes Toward any Practice following a curriculum study.

TABLE I

REPRESENTATION OF EXPECTED CHANGES IN ALL FOUR HYPOTHESES

<table>
<thead>
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<td>Decrease</td>
<td>Increase</td>
<td>Increase</td>
</tr>
<tr>
<td>Control Faculty</td>
<td>No Change</td>
<td>No Change</td>
<td>No Change</td>
<td>No Change</td>
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Definition of Terms

1. Attitude—a frame of mind, as distinguished from a practice.
2. Curriculum study--type of inservice training performed by the Region IX Education Service Center. See Appendix for more complete description.

3. Faculty--all members of a school district holding professional certificates, including teachers and administrators.

4. Region IX--an area in north Texas, comprising twelve counties, including Montague, Jack, Clay, Young, Archer, Wichita, Throckmorton, Baylor, Wilbarger, Knox, Foard, and Hardeman counties.

5. Teachers--used here, the meaning is synonymous with "faculty," except when the distinction is being made between the classroom teacher who performs teaching duties and the school administrator who does not perform teaching duties.

6. Radicalism--favoring change; favoring the new; the extent to which one strives for new values; desire for changes of a deep-rooted or fundamental nature. The radical believes in both the desirability and the possibility of change, both drastic and speedy. He says we cannot have progress without change, and he thinks that things could be better (3).

7. Conservatism--opposition to change; conservation of the old; the extent to which one is found among the conservers of the old values; skepticism as to the probability, not to say possibility, of change and unwillingness to invest time or energy in an attempt to bring about change. The
conservative insists on making progress slowly. He accepts the concept of conservatism as "the balance wheel of progress." He says change does not necessarily mean progress, and he thinks things could be worse (3).

Limitations of the Study

1. This study, in attempting to detect changes, was subject to the limitation imposed by any measurement instrument; detection of change was limited to whatever types of change the measurement instrument was capable of detecting.

2. This study was limited in the selection of subjects to teachers of school districts in Region IX whose superintendents volunteered the teachers to take part in the experiment.

3. This study was limited to a choice of relatively small school districts because of the sparseness of population in Region IX.

Basic Assumptions

1. It was assumed that such a study must necessarily be limited, and that many facets of concern to this study were left untouched.

2. It was assumed that there was value in the detection of certain changes due to the experimental treatment, even if other meaningful changes were overlooked.
3. It was assumed that the instruments chosen for measurements were adequate to accomplish the purpose for which they were intended.
CHAPTER BIBLIOGRAPHY


CHAPTER II

SURVEY OF THE LITERATURE

In 1965, the Fifty-Ninth Texas Legislature enacted legislation authorizing the State Board of Education to establish state-supported regional media centers by September, 1967. About the same time that this legislation was passed, Congress enacted the Elementary and Secondary Education Act, one part of which, Title III, provides for planning and developing supplementary educational centers and services.

The Texas Education Agency, which administered the state's responsibility for Title III, very early made a decision that coordination between these centers and services and Texas' own regional media centers would strengthen services available to all schools. In addition, such coordination would provide the machinery—the Education Service Center—for involving all schools, large and small, in educational planning for the state.

The concept of regional centers was then expanded to include not only media services but also a broad range of other services needed by local school districts. At its March, 1967, meeting, the State Board of Education approved the state plan for the establishment of education service centers (33).
Inservice Education through the Curriculum Study

The Education Service Centers soon found themselves offering assistance in many areas to school districts across the state. The curriculum study was one type of inservice education for which there was a demand.

According to a study made by the N.E.A. Research Division, most school teachers were in favor of some type of inservice education (31) to keep up with the many new innovations, concepts, and procedures in today's fast changing educational world. In another study (30), the N.E.A. found that schools with poor inservice education programs also had poor boards of education, a poor curriculum, and an incompetent superintendent.

"One of the most challenging and persistent problems faced by educators is the development of means for the professional improvement of teachers within local school systems" (4, p. 205).

Robert H. Anderson (4) evaluated a three-year inservice program which combined workshops, child-study groups, cooperative curriculum study, and the use of university consultants and resource people in various areas of the school program. He found that teachers involved in the inservice program made numerically higher scores on The Purdue Teachers Examination, the What Should Our Schools Do? questionnaire, the School Practices Questionnaire, and an
evaluation questionnaire. Anderson found few perceptible differences between the experimental and the control group concerning the factors of age, professional training, and teaching experience. In fact, none of his findings proved statistically significant.

An outstanding need in the field of education is for the critical objective analysis of the effectiveness of particular techniques which are employed in the in-service education of teachers (4, p. 213).

Anderson recommended that the administrative group as well as regular teachers and teachers of special subjects should be included in future studies to make the sample more representative of teaching staffs in general. He also noted that

The slight evidence of progress which was uncovered in some areas contributes toward the generalization that teacher attitudes and practices can be improved through cooperative in-service procedures. It is apparent that such improvement is slow and requires continuous sustained focused effort on the part of the teachers concerned (4, p. 212).

Wrightstone and others (45) found that after applying sociometric techniques to a group of teachers in an inservice program, the experimental group showed 80 percent greater gains than the control group in an intra-staff acceptability score.

Perkins (37) showed that teachers who were involved in a child-study program learned more through the group process than those teachers in leader-centered groups.
Cooperative study programs are among the accepted methods of in-service education of teachers. Cities, counties, and even states have adopted cooperative study programs of one type or another as effective techniques in curriculum development. Those conducting the cooperative studies have sometimes made almost fantastic claims as to their values in in-service programs. Many people interested in the furthering of education have questioned the value of such procedures. Some have seriously questioned the tangible values resulting from the so-called cooperative efforts where teachers get together to discuss their own curriculum problems (17, p. 695).

Attitudinal Changes

Teacher attitude studies have been conducted in connection with a number of in-service education programs. Emans (17, p. 702) recommended additional research in an effort to evaluate the changes in teacher attitudes and practices resulting from in-service education.

Attitude, as distinguished from practice, refers to an individual's feelings or mental state, emotion, mood, or opinion. Investigations have shown the results of deliberate attitudinal changes brought about by numerous types of stimuli.

Osgood and Tannenbaum (36) created a theoretical model for predicting attitude change or resistance to change based on the original attitude toward (1) the source of a message, (2) the object evaluated, and (3) the type of evaluation.

When Emans (17) attempted to measure the changes in teachers' educational attitudes and practices which came about following a cooperative curriculum study program, he
found that curriculum study programs, "are an effective method of in-service education of teachers," and that, "teachers' attitudes toward educational matters can be significantly changed through participation in the 'give-and-take' type of group curriculum study" (17, p. 701).

Anderson (4, p. 212) found that "changes in actual methods of classroom work may come about somewhat more easily than verbalizations, such as responses to questions about methods." Emans (17, p. 701) used the Teachers' Educational Attitudes Scale and a Teachers' Educational Practice Scale and found that, "although day-by-day practices of teachers in the classroom can be expected to change to a limited extent, it appears inevitable that they lag behind the changes in the teachers' attitudes and opinions." Emans also found that "both educational attitudes and practices change," but that changes in attitudes were more statistically significant (17, p. 701). He recommended that additional research be conducted to "objectively evaluate the worthwhileness" of the curriculum study to actually bring about changes in attitudes and practices of teachers in service (17, p. 702).

Attitude Scales

Bateman (5), "noting a lack of suitable scales to measure attitude toward the various types of educational programs that are prevalent in most schools--home room, auditorium,
group guidance, individual guidance, etc.," (5, p. 503) developed a generalized scale to measure attitude toward any educational program. Bateman claimed that reliability was sufficiently high for this type of group measure.

In discussing generalized attitude scales, Corey (15) said that it is questionable whether they have many advantages over the specific scale. "Generalized attitude scales represent an attempt to reduce the amount of preliminary labor and the technical difficulties involved in measuring attitudes" (14, p. 44).

Remmers (38) used a generalized attitude scale to measure attitudes toward the ministry, homemaking, high school teaching, and engineering. He found that attitudes toward high school teaching and the ministry tend to vary together, and that there was a definite sex difference in attitude toward the ministry.

In an investigation which tested the validity and the reliability of a scale designed to measure attitude toward any institution, Kelly concluded that "The generalized scale has a validity and a reliability high enough to make it a reasonably accurate instrument for measuring attitudes of any group toward any institution and for comparison of groups as to mean attitude and the spread of attitude" (23, p. 36).

In comparing a generalized and a specific scale for the measurement of attitude toward teaching, Miller found
The generalized scale could be used in place of the specific scale for measuring attitudes, as the validity and the reliability were high enough to indicate this. The generalized scale, seems more practical in that one scale could be used to measure several attitudes and separate scales would not need to be purchased or constructed for measuring attitudes (27, p. 108).

Although Newcomb (32), like several other reviewers (10, 12), found that the disadvantages of the generalized scales far outweigh the advantages, he did have a few kind words for them.

Scores on those generalized scales, moreover, correlate highly in general with those for Thurstone scales on similar attitudes. The advantages are obvious: time-saving in construction, and ready applicability for a new purpose at a moment's notice. Remmers has also succeeded in using clear and simple language in his scaled statements (32, p. 58).

However, Newcomb could not see why a scale should not be constructed specifically for any attitude continuum rather than resorting to a generalized scale. Commins (14) said, on the other hand, "the present scales are certainly worth a trial in a practical way" (14, p. 57).

Conservatism-Radicalism

In the summer of 1968, this author conducted a pilot study (22) to determine whether the amount of faculty conservatism was reduced by a Region IX Education Service Center curriculum study.

The major hypothesis of the study was that teachers experiencing a curriculum study would tend to be less
conservative following the curriculum study than teachers who had not experienced such a curriculum study.

Two Texas school faculties, both from small schools, were involved in this study. There were nine teachers in the experimental group involved in a curriculum study and ten teachers in the control group not involved in a curriculum study. The curriculum study was not completed because the summer vacations threatened to prolong the study and because several teachers from each school would not be returning after the summer vacation.

The measurement instrument used in this study was the C-R Opinionnaire, forms J and K, in which conservatism was defined as resistance to change. The major hypothesis, that teachers would become less conservative, seemed to be supported by the findings in the pilot study, but the findings were highly questionable because of the limited number of teachers taking part in the study and because the curriculum study was not completed at the time of the retesting. It was felt, however, that future studies would show that Education Service Center curriculum studies do tend to reduce faculty conservatism (22).

An official of the Texas Education Agency in Austin acknowledged that the most severe—and valid—criticism of schoolmen and schools in general is the tendency toward traditionalism, or a fetish for clinging to the status quo (42, p. 6).
Hovland and others (21) showed that resistance to attitude change was greater among members of a group who valued their membership highly. Likert (25) showed the importance of individual participation in overcoming resistance to change. Conclusion-drawing by a speaker tended to increase attitude change, according to Hovland and Mandell (20). By letting it be known that other members of the group have changed their minds, resistance to attitude change can be reduced, it was shown in a study by Oliver (35).

Lentz (26) used his C-R Opinionaire to show that "radicals" were not as favorable toward moral prudishness, the church, the status quo, and conventions as "conservatives" were. The trait measured by the C-R Opinionaire is "not identical with the contemporary political parties and doctrines commonly called 'conservative' or 'radical'" (34, p. 59).

Sappenfield (39) used form J of the C-R Opinionaire to compare Catholic, Jewish, and Protestant college students and found that Catholic and Protestant attitudes, in fields other than religion, are in closer agreement than are Jewish attitudes.

Radicalism is an "attitude" if the object of rebellion can be clearly specified, but if the object of rebellion is generalized or temperamental, Allport (2, p. 838) classified it as a "trait."

Alpert and Sargent suggest that the C-R Opinionaire seems to get at what Allport means by a "trait" of conservatism or radicalism.
In the words of Lentz: "The essential principle in the conservatism-radicalism difference among persons is the difference in degree of opposition or favor towards change" (3, p. 184).

This study by Alpert and Sargent (3) attempted to show that a person with a deep-seated attitude of radicalism would take sides for or against most new controversial issues as they appeared.

Emily Dexter (16) investigated the characteristics of upper-class college women with the C-R Opinionnaire and a variety of other tests, including the Bernreuter Personality Inventory, the Henmon-Nelson Tests of Mental Ability, the Morris Trait Index, and the Downey Will-Temperament Test. She pointed out that Moore (28), in an earlier study, found no relation between radicalism and intelligence, or emotional stability. Moore also found radicals more rapid than conservatives unless accuracy is involved. Dexter's findings differ from Moore's findings on several counts. She found that radicals were better informed, had higher mental ability, were more self-sufficient, and more dominant than conservatives (16, p. 232). She also found that in most cases a "well-informed-and-quick" student proved to be a conservative, while a "well-informed-and-slow" girl was radical (16, p. 234). She also found that radicals were a more admirable group of personalities than conservatives (16, p. 236).
Dexter also differed with earlier research by Allport (1), in which he found radicals tended to be extroverts and conservatives introverts. Dexter found that radicals were more introverted, had more feelings of inferiority, and rarely were the product of small towns (16, p. 232). No distinction was found between radicals and conservatives in regard to size of family, income, emotional stability or intensity, or teaching ability (16, p. 237).

With the possible exception of the radical tendency toward being introverted that Dexter found, radicals in her study also seemed to have the characteristics that one expects to find in leaders. One would expect a leader to be well informed, have a high mental ability, be self-sufficient, and even be dominant.

Leadership Studies

Leadership, according to Wolman (44, p. 468), "is the sociopsychological equivalent of the educational term guidance." He said that without leadership learning may lead nowhere, and may become utterly inefficient, even resulting in the establishment of faulty techniques.

We may obey someone at gun-point, Wolman said, but certainly this is not leadership. "Within the framework of a group defined as cooperative, leadership depends upon the willingness of the followers to accept the guidance or control of the leader" (44, p. 468). An effective teacher must
possess the quality of leadership. Wolman believed that leadership was composed of two factors, strength and friendliness (44, p. 470). Unless a teacher is perceived as a person capable of satisfying student needs (strong) and also willing to satisfy these needs (friendly), the teacher will have a deficiency in the teacher-student or leader-follower relationship and will invariably have disciplinary problems with students (44, p. 470).

While Wolman presented a two-factor theory of leadership, Bowers and Seashore (8) conceived a four-factor theory consisting of the dimensions of (1) support, (2) interaction facilitation, (3) goal emphasis, and (4) work facilitation. The first two of these dimensions might be compared with Wolman's friendliness and the second with strength.

Frutcher and Skinner (18) also analyzed leadership in terms of four Major factors: (1) activity, (2) interaction, (3) sentiment, and (4) norms. Their study, however, showed only the first three of these constructs actually present in leaders studied.

Notice the similarity between the factors named in each of these three examples. The factors "sentiment," "friendliness," "support," "interaction facilitation," and "interaction," all seem closely related.

The Guilford-Holley L Inventory (9) concentrates on five factors of leadership. These factors seem similar or inclusive of factors found in other studies mentioned; they are:
(1) benevolence, (2) ambition, (3) meticulousness, (4) discipline, and (5) aggressiveness.

Leadership has been studied in relation to a number of other attitudes. Singh and Arya (41) tested village leaders in New Delhi for (1) liberalism-conservatism, (2) scientism-fatalism, and (3) nonauthoritarianism-authoritarianism, and found that nonleaders scored high only on nonauthoritarianism.

In an experimental study of cultural training on leadership involving two groups of ROTC cadets (11), profound effects on attitudes were found with only three hours of training.

Mulford (29) found that leadership roles of top influentials include two functions, instrumental and expressive.

In mentioning the three factors which promote social development in the classroom, Wrightstone (45, p. 301) was pointing toward the leadership role of the teacher when he included (1) warmth of the teacher, (2) activities which permit a high degree of interaction, and (3) the use of democratic methods.

However, the use of democratic methods through participatory leadership, although having received a good deal of praise, has been shown to be effective only under certain conditions; lecture leadership is more effective at certain times (24, p. 178).
Leadership is absolutely necessary in the classroom because education is a group process where several individuals are involved in positive social interaction.

It would be useless to talk about education if students and teachers fought each other or if hate and violence prevailed in school buildings. Education is a group process in which one party, the educators, aim at serving the needs of the other party, the pupils (44, p. 466).

A leader's threat arouses anxiety that can be minimized by group discussion, suggests one study (24).

Alpert and Sargent (3) mention strong emotional components in attitudes and opinions when discussing their study on conservatism and radicalism.

Anxiety Studies

The qualities comprising the anxiety syndrome seem to be the opposite of the qualities of leadership.

The IPAT Anxiety Scale (19) includes the following qualities: (1) tension, (2) irritability, (3) lack of self-confidence, (4) unwillingness to take risks, (5) tremor, and (6) various psychosomatic signs.

Guilford (19, p. 138) interpreted The IPAT Anxiety Scale as a measurement of the primary traits of (1) composure-nervousness, (2) confidence-inferiority, and (3) liking for adventure-security.

Cohen (13) pointed out that The IPAT Anxiety Scale correlated positively with the Edwards Social Desirability Scale.
Intercorrelating several anxiety and constriction scales with a measure to test taking defensiveness, Wohl (43) found that when the defensiveness scale was held constant, the anxiety measures did not correlate significantly with the constriction measures.

In a test booklet (40), several cases pointed out that the anxious person was less confident than the person who had a low anxiety factor (40, p. 5). The booklet also said that varsity football players with middle levels of anxiety have been found to play better than men with extremely high or low levels (40, p. 4).

Bendig (6) found no sex differences in anxiety among undergraduate and graduate college students. He did find a significant linear decrease in "overt" anxiety with age. In another study, Bendig (7) found no sex differences for "covert anxiety," but he found women significantly higher on "overt" and "total anxiety" scores.

Anderson (4, p. 210) found no sex differences, no differences in age groups, and no differences because of professional training or teaching experience when he investigated the influence of an inservice program upon teachers.

Hugh Perkins found that teachers, taking part in an inservice program, were affected by the climate and the curriculum of the program. He also concluded that "evidences of tension and feeling were found to be important influences affecting the kinds and qualities of group learning" (37, p. 285).
Perkins also noted that, "Studies of learning have consistently found that presence of unpleasant emotion and tension retards and limits learning" (37, p. 285).

Norris showed that a high degree of anxiety tended to make a person more resistant to change (34).

Research seems to indicate that radicalism and leadership, factors containing related variables, might be increased by an inservice program such as a curriculum study, in which case the factor of anxiety would probably be decreased.

Generalized attitude scales which can measure attitude toward any number of items, including attitude toward a curriculum study, have been discussed here, along with the traits of conservatism-radicalism, leadership, and anxiety. Several studies in this discussion have shown that age, sex, and experience are a concern in such attitudinal investigations.
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CHAPTER III

METHODS OF THE STUDY

This study concerned itself with a curriculum study conducted by Region IX Education Service Center in a Region IX school district. An attempt was made to measure indications of attitude change, resulting from the curriculum study, in several areas: (1) teacher conservatism-radicalism, (2) teacher attitudes toward the curriculum study, (3) teacher leadership behavior, and (4) teacher anxiety.

Procedures for Collecting Data

The first step in the investigation was the selection of an experimental and a control group, with approximately fifty teachers in each group.

Subjects

Two Texas school districts, each with a minimum of fifty professional personnel, were chosen from the Region IX Education Service Center "curriculum study waiting list" composed of school districts whose superintendents had requested a curriculum study in their school districts.

One of these two school districts was selected, by the flip of a coin, to be the experimental group. The other school district was designated as the control group.
The study involved a total of 132 teachers. There were 70 teachers in the experimental group and 62 teachers in the control group.

**Instruments Used**

The second step in the investigation was the administering of the pretest. Included in the pretest were four measurement instruments:

1. The **C-R Opinionnaire**, Form J,
2. **Scale for Measuring Attitudes Toward any Practice**, Form A,
3. The **Guilford-Holley L Inventory**, and
4. The **IPAT Anxiety Scale**.

In searching for suitable instruments to measure various possible changes resulting from a curriculum study, an instrument for measuring resistance to change was of greatest importance. The **C-R Opinionnaire** was chosen because of several high recommendations.

... for a comprehensive estimate of an individual's disposition to welcome or resist rationally-grounded proposals for change in such diverse areas as science, technology, religious beliefs and practices, education, sex and family life, national and international organization, etc., this well seasoned Washington University product probably supplies as convenient and useful a composite score as any existing alternative (8, p. 83).

Dr. Laurence S. McGaughran, director of clinical training at the University of Houston, reported:
I have enquired among several members of the staff and have not been able to come up with any suggestion which would be an improvement . . . (11).

The C-R Opinionaire contains sixty statements. The instructions are to distinguish between the statements with which one agrees and disagrees.

The characteristic that this instrument is designed to measure is "conservatism-radicalism," or a "general tendency to oppose or to welcome cultural change" (14, p. 59).

The statements in this measurement instrument cover a wide range of items:

. . . including possibility of cat meat diet, calendar reform, compulsory cremation, new inventions, and new religions. The trait is thus not identical with the contemporary political parties and doctrines commonly called "conservative" or "radical" (14, p. 59).

The test is brief and self-administering in nature. Percentile norms from 580 college students are furnished in the manual. It has an adequate reliability, with a self-$r$ of .83 (8, p. 84).

The case for validity can be summarized as follows. Experienced judges agree with regard to the key. People who call themselves conservative or middle-of-the-road . . . make respectively higher conservatism scores on the test than those who rate themselves as radical . . . (10, p. 3).

Scoring results in one composite figure. Higher figures indicate higher conservatism.

The Scale for Measuring Attitudes Toward any Practice, which can be adapted to measuring faculty attitudes toward
the curriculum study, was chosen because of its appropriateness despite critical reviews such as the following:

In view of the simplicity, reliability, and validity of attitude scales constructed by other methods, and in view of the fact that attitudes toward Japanese as a group (for example), or the medical profession as an occupation, do involve specific as well as general considerations, there seems to be no good reason why a scale should not be specifically constructed for any attitude continuum which it seems worthwhile to measure, rather than resorting to generalized scales (12, p. 58).

The split-half reliability coefficients for the attitude scales, according to Newcomb, were nearly as satisfactory as for the Thurstone scales, and more reliable than the Thurstone scales.

Scores on those generalized scales, moreover, correlate highly in general with those for Thurstone scales on similar attitudes. The advantages are obvious: time-saving in construction, and ready applicability for a new purpose at a moment's notice. Remmers has also succeeded in using clear and simple language in his scaled statements . . . (12, p. 58).

The measurement instrument contains seventeen sentence fragments, arranged in a regular descending order of scale values, from positive to negative.

Commins says the reliability, as determined by correlating equivalent forms, is high, with some coefficients around .90 (4, p. 57).

The scales demonstrate face validity and validity both against Thurstone's specific scales and in differentiating among attitudes known to differ among various groups (13, p. 6).
"The median scale value of the statements endorsed is the attitude score" (13, p. 1). This score must then be compared to the scale values listed to determine whether the attitude is favorable, indifferent, or unfavorable.

The design of the instrument afforded the opportunity for collection of attitude data on several practices relevant to the teaching profession. In addition to a measurement of attitudes toward a curriculum study, attitudes toward the following practices were also measured: inservice education, team teaching, the lecture method of teaching, and grouping of students.

The Guilford-Holley L Inventory was chosen to measure leadership behavior because the factors included in this inventory appeared to be inclusive of leadership findings in several investigations (1, 5, 15).

Five personality factors, which were the outcome of a factor analysis of sets of homogeneous items used as experimental variables, "were believed to have relevance in connection with leadership behavior" (7, p. 1).

The following factors comprise the leadership construct in the Guilford-Holley L Inventory: (1) benevolence (sympathy, kindliness, generosity, helpfulness), (2) ambition (desire for fame, fortune, eminence, status), (3) meticulousness (desire for neatness, cleanliness, order), (4) discipline (belief in strictness, sternness, severity), and (5) aggressiveness (hostility, coerciveness, cruelty) (7, p. 1).
Other investigators appear to have verified the same factors. A factor like "benevolence" was reported by Harding (1941), who called it "idealism"; by Gordon (1951), who called it "generosity"; and by Adcock (1952), who called it "kindliness." A factor that can possibly be identified as "ambition" was reported by Cattell and Miller (1952), who called it "self-assertion" and by Guilford et al (1954). A factor sometimes called "meticulousness" was reported by Barnes (1952); by Adcock (1952), who called it "obsessional tendency"; and by Guilford et al (1954).

Need for discipline has been supported by Guilford et al (1961). The factor of "aggressiveness" has been identified by Brogden (1940), who called it "hardboiled aggression"; by Cattell (1946), who referred to a factor of "hypomanic aggression"; and by Barnes (1952).

The independent findings of these five factors lend good support for their uniqueness as dimensions of personality (7, p. 1).

The Guilford-Holley L Inventory is made up of 150 statements that pertain to personal beliefs, habits, and dispositions. There are three answer choices for each statement, "yes," "?," and "no." There are thirty questions devoted to each personality factor.

Internal-consistency reliability estimates made by the odd-even method are included in Table 2 of the manual and include a range of coefficients from around .45 for the ambition factor, around .70 for the factor benevolence, around .75 for the two factors discipline and aggressiveness, and around .85 for the factor meticulousness (7, p. 2).

Intercorrelations are included in Table 3, with positive correlations shown between meticulousness and discipline, discipline and ambition, and aggression and ambition. However, the "intercorrelations among the five factor scales
are generally low," and "there is much room for differential measurement among the five scale scores" (7, p. 3).

The IPAT Anxiety Scale was chosen as an instrument designed for the assessment of anxiety level because of generally favorable reviews. "For a quick measure of anxiety level in literate adolescents and adults, it has no peer" (3, p. 256).

This is a highly promising brief scale for assessing a pervasive personality variable. It is likely to be widely used as a research instrument and probably should be in view of the substantial evidence for its construct validity. Clinicians who are willing to give the scale a try (in spite of its being a by-product of factor analysis!) are likely to find it a useful diagnostic device for initial screening purposes (9, p. 140).

"The instrument is based upon considerable background research" (6, p. 139).

The instrument bears the title "Self-Analysis Form," and is comprised of forty statements with a choice of three replies such as "true," "in between," and "false," or "often," "sometimes," and "never."

The following five factors comprise the anxiety construct in the IPAT Anxiety Scale: (1) lack of self sentiment development (failure to integrate his behavior about an approved, conscious self-sentiment, and socially-approved standards is one of the major causes and symptoms of anxiety), (2) ego weakness (lacking the capacity to control and express frustrative tensions in a suitably realistic way
could generate anxiety); (3) suspiciousness, paranoid-
type insecurity (the social difficulties caused by paranoid-
type behavior could lead to isolation and anxiety); (4) 
guilt proneness (feelings of unworthiness, depression, and 
guilt suggest the concept of anxiety); and (5) frustration, 
tension, id pressure (excited drives and unsatisfied or 
frustrated needs of all kinds are shown by correlations and 
factor analysis to be one of the largest and most central 
components in anxiety).

This forty-item inventory results in measurements of 
the five factors comprising the anxiety construct, as well 
as overt and covert measurements of each factor. The covert 
items "are relatively indirect and hidden in purpose." The 
overt items are direct and not hidden in purpose. The overt 
items

... serve, first, as a record of actual symp-
toms; secondly, as an indication of how conscious 
the patient is of his problem; and, thirdly, in 
special circumstances, as a clue to attempts to 
distort and over-emphasize symptoms (7, p. 17).

The handbook warns that

Actual scoring breakdowns into five components 
and into overt vs. covert are indeed possible, 
...; but standing by themselves, these part 
scores are far less important, because neces-
sarily less reliable, than the total score on 
all 40 questions (7, p. 17).

The construct validity is estimated at above .85. The 
external concrete validity on a psychiatric criterion is 
confirmed from at least four sources. "The reliability of
the test, as can be seen from Table 2, is highly satisfactory" (7, p. 8).

Design

The experimental faculty and the control faculty were tested before and after the presentation to the experimental faculty of a curriculum study consisting of a total of thirteen meetings, of which two meetings were administrative in nature, one meeting consisted of the presentation of certificates of completion, and ten meetings were devoted to the presentation and discussion of curriculum study methods and teaching concepts. Counting the pre- and post-tests, there were a total of fifteen meetings involved in the curriculum study for the experimental group, and two meetings, for testing purposes, for the control group.

Pretest

The procedures for administering the four instruments making up the pretest involved, first, an interview with both superintendents involved in the study. Three weeks in advance of the curriculum study, both superintendents were contacted twice. The initial contact was by telephone, and then a personal contact was made. Testing dates for the pretest were scheduled during these contacts. The testing dates were approximately a week before the Region IX Education Service Center curriculum study was scheduled to begin. The following pretest conditions prevailed:
1. Pretests were administered with no explanations other than those printed on the test forms and the assurance that the tests were not disguised scales for measuring intelligence or moral knowledge, and that the results would be confidential and could in no way detract from the subject's standing.

2. Participants included all available professional (certified) personnel within the school district, including the superintendent of both school districts.

3. The following information was included on the front of each measurement instrument: age, sex, and years of teaching experience.

4. Teachers were assigned numbered answer sheets and for anonymity were instructed not to put their names on them.

Curriculum Study Content

The third step in the investigation was the presentation of the curriculum study. This was conducted by James C. McBride and James A. Hefter of Region IX Education Service Center, assisted by several of the service center personnel. Assisting were David A. Bocher, Media Services Director; Hal Mabry, Planning Director; Ben Davidson, Coordinator for Special Education; and Paul Green, Media Library Supervisor. The researcher also attended all meetings of the curriculum study and assisted in its presentation.
The curriculum study consisted of a total of fifteen meetings, each approximately an hour in length. There were two administrative meetings and thirteen meetings of the entire faculty.

The first administrative meeting was for the purpose of organizing the curriculum study. Members present included the superintendent of the experimental school district and the various service center personnel involved in the program. The second administrative meeting involved the Education Service Center director, the researcher, the experimental school superintendent, and the six school principals from the experimental school system. At this second administrative meeting, departures from the originally planned curriculum study activities were made because of suggestions brought forth by school principals. The service center director and the experimental school superintendent determined that two departures from the original plan were necessary. The original content of the curriculum study had been published in a service center newsletter several weeks before the curriculum study was to begin and is included in the Appendix.

The first departure was in relation to the testing procedures used in connection with the study, and the second departure concerned the content of the curriculum study.

The first departure was a result of the revelation by several administrators that the faculty deeply resented the pretest they were forced to take. It was felt that a large
part of the resentment came because no explanations other than those printed on the test forms were given. The principals advised that the faculty should either be completely informed and made aware of the reason for the tests, or the curriculum study should be cancelled immediately because of the high negative feeling among the faculty toward the pretest and toward the approaching curriculum study. Therefore, the first departure decided upon was that teachers would be advised that the pretest and the posttest were related to the curriculum study and that the tests were a necessary part of the curriculum study.

The second departure also was decided upon as a result of revelations at the second administrative meeting with the experimental school principals. The second departure dealt with teacher "homework" that experimental teachers feared would be imposed upon them in the upcoming curriculum study. The principals pointed out that removal of the threat of extra work would almost assuredly cause resentment toward the curriculum study to subside when accompanied by an explanation of the reason for the pretests and the future posttests. The principals recommended that the curriculum study be held during duty hours and that no extra work be assigned any teacher in connection with the curriculum study. Therefore, the second departure decided upon was that teachers would not be asked to do any extra work in connection with the curriculum study, more especially would they not be asked to do any work outside of regular teacher duty-hours.
The uppermost goal of the curriculum study being to effect a change in attitude on the part of the faculty, it was brought out that the resentment might well subside and that later the teachers from the experimental faculty could request their superintendent to contact the Education Service Center and conduct the originally planned study.

The thirteen meetings of the experimental faculty consisted of two meetings for testing purposes, ten meetings for the presentation and discussion of curriculum study methods and teaching concepts, and one meeting for the purpose of good will, at which presentations of awards were made to all experimental teachers and service center personnel participating in the curriculum study.

The two meetings for testing purposes were for the administering of the pretest and the posttest.

The ten meetings for the presentation and discussion of curriculum study methods and teaching concepts are described in detail in the Appendix, and dealt with the following topics: (1) "Introduction to the Curriculum Study," (2) "Identification of Needs," (3) "Setting Priorities," (4) "Educational Objectives," (5) "Writing Educational Objectives," (6) "Educational Materials," (7) "Evaluating Educational Materials," (8) "Techniques of Instruction," (9) "Developing Techniques of Instruction," and (10) "Evaluating the Educational Process."
At the awards meeting, all participants in the curriculum study were presented a certificate which read:

The Region IX Education Service Center of the State of Texas certifies that (the participant) has completed the course of instruction in EDUCATIONAL PLANNING conducted under the auspices of the Center and awards this CERTIFICATE in recognition of professional merit.

Posttest

The fourth step in the investigation was the administration of the posttest. The following posttest conditions prevailed:

1. Posttests were administered in mid-May with the explanation that this test and the previous test were related to a curriculum study being conducted by the Region IX Education Service Center and were a necessary part of the curriculum study. Participants were advised that the tests were not disguised scales for measuring intelligence or moral knowledge, and that the results would be confidential and could in no way detract from the subject's standing.

2. Participants included all available professional (certified) personnel within the school district, including the superintendent of both school districts.

3. Teachers were asked not to put their names on the test answer sheets. Their tests were given the same number as that used in the pretesting.

Included in the posttest were four measurement instruments:
1. The C-R Opinionnaire, Form K,
2. The Scale for Measuring Attitudes Toward any Practice, Form B,
3. The Guilford-Holley L Inventory, and
4. The IPAT Anxiety Scale.

Procedures for Treating Data

Pretest raw scores, posttest raw scores, and pre- to posttest gains from the four measurement instruments were punched on key punch cards along with the sex, age, years of teaching experience, teaching level, and the degree of each participant in the experimental and control groups. Computations were made by the Data Processing Center at North Texas State University.

The tenability of the hypotheses in this study was determined in the following manner:

Pretest to posttest mean gain of the experimental group raw scores was compared to pretest to posttest mean gain of the control group raw scores. Raw scores for each measurement instrument were adjusted by the analysis of covariance. The .05 level of significance was determined sufficient to reject the null hypotheses.

In addition to the analysis of the four hypotheses, there were four subproblems investigated for which no hypotheses were stated.
The first subproblem dealt directly with each of the four areas of concern in the four hypotheses. The problem was to determine relationships between the four areas of radicalism, anxiety, leadership behavior, and attitude toward a curriculum study and the five teacher variables: age, sex, years of teaching experience, teaching level, and degree. The experimental group pretest to posttest mean gain raw scores on each measurement instrument were compared to the several age categories, the two sex categories, the several teaching experience categories, the two teaching level categories, and the two degree categories. Control group pretest to posttest mean gain raw scores on each measurement instrument were also compared to the several age categories, the two sex categories, the several teaching experience categories, the two teaching level categories, and the two degree categories. The experimental and control groups were not compared to each other in subproblem one by statistical computations. Raw scores of all categories within each of the five variables were adjusted by the analysis of covariance. The .05 level of significance was determined sufficient to reject the statistical hypothesis that there is no difference between categories.

The second subproblem, related to hypothesis II, compared the ten pretest to posttest mean gains of the experimental group anxiety factor raw scores with the pretest to posttest mean gain of the control group anxiety factor raw
scores. The ten anxiety factors, which comprise the anxiety construct, are (1) covert lack of development of integrated self sentiment, (2) overt lack of development of integrated self sentiment, (3) covert ego weakness, (4) overt ego weakness, (5) covert suspiciousness and paranoid-type insecurity, (6) overt suspiciousness and paranoid-type insecurity, (7) covert guilt proneness, (8) overt guilt proneness, (9) covert tension, id pressure, or frustration level, and (10) overt tension, id pressure, or frustration level.

Raw scores for each anxiety factor were adjusted by the analysis of covariance. The .05 level of significance was determined sufficient to reject the statistical hypothesis that there is no difference between the experimental and control groups.

The third subproblem, related to Hypothesis III, compared the five pretest to posttest mean gains of the experimental group leadership factor raw scores with the five pretest to posttest mean gain scores of the control group leadership factor raw scores. The five leadership factors, which are believed to have relevance to leadership behavior are (1) benevolence, (2) ambition, (3) meticulousness, (4) discipline, and (5) aggressiveness.

Raw scores for each leadership factor were adjusted by the analysis of covariance. The .05 level of significance was determined sufficient to reject the statistical hypothesis that there is no difference between the experimental and control groups.
The fourth subproblem, related to Hypothesis IV, compared the four pretest to posttest mean gains of the experimental group attitudes toward practices relevant to the teaching profession raw scores with the four pretest to posttest mean gain scores of the control group attitudes toward practices relevant to the teaching profession raw scores. The four practices relevant to the teaching profession are (1) inservice education, (2) team teaching, (3) lecture method of teaching, and (4) grouping of students.

Raw scores for each practice relevant to the teaching profession were adjusted by the analysis of covariance. The .05 level of significance was determined sufficient to reject the statistical hypothesis that there was no difference between the experimental and control groups.

Following the statistical computations, data were tabulated for analysis and entered into tables for clarity of presentation.

All data concerning the study was inspected; conclusions, implications, and recommendations were formulated consistent with the data collected.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

RESULTS OF THE STUDY

The experimental group of school teachers participated in an inservice program which consisted of a curriculum study. Pretesting was administered a week before the curriculum study began and posttesting was administered a week after the curriculum study was concluded.

Following tabulation and statistical computations, the data was tabulated for analysis and entered into tables for clarity of presentation.

Table II presents the statistical results of Hypothesis I. The table includes the mean scores, standard deviations, and adjusted mean scores resulting from the analysis of covariance technique. It also includes the F value for
determining the statistical significance of each hypothesis and the pretest and posttest divisions for both the experimental and control groups. Also shown is the fact that there were seventy teachers in the experimental group who participated in the curriculum study and sixty-two teachers in the control group who did not participate in the curriculum study.

Hypothesis I: There will be an increase in radicalism measured on the C-R Opinionnaire scale following a curriculum study.

Hypothesis I predicted an increase in radicalism following a curriculum study. Higher scores indicate conservatism and lower scores are indicative of radicalism. Though the teachers who participated in a curriculum study showed an unmistakable increase in radicalism, indicated by a drop from twenty-four on the pretest mean score to nineteen on the posttest mean score, this change was accompanied by a marked increase in radicalism in the control group. The change in the control group nullified the meaning of the experimental group increase in radicalism. The control group pretest mean score was thirty-four. This dropped to a posttest mean score of twenty-four, showing a radical trend.

The adjusted means, resulting from the analysis of covariance, indicate twenty-one for the experimental group and twenty-two for the control group. These adjusted mean scores
show that the teachers who participated in the experimental curriculum study became more radical than the teachers who did not participate in the curriculum study. However, the low F value of .15 shows that there was no statistical significance in the difference between the experimental group pretest to posttest mean scores and the control group pretest to posttest mean scores.

Therefore, the null hypothesis was confirmed and the research hypothesis was rejected. Subproblem number one contains findings related to Hypothesis I, and these findings will be presented after all hypotheses have been discussed.

Table III presents graphically the statistical results of Hypothesis II. Table III follows the form of Table II

**TABLE III**

**STATISTICAL RESULTS RELATED TO HYPOTHESIS II**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Pretest</th>
<th>Posttest</th>
<th>F = .41</th>
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<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>70</td>
<td>26</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Control Group</td>
<td>62</td>
<td>27</td>
<td>.10</td>
<td>24</td>
</tr>
</tbody>
</table>

F value of 2.99 = .05 level of significance.

and divides into two groups, the experimental and the control groups. The table includes the number of teachers in each group, the mean scores, the standard deviations, the adjusted mean scores, and the F value.
Hypothesis II: There will be a decrease in anxiety measured on the IPAT Anxiety Scale following a curriculum study.

Hypothesis II predicted a decrease in anxiety among those teachers experiencing a curriculum study. The higher mean scores indicate a higher degree of anxiety. As predicted, there was a decrease in anxiety shown in the mean scores of the teachers who participated in the curriculum study. However, the anxiety decrease in the experimental group was accompanied by another anxiety decrease reflected in the mean scores of the control group. The control group had an even greater decrease in anxiety than the experimental group.

The experimental group pretest mean was twenty-six, with a standard deviation of eleven. The posttest mean score for the experimental group fell to twenty-four, with a standard deviation of thirteen. The control group had a pretest mean score of twenty-seven, with a standard deviation of ten, followed by a posttest drop to a mean score of twenty-four, with a standard deviation of eleven. The lower scores for both the experimental group and the control group on the posttest indicate a reduction of anxiety in both groups. The F value of .41, indicates that there is no statistical significance in the difference between the pretest to posttest mean scores of the teachers who participated in the curriculum study and the teachers who did not.
Therefore, the null hypothesis was confirmed and the research hypothesis was rejected. The discussion of results of subproblem number one and subproblem number two, later in this chapter, contains information related to this hypothesis.

Table IV is a graphical presentation of the statistical results of Hypothesis III and follows the same form as the

<table>
<thead>
<tr>
<th>TABLE IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATISTICAL RESULTS RELATED TO HYPOTHESIS III</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>F = .06</th>
</tr>
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<tr>
<td>Control Group</td>
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<td>83</td>
<td>18</td>
</tr>
</tbody>
</table>

F value of 2.99 = .05 level of significance.

Hypothesis III: There will be an increase in leadership behavior measured on the Guilford-Holley L Inventory following a curriculum study.

Hypothesis III predicted an increase in leadership behavior following a curriculum study. High mean scores indicate a high degree of the personality factors relevant to leadership behavior. Therefore, high scores are interpreted as indicating high leadership behavior.
Instead of an increase in leadership behavior, as hypothesized, there was a decrease in leadership behavior following the curriculum study. There was also a decrease in leadership behavior for the control group. However, the teachers who participated in the curriculum study suffered a greater drop in leadership behavior scores than the teachers who had not participated.

Experimental mean scores fell from eighty-two, with a standard deviation of eighteen, to seventy-three, with a standard deviation of twenty-seven. The control group pre-test mean was eighty-three, with a standard deviation of eighteen. This fell to seventy-four on the posttest, with a standard deviation of twenty-six. The adjusted mean scores show the control group to be the highest with a mean score of seventy-four, compared to an experimental group mean score of seventy-three. The F value, however, shows that there is no statistical significance in the difference between the pretest and posttest mean scores of the two groups. The predicted increase in leadership behavior did not occur.

Therefore, the null hypothesis was confirmed, and the research hypothesis was rejected. Further pertinent findings relevant to this hypothesis will be found in the discussion of subproblem number one and subproblem number three.

Table V shows the statistical results of Hypothesis IV and, following the pattern of the preceding three tables,
includes the number of teachers, the mean scores, the standard deviations, and the adjusted mean scores, as well as the F value, and a breakdown into pretest and posttest, experimental group and control group.

Hypothesis IV: There will be a more favorable attitude toward a curriculum study measured on the Scale for Measuring Attitudes Toward any Practice following a curriculum study.

Hypothesis IV predicted a more favorable attitude toward a curriculum study following the participation in a curriculum study. Findings did not support this prediction. Both the experimental group and the control group mean scores were lower on the posttest than on the pretest. The teachers who experienced the curriculum study, moreover, held a less favorable attitude toward a curriculum study after their participation than the teachers who did not participate; whereas, they had begun with a slightly more favorable attitude.
The experimental group pretest mean score was seventy-seven, with a standard deviation of twelve, compared to a control group pretest score of seventy-six, with a standard deviation of thirteen. The experimental group had a slightly more favorable attitude toward a curriculum study than the control group. Following the curriculum study, the experimental group registered a posttest mean score of sixty-nine, with a standard deviation of twenty-five, compared to a posttest mean score of seventy-four on the part of the control group, with a standard deviation of twenty-three. The experimental group had a less favorable attitude toward a curriculum study than the control group on the posttest. The analysis of covariance technique produced an F value of 1.04 and an adjusted experimental mean score of sixty-nine, which is five points lower than the control posttest mean score of seventy-four. The predicted attitude change did not occur.

Therefore, the null hypothesis was confirmed, and the research hypothesis was rejected. Following discussions of the results of subproblems one and four will contain findings related to Hypothesis IV.

An analysis of the data indicated that none of the hypotheses were statistically significant. The results call for a confirmation of all null or statistical hypotheses and the rejection of all research hypotheses. Tables II through V present the results of the four hypotheses.
In the discussion of the subproblems in this study, it was arbitrarily decided to limit the discussion to those variables where the adjusted means resulted in an F value above a fraction. Therefore, only variables having an F value of at least 1 will be considered for discussion. An F value of 2.99 is required for significance at the .05 level.

In subproblem one, teachers participating in a curriculum study were compared with teachers who did not participate in the curriculum study to determine measurable changes in four areas. These areas were radicalism, anxiety, leadership, and attitudes toward a curriculum study. Hypothesis I dealt with radicalism, Hypothesis II dealt with anxiety, Hypothesis III dealt with leadership, and Hypothesis IV dealt with attitudes toward a curriculum study. Relationships between these four areas of concern and five teacher variables were explored in subproblem one.

In subproblem one, pictured in Tables VI, VII, VIII, and IX, each hypothesis was related to the age, sex, years of teaching experience, teaching level, and degree of the teachers involved. However, because the law of averages would favor statistically significant findings occasionally among a large number of comparisons, it was decided to relate the experimental group and the control group with each of the five mentioned variables, but not to relate the experimental group and the control group to one another except by visual inspection. This means that subproblem
one actually became eight separate and distinct problems, four dealing with the experimental group and four dealing with the control group. All eight relationships were explored, the findings dealing with the control group having somewhat less importance and less relevance than the experimental group findings. Whereas the experimental group findings in subproblem one give an indication of what teachers underwent the greatest change following a curriculum study, the control group findings serve to show whether teachers in the same categories underwent similar changes in the absence of a curriculum study. Therefore, the experimental and control groups are pictured side by side for visual analysis in Tables VI, VII, VIII, and IX, even though they have not been statistically compared.

The statistical results of subproblem one are presented in Tables VI, VII, VIII, and IX. These tables list the five teacher variables of age, teaching level, teaching experience, sex, and degree held. The table shows the number of teachers, the mean scores, the standard deviations, the adjusted mean scores, and the F values for both the experimental and the control groups. The purpose of the table is to show by categories the changes in radicalism that occurred after the curriculum study. The experimental teachers, by definition, are the only ones that participated in the curriculum study.
The age categories show that in the experimental group there were 21 teachers below the age of 25, and 17 teachers between the ages of 26 and 35. Thirteen of the experimental teachers were between the ages of 36 and 45, and 13 were between 46 and 55 years of age, while 6 were over 55 years of age.

The control group had 8 teachers under 26 years of age, and 13 teachers between 26 and 35 years of age. Twelve of the control teachers were between 36 and 45 years of age, 13 were between 46 and 55, and 15 were over 55 years old.

The teaching level categories show that the experimental group had 28 elementary teachers and the control group had 29. Secondary teachers in the experimental group numbered 42, while in the control group they numbered 33.

The teaching experience categories indicate that in the experimental group there were 18 teachers with less than 6 years experience. There were the same number in the control group. The experimental group had 14 teachers with from 6 to 10 years experience, while the control group had 12 teachers in this category. There were 7 experimental teachers with from 11 to 15 years experience. The control group had 10 teachers in this category. Nine experimental teachers and 5 control teachers fell in the 16 to 20 years experience category. Teachers with 21 to 25 years experience numbered 6 in the experimental group and 4 in the control group. Both groups had 5 teachers in the 26 to 30 years teaching
experience category. The category of 31 to 35 years of experience shows 4 experimental teachers and no control teachers. Actually there were 6 teachers in the control group who fell in the 31 to 35 years experience category, but only 1 control teacher in the 36-up experience category. Rather than group that one 36-up teacher in a category alone, all the teachers with more than 30 years of teaching experience were grouped together in a category labeled "31-up." There were 7 control group teachers with 31 years experience or more. The experimental group had 7 teachers with 36 years experience or more.

The sex categories show that there were 22 experimental males and 20 control males. Forty-eight experimental teachers were female, and 42 control teachers were female. All teachers with less than a master's degree appear in the B.A. degree category. This category shows 38 experimental teachers to have less than a master's degree, while 43 control teachers have less than a master's degree. The category labeled M.A. includes all teachers with a master's degree. There were 32 experimental teachers with a master's degree and 19 control teachers with a master's degree.

In discussing the four tables which present the statistical results of subproblem one, the experimental and control groups will be listed separately, showing the categories that underwent the greatest amount of change and the categories that underwent the least amount of change, according
to the adjusted mean scores, in each variable with an F value of 1 or above.

Table VI shows the statistical results of relationships between radicalism and five teacher variables.

<table>
<thead>
<tr>
<th>Teacher Variable and Category</th>
<th>Experimental Group</th>
<th>Analysis of Covariance</th>
<th>Control Group</th>
<th>Analysis of Covariance</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>N = 70</td>
<td></td>
<td>N = 62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
<td></td>
<td>Pre-test</td>
</tr>
<tr>
<td>Age</td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>0-25</td>
<td>21.24</td>
<td>11</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>26-35</td>
<td>17.25</td>
<td>13</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>36-45</td>
<td>13.19</td>
<td>15</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>46-55</td>
<td>13.23</td>
<td>18</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>56-up</td>
<td>6.38</td>
<td>5</td>
<td>26</td>
<td>1</td>
</tr>
<tr>
<td>Level</td>
<td>1.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>28.22</td>
<td>16</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>Secondary</td>
<td>42.26</td>
<td>12</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td>Experience</td>
<td>1.15</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>0-5</td>
<td>18.23</td>
<td>13</td>
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<td>13</td>
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<tr>
<td>6-10</td>
<td>14.19</td>
<td>13</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>11-15</td>
<td>7.25</td>
<td>14</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>16-20</td>
<td>9.30</td>
<td>10</td>
<td>25</td>
<td>8</td>
</tr>
<tr>
<td>21-25</td>
<td>6.36</td>
<td>6</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>26-30</td>
<td>5.19</td>
<td>18</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>31-35</td>
<td>4.29</td>
<td>15</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>31-up</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>36-up</td>
<td>7.23</td>
<td>17</td>
<td>16</td>
<td>12</td>
</tr>
</tbody>
</table>
Table VI shows radicalism was most extreme in the following experimental categories following the curriculum study, according to the adjusted mean scores: (1) 46 to 55 years of age, (2) 31 to 35 years teaching experience. Experimental teachers most conservative in their views fell into the following categories: (1) 26 to 35 years of age, and (2) teaching experience in three categories, including 6 to 10 years, 16 to 20 years, and 21 to 25 years.

In the control group, radicalism was most extreme, according to the adjusted mean score, in the following categories: (1) 26 to 35 years of age, (2) male, and (3) master's degree. Control teachers most conservative, according to the analysis of covariance adjusted means, include
the following categories: (1) the two extreme age groups, 25 and below, and 56-up, (2) females, and (3) bachelor's degree.

None of the findings presented in Table VI were statistically significant. The experimental group and the control group were not related by statistical analysis because in such a large number of categories the law of averages would favor an occasional finding that would appear to have significance.

Table VII is the second graphic presentation of the results found in subproblem number one. It pertains to

TABLE VII

STATISTICAL RESULTS OF SUBPROBLEM NUMBER ONE, SHOWING RELATIONSHIPS BETWEEN FIVE TEACHER VARIABLES AND ANXIETY
### TABLE VII—Continued

<table>
<thead>
<tr>
<th>Teacher Variable and Category</th>
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<th>Control Group</th>
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</thead>
<tbody>
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<td>Post-test</td>
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<td></td>
</tr>
<tr>
<td>Level</td>
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<td>21-25</td>
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<td>23</td>
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<td>26-30</td>
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<td>30</td>
</tr>
<tr>
<td>31-35</td>
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<td>32</td>
</tr>
<tr>
<td>31-up</td>
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<td>--</td>
</tr>
<tr>
<td>36-up</td>
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<td>35</td>
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<td>Sex</td>
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<td>22</td>
</tr>
<tr>
<td>Female</td>
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<td>28</td>
</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.A.</td>
<td>38</td>
<td>26</td>
</tr>
<tr>
<td>M.A.</td>
<td>32</td>
<td>26</td>
</tr>
</tbody>
</table>

anxiety. According to the adjusted mean scores indicated by the analysis of covariance technique, anxiety was highest among males in the experimental category following the curriculum study. Experimental teachers exhibiting the least amount of anxiety, according to the adjusted mean scores, were females.
In the control group anxiety was highest, according to the adjusted mean scores, in the following categories:
(1) 26 to 30 years experience, and (2) bachelor's degree.
Control group teachers with the least amount of anxiety, according to the adjusted mean scores were in these categories: (1) 31-up years experience, and (2) master's degree.

None of the findings were statistically significant in Table VII.

The third graphic presentation of the results found in subproblem one is presented in Table VIII. This table

| TABLE VIII |
| STATISTICAL RESULTS OF SUBPROBLEM ONE, SHOWING RELATIONSHIPS BETWEEN FIVE TEACHER VARIABLES AND LEADERSHIP BEHAVIOR |

<table>
<thead>
<tr>
<th>Teacher Variable and Category</th>
<th>Experimental Group N = 70</th>
<th>Control Group N = 62</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>Age</td>
<td>N</td>
<td>M</td>
</tr>
<tr>
<td>0-25</td>
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<td>80</td>
</tr>
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<td>26-35</td>
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<td>82</td>
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<td>36-45</td>
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<td>74</td>
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<td>46-55</td>
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<td>91</td>
</tr>
<tr>
<td>56-up</td>
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<td>95</td>
</tr>
<tr>
<td>Level</td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>Elementary</td>
<td>28</td>
<td>85</td>
</tr>
<tr>
<td>Secondary</td>
<td>42</td>
<td>81</td>
</tr>
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TABLE VIII—Continued

<table>
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</thead>
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<td>Post-test</td>
</tr>
<tr>
<td>Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5</td>
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<td>64 30</td>
</tr>
<tr>
<td>6-10</td>
<td>14 82 18</td>
<td>71 28</td>
</tr>
<tr>
<td>11-15</td>
<td>7 77 10</td>
<td>79 6</td>
</tr>
<tr>
<td>16-20</td>
<td>9 87 17</td>
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<tr>
<td>31-35</td>
<td>4 82 15</td>
<td>63 34</td>
</tr>
<tr>
<td>31-up</td>
<td>-- --</td>
<td>--</td>
</tr>
<tr>
<td>36-up</td>
<td>7 97 7</td>
<td>94 9 0</td>
</tr>
</tbody>
</table>

| Sex                          | 22 83 20 | 73 33 | 73 | 20 87 14 | 72 32 | 70 |
|------------------------------|          |      |    |          |      |    |
| Male                         | 48 82 13 | 73 24 | 73 | 42 84 15 | 75 23 | 76 |
| Female                       |          |      |    |          |      |    |

| Degree                      |          |      |    |          |      |    |
|------------------------------|          |      |    |          |      |    |
| B.A.                        | 38 83 15 | 74 26 | 74 | 43 85 14 | 74 24 | 74 |
| M.A.                        | 32 83 17 | 72 28 | 72 | 19 84 15 | 74 32 | 74 |

presents the relationships between five teacher variables and leadership behavior. Leadership behavior was highest in the following experimental categories, according to the adjusted mean scores derived from the analysis of covariance technique: (1) 56-up in age, (2) 36-up in teaching experience. Experimental teachers exhibiting the lowest leadership behavior according to the adjusted mean scores were in the
following categories: (1) 36 to 45 years old, and (2) 26 to 30 years teaching experience.

None of the control variables had an F value as high as 1. None of the findings in Table VIII concerning leadership behavior were statistically significant.

Table IX is the fourth and last of the graphic presentations of results found in subproblem one. It shows the

**TABLE IX**

**STATISTICAL RESULTS OF SUBPROBLEM ONE, SHOWING RELATIONSHIPS BETWEEN FIVE TEACHER VARIABLES AND ATTITUDE TOWARD A CURRICULUM STUDY**

<table>
<thead>
<tr>
<th>Teacher Variable and Category</th>
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<th>Control Group N = 62</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-25</td>
<td>21 80</td>
<td>6 67</td>
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<tr>
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<td>17 79</td>
<td>7 81</td>
</tr>
<tr>
<td>36-45</td>
<td>13 78</td>
<td>8 55</td>
</tr>
<tr>
<td>46-55</td>
<td>13 79</td>
<td>10 72</td>
</tr>
<tr>
<td>56-up</td>
<td>6 71</td>
<td>9 67</td>
</tr>
<tr>
<td>Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>28 80</td>
<td>8 74</td>
</tr>
<tr>
<td>Secondary</td>
<td>42 77</td>
<td>8 66</td>
</tr>
</tbody>
</table>
### TABLE IX--Continued

<table>
<thead>
<tr>
<th>Teacher Variable and Category</th>
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<th>Control Group N = 62</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>N</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>18</td>
<td>79</td>
</tr>
<tr>
<td>6-10</td>
<td>14</td>
<td>80</td>
</tr>
<tr>
<td>11-15</td>
<td>7</td>
<td>76</td>
</tr>
<tr>
<td>16-20</td>
<td>9</td>
<td>77</td>
</tr>
<tr>
<td>21-25</td>
<td>6</td>
<td>85</td>
</tr>
<tr>
<td>26-30</td>
<td>5</td>
<td>79</td>
</tr>
<tr>
<td>31-35</td>
<td>4</td>
<td>67</td>
</tr>
<tr>
<td>36-up</td>
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</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
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<td>79</td>
</tr>
<tr>
<td>Female</td>
<td>48</td>
<td>78</td>
</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B.A.</td>
<td>38</td>
<td>78</td>
</tr>
<tr>
<td>M.A.</td>
<td>32</td>
<td>79</td>
</tr>
</tbody>
</table>

According to the adjusted mean scores, experimental teachers with the most favorable attitudes toward a curriculum study were in the following categories: (1) 26 to 35 years of age, (2) elementary teachers, and (3) males. Experimental teachers exhibiting the least favorable attitudes toward a curriculum study
were in the following categories: (1) 36 to 45 years of age, (2) secondary teachers, and (3) females.

In the control group, attitudes toward the curriculum study were highest, according to the adjusted mean scores, in the 26 to 30 years teaching experience category. Control group teachers with the least favorable attitudes toward a curriculum study were those in the 31-up teaching experience category.

None of the findings presented in Table IX were statistically significant. However, the experimental age variable had an F value of 2.10. An F value of 2.99 is required for significance at the .05 level.

The data show that there were no statistically significant findings in subproblem number one.

In discussing subproblem number two, which presents the statistical results of relationships between the curriculum study and ten personality areas comprising the anxiety construct, only variables showing an F value of 1 will be mentioned. Subproblem number two findings are presented in Table X.

When compared to the control group, the teachers who participated in the curriculum study increased in overt ego weakness. This increase in overt ego weakness by the experimental group was a statistically significant finding. The experimental group's pretest mean on the overt ego weakness
TABLE X

RESULTS OF SUBPROBLEM TWO, INDICATING RELATIONSHIPS BETWEEN THE CURRICULUM STUDY AND TEN PERSONALITY AREAS COMPRISING THE ANXIETY CONSTRUCT

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Post-test</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Self-Sentiment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Covert</td>
<td>2.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Overt</td>
<td>3.2</td>
<td>1.9</td>
</tr>
<tr>
<td>Ego Weakness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Covert</td>
<td>2.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Overt</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Suspicion</td>
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<td></td>
</tr>
<tr>
<td>Covert</td>
<td>.9</td>
<td>.9</td>
</tr>
<tr>
<td>Overt</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Guilt</td>
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<td></td>
</tr>
<tr>
<td>Covert</td>
<td>4.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Overt</td>
<td>3.7</td>
<td>2.1</td>
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<td>Tension</td>
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</tr>
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<td>Covert</td>
<td>4.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Overt</td>
<td>2.6</td>
<td>2.2</td>
</tr>
</tbody>
</table>

measurement was 1.3, with a standard deviation of 1.4, while the posttest measurement was 1.4, with a standard deviation of 1.4; compared to a control group pretest measurement of 1.3, with a standard deviation of 1.4, and a posttest mean score of 1.0, with a standard deviation of 1.3. The F value is 3.47. The F table shows that 2.99 is the amount needed for the .05 level of significance.
Table X also shows that when compared with control teachers, the teachers who participated in a curriculum study had an increased amount of overt tension in a degree approaching the point of significance. The F reading of 2.58 was .41 below the mark required for significance at the .05 level.

Subproblem number three indicates relationships between the curriculum study and leadership behavior. The five factors which comprise the leadership behavior construct are benevolence, ambition, meticulousness, discipline, and aggressiveness.

Table XI gives a graphic presentation of the effects of a curriculum study on factors that have been deemed to have

| Table XI |
| RESULTS OF SUBPROBLEM THREE, INDICATING RELATIONSHIPS BETWEEN THE CURRICULUM STUDY AND FACTORS RELEVANT TO LEADERSHIP BEHAVIOR |

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group</th>
<th></th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 70</td>
<td>N = 62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
<td>Pre-test</td>
</tr>
<tr>
<td></td>
<td>M      SD</td>
<td>M      SD</td>
<td>AM</td>
</tr>
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<td>20</td>
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<td>10  6</td>
<td>11</td>
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<tr>
<td>Meticulousness</td>
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<td>16  7</td>
<td>16</td>
</tr>
<tr>
<td>Discipline</td>
<td>18  6</td>
<td>16  7</td>
<td>16</td>
</tr>
<tr>
<td>Aggressiveness</td>
<td>9   4</td>
<td>8   5</td>
<td>8</td>
</tr>
</tbody>
</table>
relevance to leadership behavior. This table shows the findings of subproblem three. Subproblem three findings indicate that there were no statistically significant differences in leadership behavior between teachers who took the curriculum study and teachers who did not take the curriculum study. None of the variables showed an F value of 1 or above.

The fourth subproblem relates the curriculum study and attitudes toward inservice education, team teaching, the lecture method of teaching, and grouping of students.

The fourth subproblem is presented in Table XII. Only one variable in Table XII shows an F value of 1 or above.

TABLE XII

SUBPROBLEM FOUR RELATES THE CURRICULUM STUDY AND ATTITUDES TOWARD PRACTICES RELEVANT TO TEACHING

<table>
<thead>
<tr>
<th></th>
<th>Experimental Group</th>
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<th>Control Group</th>
<th></th>
</tr>
</thead>
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<tr>
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<td>Lecture method of teaching</td>
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<td>Grouping of students</td>
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According to the adjusted mean scores in Table XII, teachers who participated in a curriculum study had a less favorable attitude toward inservice education than teachers who did not participate in a curriculum study. None of the findings presented in Table XII were statistically significant.

An analysis of the data showed that there was one statistically significant finding in the four subproblems: Teachers who participated in a curriculum study showed an increase in overt ego weakness when compared to teachers who did not participate in such a curriculum study.
Summary

Teachers who participated in an inservice curriculum study, and teachers who did not, showed no significant differences when measured for changes in conservatism-radicalism, anxiety, leadership behavior, and attitude toward a curriculum study.

A definite indication which lacks statistical significance is that teachers who had participated in a curriculum study had a less favorable attitude toward a curriculum study than teachers who had not participated in one.

There is also some indication that the teachers who lowered their opinion of a curriculum study the most were in the following categories: (1) male, (2) secondary teachers, and (3) below twenty-six years of age.

In comparing the teachers who took part in the curriculum study to those who did not, the participating teachers showed a significant increase in overt ego weakness. In addition, those participating teachers showed definite indications, though beneath the level of significance, of an increase in overt tension. There were no significant differences between
the two groups in covert measurements of ego weakness and tension.

There is some indication that the male teachers had higher degrees of overt ego weakness and tension than the female teachers.

Conclusions

1. Teachers who participated in a curriculum study appeared to show no attitudinal changes when measured for conservatism-radicalism, anxiety, leadership behavior, and attitude toward a curriculum study.

2. Teachers who participated in the curriculum study had apparent ego weakness when such measurements were overt (not hidden), but when the measurements for this quality were covert (hidden), the teachers did not appear to possess the trait of ego weakness.

Observations

In searching for possible reasons for the conspicuous absence, except for the overt ego weakness, of statistically significant findings, in over 170 separate statistical comparisons in this study, several possibilities seem worthy of mention. The first possible reason for an absence of more findings of significance is that detection of change is limited to whatever types of change the measurement instruments are capable of detecting. Changes may have taken
place that were not detected by the instruments, or more likely, there may have been changes that were not even measured.

The study was also limited in the selection of subjects. Therefore, it is possible that the control group was not similar enough to the experimental group to reflect accurate possibilities in the absence of the experimental application. In some respects the experimental and the control groups were alike, and in some respects they were different. They had approximately the same amount of teaching experience, for example, and approximately the same percentage of male and female teachers. In other respects the two groups were not alike. The experimental group had a greater percentage of teachers with a master's degree and was also composed of a younger group of teachers than the control group. Perhaps the differences were a contributing factor in the results. The study was necessarily limited to a choice of relatively small school districts; therefore, the small sampling could have contributed to the results.

The findings may very well indicate that this type of inservice program did not accomplish the goals that the administrators thought it was going to accomplish.

One possible reason for teachers to appear to have the trait of ego weakness following the curriculum study is that the hostility toward the pretesting may not have completely subsided. Another possibility is that because the teachers
knew what the posttesting was for, there could have been a reverse Hawthorne effect, by which is meant that under the focus of attention there may have been the desire for a negative appearance.

Recommendations

1. There needs to be more exploration concerning the effects of a wide variety of inservice programs on teacher attitudes. Certain types of inservice programs, such as the one investigated in this study, may not be getting the results that administrators think they are getting.

2. The state legislature of Texas has recently passed a ten-month year for school teachers and has expressly designated a requirement of ten days a year of inservice programs for teachers. These ten days had best be planned carefully.

3. More research is needed to show how this inservice activity affects the attitudes of teachers.

4. Above all, administrators need to develop methods of measuring changes that result from inservice educational programs, if in fact there are changes occurring.
APPENDIX A

In its April, 1968 edition of Centerline, the Region IX Education Service Center newsletter, a description by Dr. James C. McBride appeared of a typical curriculum study under the title, "What Goes on in a Curriculum Study." The following is a copy of that article:

The purposes of consultative assistance in a curriculum study are six-fold:

1. To assist in organizing of faculty committees to carry out the study.
2. To guide the faculty in developing clearly stated objectives which they decide are appropriate for their particular school district.
3. To assist the faculty in translating these objectives into specific goals for each course or each subdivision of a course.
4. To help teachers examine some innovative concepts and teaching techniques that have proved successful elsewhere.
5. To examine the concepts to be taught, the materials to be used, and the activities to be engaged in so that they can be organized in such a way that the objectives which have been determined can be executed.
6. To provide editorial assistance and reproduction facilities within our capability to publish the reports.

The Center staff reviews a list of faculty teaching assignments, and, without knowing the individual faculty members, recommends that the school district create an organization composed of committees, and that each teacher serve on at least two committees. Some serve on three. One of the committee assignments is in the subject area or grade level where the teacher is teaching; the other is out of the subject area. For example: a second grade teacher would be serving on the committee dealing with second grade material and might also serve on the high school English committee, while a high school English teacher would serve on the high school
English committee and perhaps on the industrial vocational committee.

The purpose for this is to give teachers an opportunity to make a contribution in the field of their specialty and also to provide an outside influence on each committee. In addition to strengthening the content, we find that this has a tendency to produce a greater degree of faculty cohesion. At first, most teachers are uncomfortable with assignments on committees outside their area, but once they begin working, they find that they do have contributions to make. The committee organization suggested is subject to any changes that are deemed appropriate by the school district administration.

To assist in the development of goals, the Center issues published material such as "Preparing Instructional Objectives" by Robert F. Mager, designed to help teachers state their objectives in clear and unmistakable terms. The writing of clear and specific goals is the key to furthering the curriculum study. This stage of the study is frequently a source of great frustration to the faculty. Committee members have to (1) come to some agreement on what they are trying to do, and (2) word this objective in such a way that it says exactly what they are trying to do. What usually happens is that when they attempt to put that objective into writing, they discover there is disagreement. In this way they begin to reject generalities and strive for specifics.

In preparation or organization of materials, we provide them with a brief overview of recent innovations (within the past 10 years) in organization and teaching techniques. We deal with such things as team teaching, large group and small group instruction, and utilization of community resources in the instructional program. The book that we are issuing on this is "Community Resources--Functional Principles and Operational Manual" by Dr. Harold Bottrell. Here we find what resources are available. Instructional media is another major point we deal with in innovations.

Then the committees begin their work. They will be writing objectives; they will examine the concepts that they feel need to be covered. Having an idea of concepts and how they need to be covered, they now work for resources that can be used. We strongly urge that they organize the concepts in the terms of their best professional
judgement and not simply outline a textbook. A textbook should be chosen because it correlates with the material they have organized. It is our observation that on the elementary level there are textbook and related material packages of increasing quality so that a committee may get their thinking organized and find the package that fits in with what they are doing. Once they have determined the concepts and the materials that are available, they take up the matter of activities which students are to engage in. These may include such things as panels, reports of various kinds, individual research, and study activities, graphic portrayal, dramatizations, and debates.

The form in which the committee reports are made is determined by local requirements. It may take the form of a curriculum guide or a self-study in preparation for an accreditation visit, or it could take the form of an outline for in-service training of faculty.

In the development of the editorial phase, EDC works with committee members. If the districts desire, and we strongly advise them to do this, we will assist in the development of an evaluation design so that the curriculum that comes out of this can be evaluated in an organized fashion.
APPENDIX B

ADMINISTRATIVE MEETING NUMBER 1

The superintendent of the experimental school met with the researcher and the director of the Region IX Education Service Center to arrange tentative meeting dates for the curriculum study. The service center director cautioned the superintendent that there was always the possibility that such a program as the one planned could contribute to discontent among the teachers rather than an improvement in teacher attitudes. The director outlined the subject matter to be covered in the curriculum study. A pretest date was arranged.

ADMINISTRATIVE MEETING NUMBER 2

Following the pretest, a meeting was held for the purpose of winning the support of the school principals for the approaching curriculum study.

There were five principals, one assistant principal, and the superintendent present as well as the researcher and the Region IX Education Service Center director.

The principals were told what was being planned and were asked to give advice. Several proposed meeting dates were changed.
The principals suggested a number of changes in the content of the curriculum study and revealed that the faculty was disgruntled because they had been forced to participate in the pretesting without being told the purpose of the testing. It was decided to explain the purpose of the pretest and posttest to the entire faculty.
APPENDIX C

CURRICULUM STUDY

Following is a summary of the inservice curriculum study presented to the experimental group in ten one-hour meetings by representatives of the Region IX Education Service Center.

Curriculum Study Meeting Number 1

Introduction to the Curriculum Study

An explanation of the program was given by the director of the Region IX Education Service Center. Following is a summary of that presentation:

Almost nothing that we are doing effectively today was being done, or was being done in the same way, a couple of years ago; and by the same token much of what we are doing effectively today probably won't be effective a few years hence, because the world is changing so rapidly. The occupations that we are preparing youngsters to go into, the colleges that we are preparing them to enter, are requiring not only a higher level of sophistication and more skill, but also a different kind of skill. If we are going to be very effective in working with youngsters, we have to make ourselves amenable to change, simply because it is the one
thing that we know we are going to be living with. However long we live we will be living with change. This being the case, we perhaps kind of steel ourselves to the whole matter of changing and the real beginning of effective changing is in a process that we call planning.

What we want to do today is start a program in which we will examine the whole area of educational planning. What's going on in the field? What are people doing in other places? What are we doing here? Curriculum development is a continuing process. You don't plan it and then operate and then stop down the line and replan it. There's no way to do this any more. You have to kind of keep one claw on reality and another one out here searching for what might be a better way than when we started out to do it. It seems to me that we have to be continually asking ourselves what do we do, why do we do it, what are we striving for, what is the line of our operations, how well do we do it, can we do it better, and finally what must we be striving for five or ten years hence?

One claw must hold on to reality, to the names, age-grade distributions, the I.Q.'s, and the family background of youngsters who are in a class right now. Some of them are having their problems. What am I doing? Why am I doing it? How well am I doing it? That's the reality end of it, and then out here waving with the other claw, we try to snag off with something that will give us an idea of
where we ought to be five or ten years from now. Because if you can find a school district some place where everyone is working right up to capacity and everyone is doing a perfect job of meeting the needs of the youngsters in that school right now—if they are satisfied and they stop looking, at some time out in the future, if they are doing exactly the same thing that they are doing right now that constitutes perfect education, that program won't be worth anything. Because we're changing so rapidly. So what do we do? Why do we do it? How well do we do it? Could we do it better? What must we be striving for five or ten years hence? This is a pretty broad subject, this whole matter of trying to decide for ourselves what kind of teaching job we are doing.

The program we have put together is not completely involved with what is going on in your particular school district or what ought to be going on in your schools. It isn't involved in that at all. We will, I'm sure, occasionally get into such discussions, but primarily we're not here to find out what the second grade teacher ought to be teaching here in your second grade.

What we are going to do is look at what's involved in looking at a curriculum, rather than looking at the curriculum itself. What are the lead lines into effective curriculum development? We are going to talk about curriculum, about what's going on in schools, and not attempt to come up with a curriculum guide to file away. What we are going to try
to come up with is some attitudes. We are going to try to come up with a group of teachers who are interested in looking at what they are doing, and examining what they teach.

Curriculum Study Meeting Number 2

Identification of Needs

The service center director pointed out that there are six steps in a planning cycle: (1) the identification of problems and needs; (2) setting of priorities; (3) formulation of specific objectives; (4) development of programs and conducting these programs; (5) evaluation in order to identify successes, failures, problems that still exist, and needs that still exist; and (6) reproduction of the cycle, beginning again with identification of problems and needs, setting priorities, formulating objectives, etc.

The teachers then broke into two groups to talk about planning cycles and to discuss what goes into planning.

The following ideas were presented, and discussion of the ideas was carried on in one of the groups:

There are a lot of kinds of planning and if you have a one-time operation, like a fishing trip, you plan it and you get to a point, and then you do whatever has been planned, then when it's over that's the end of it. You planned and you did it. Now if it's a one-time thing that's going to happen from time to time, you may keep records so that the next time you have to plan it, you go back and consult the
records so that you don't make the same mistakes. Sure, elementary school teachers are great at it, you know. Last year I had pumpkins and turkeys for Thanksgiving, but this year I'm going to have Pilgrims and Indians, you know, and the year after I'm going to have pumpkins and turkeys again.

In the operation of a public school program we are not involved in a one-time operation, we are involved in a cycle, and things just go around and around, and where she stops nobody knows. We start out and we plan a program and we conduct it, and after we conduct it we try to figure out how good a job we did. Based on how good a job we did we figure we need some more programming.

Those of you who have been in the classroom for a number of years know that the kids you get now are not like the kids you got twenty years ago. They're not at all alike. They don't think alike; they don't look alike; they are just really a different breed of animal.

To wrap it all up, what does he have? He has some real needs, doesn't he. He has some needs to be understood for what he already is, based on what he has been in the past and the ideas he holds today. He has some needs in terms of what's going to happen to him, out here in the future. Well, what do we do with these needs, if we're going to plan an educational program. We have not yet found a way to individualize to the point of handling each one of them individually. So what are we going to have to do in order to
develop and educational program for these kids? If there had never been a school here, if you were starting out fresh. Somebody decided it was time to have a school here and you built a beautiful building like this and put kids in it and said, "All right teachers, have at it, build yourself an educational program." This is what we did at the regional center last year. There had never been one before. Now there are twenty of them in the state and no two look alike. We all ran a different direction, because the directions were laid out by the needs that the school districts expressed. We asked the superintendent what he needs. He told us, and we structured that way, and we ran that way. Well, that's the first step in the planning cycle. You identify needs and needs are elusive. You must not come to the identification of a need step with prior assumptions of what the needs are.

How do you measure the effectiveness of a person, in becoming a voting member of a democratic system. I don't know, I really don't, but I know you can, just as I told you a minute ago, I know you can measure a teacher's effectiveness, and I know you can measure student achievement and I know you can measure the correctness of a set of educational objectives. I don't know how, but I know that there are ways to do it.

Because we don't measure it, doesn't make it immeasurable, so that's where the objective has to be written.
Now once you've got the objectives laid out, you have a two-pronged development, and they go along side by side. One is the development of whatever evaluation is going to take place down the line; it has to be filled in just as we have filled in the evaluation of this school system.

We started out knowing how we are going to evaluate it. That's one of the prongs; the other prong is the development of the program itself. What are you going to do to meet the objectives? So that is in part, at least, developed out of the objectives. The next thing you do is conduct a program.

In the end you evaluate it and what do you do with the results of the evaluation? You set up your objectives, and you develop a program and now you evaluate it, after you conduct it, you find the results of the evaluation.

All right, find out what you did wrong that time, which is another way of saying, "Which needs remain unmet?" You're going to find out which ones you didn't do anything about, or which ones you didn't do enough about, and that becomes the identification of needs, for the second cycle. That's why I say, around and around she goes and where she stops nobody knows. Because at the conclusion of each cycle, the last step in each cycle is the input to begin the cycle again. Now you try to organize that with a large faculty and set it up so it will run that way, and you will drive yourself utterly insane. But if you show teachers how to do it for themselves, and they are going to find out there's
a whole new dimension of teaching, that some have stumbled on to by themselves. A few have had some unsuccessful experiences with it, and others have never known it existed.

Curriculum Study Meeting Number 3

Setting Priorities

Following is a summary of the ideas that the service center director presented to the faculty:

You recall we talked about this matter of listing problems at the beginning of the planning cycle and then taking these problems which simply represent dissatisfaction or the feeling of individuals that all is not right. We talked about taking these problems and developing them into actual needs of a school district.

Now, the next step in the planning cycle is to set priorities. Because we always lack resources, either we don't have enough money or we don't have enough people, or we don't have enough talent, knowledge, to handle all of the things that need to be done. So we have to set priorities.

I think that there are three criteria that we most often will be working with in setting priorities that determine the priorities of needs.

1. Sometimes we have prerequisites, this is one of the criteria. You can't do something until something else has been done and automatically something else is of higher
priority. If you need more money, but before you can get more money, you have to sell the public on the quality of your educational program, but before you can sell the public on the quality of the educational program, you have to have a quality program, then obviously the priorities are first to establish a quality program, second to sell the people on the quality of the program and then to go after the money. So, prerequisites are one of the things that determine priority.

Then another priority criterion is criticality. How critical is the need? Well, we need a swimming pool. We don't have a place for kids to learn to swim, so we can't compete in the swimming competition, and we just don't have swimming. We need a swimming pool. We do not have a cafeteria in which we can feed all of the youngsters. Which is the more critical need? I would think a cafeteria is a more critical need. It has much wider impact on the whole instructional program. It is because you don't have a cafeteria you are hauling kids across town, or you're hauling food across town, or you're running lunch periods from 10:00 o'clock in the morning until 2:00 o'clock in the afternoon, or you're splitting up lunch periods, with some kids going to class fifteen minutes and then going to lunch and then going back to class forty-five minutes. See, if you are running things like that then you are messing up a lot of the instructional program, simply because you need a
cafeteria. Compared with the impact of building a swimming pool, the building of a cafeteria under these circumstances would probably produce a much greater effect much more rapidly in the quality of the whole educational program. So, which is the more critical, and that's a matter of judgement which is more critical. We determine criticality in terms of safety, in terms of the efficiency of the educational program, in terms of perhaps saving elements of a student body that we might otherwise lose.

3. The third criterion I'm going to give you is finance of personnel. What do you have money to do? No matter how critical a thing is, if there is absolutely no way to finance it, then it cannot be a high-priority need. Now finding the money to do it may become a high-priority need, but doing the thing itself, it would be ridiculous to put it first priority and automatically have to go to the second priority to start out, because there is no money to do the first one, so you have to have the financial ability to meet the needs and personnel, both numbers of personnel and training, background, capabilities of personnel. If you feel like the thing is the highest single priority in your school district at this time is the development of health services, not health education but health services, but there is no way that you can get the services of the physician, or of a nurse, there's no way that you can get professional talent into your school district to develop
health services, then finding a way to get these persons may become a high priority need, but the provision of health services has to be a fairly low priority need, because you can't meet the prerequisite to it yet. If you don't have the number of people, can't get the number of people, can't get some people with the training or the kind of background, then that can't be a very high priority need, but if you have the financial ability to meet the need and you have or can get the personnel to meet the need, then it can become a priority need. So these are the kind of criteria that we kind of keep in mind, the matter of prerequisites that something has to be done before other things can be done and they automatically become high priority items if they have to be done first.

Curriculum Study Meeting Number 4

Educational Objectives

The service center director gave a short introduction before the faculty divided into four groups. Following is a summary:

Now let me set the scene, folks. We're not here for this exercise, we're someplace else, we're any place else; we're in a school district that's pretty disjointed. Nobody really knows what's going on any place else, the teachers teach in their classrooms, and each classroom is self-contained, even though you've got departmentalization on the
upper grades, each teacher is pretty well self-contained. The kids seem to do a pretty fair job on a standardized test, but the faculty has come to the realization that they do need to know more about what's going on. The high school needs to know something about what's going on in the elementary school, the elementary school needs to have a better understanding of what the high school kids need. Teachers in a given building aren't too well coordinated with each other. Two history teachers in the high school teaching the same course really don't cover the materials in the same way or, I don't even know if it's good for them to cover the same materials, but they're not really teaching the same course, with the same title. There was a need for procedures, for articulation between grades.

Now, this school district is housed in a ramshackle old building. It was originally constructed in 1909, or thereabouts, and added to in 1924 and repaired in 1937. So, they said another one of the needs of this district was to build a new high school. They know that the community is not much interested in the schools, so they thought that public relations was a pretty important need in this school, and they had heard something about this process approach, this discovery method of teaching science and social studies and some of the other subjects, and so they thought maybe that they needed to use the discovery method in appropriate subjects, and they felt like there was just an awful lot of
things that they didn't like in the administration policies of the school, so they felt that they needed to get a re-write of board and administrative policy affecting children and teachers, such as sick leave and vacation and attendance regulation, etc. Everybody got these in mind now? What you want to do now is put them in order. Procedures for articulation between grade schools and high school, build a new high school, public relations, institute the discovery method in appropriate subjects, and rewrite the administrative policies affecting children and teachers. Now, in this school district that's what the teachers said they felt the needs were. Now, in what priority are we going to do these things.

The faculty divided into four groups and discussed the priorities of these needs. Each group arranged the needs in the order of highest priority. Then the groups re-assembled as one large group and compared results. It was determined that setting priorities is a matter of value judgement.

Following is a summary of the concluding remarks:

If we had spent several hours, structuring a school district, so we were intimately associated with all of the means behind these things and they weren't just general ideas, then there might have been a right answer, or a wrong answer. But, the thing that we wanted to do in these groups today was to get the feel of weighing the needs.
Some things can't be done until other things are done. Some people mentioned this. Some things take a lot of money to do, and so you know it's going to take longer to get to them. Some things take trained personnel, that you might or might not have. You have to make an assumption whether you have those trained personnel or not. But, generally speaking, as long as you didn't come up with an idea that you would start out with the results that you were seeking and work back from it in priorities, as long as you start out with the things that can be handled and that will produce an effect in the direction you want to go, and will facilitate the other things that you want to do down the line, this is where you set priority. Once you set priorities, you decide which one you tackle first, and then set up some specific objectives for attacking that priority need. A program should attack the priority need, carry out the program evaluated, and then see how well it's been done.

Educational objectives should be written in behavioral terms. An objective that reads "to make better Americans out of the students," is a poor educational objective. There are many parts of the American way that are not good, are not worthy of being preserved. Preserving the American way, although it might be a fine-sounding terminology, is not a good educational objective. Everyone has probably seen things in America that they do not consider worthy of preserving. Poverty, riots, prejudice, so on, are things that
are very real in our American way of life, but are not worthy of preserving. Therefore, preserving the American way of life is just not a good educational objective. Better, perhaps, would be to make students intelligent voters in the democratic process. This might be a better educational objective. It's one that perhaps could be measured.

Curriculum Study Meeting Number 5

Writing Educational Objectives

The faculty was divided into four groups. A representative from the regional center met with each of three groups and the researcher met with the fourth group. These groups met in separate rooms for a gripe session.

In this session teachers were to simply tell what it was that bothered them. They told what problems they had, what they would like to see changed. It was just a general gripe session. What would come out in these gripes we would call problems. Each leader appointed a secretary of the group to take down the gripes in each group.

It was explained that we were going to break up into gripe sessions and that we would come back and we would spell out the gripes of the four groups, then we would break up into the same four groups again and go back into the rooms and we would attempt to come up with needs that had come from these gripes. Needs are action-oriented. They
should be stated in terms of outcomes; we need to make it so that, or to develop procedures to, or to establish the system that. We were going to come back together and list these needs, and as a conclusion we were going to attempt to list the order of the importance of these needs, and prepare to set priorities, so as to develop objectives at the next meeting.

After an explanation of what this meeting was going to be about, the faculty broke into four groups to list problems.

The following gripes, or problems, were listed in each group:

**Group I.**

1. Testing procedures for Special Education not good.
2. No teacher aides.
3. Too many non-teaching duties.
4. Lunch room overcrowded, which causes unsanitary conditions.
5. Too many pupils per teacher.
6. Teachers not qualified to give mental maturity test and don't want to. Also rushed for time.
7. Lack of communication with other teachers and administrators.
8. Lack of consistency in grading.
9. Days lost are not consistent with days made up, causing complications in schedules.
10. Lack of vocational training from first grade up.
11. Lack of facilities.
12. Lack of curriculum for pupils between 73-93 I.Q.
13. Need for music, art and physical education in elementary schools.
14. Fewer reporting periods.
15. Inadequate funds.
17. Faculty meetings without objectives.
18. Make sure to get credit for in-service training.
19. Prospect of losing bonus if raise goes through.
20. Last minute changes made in teacher assignments without notification of all teachers involved.
21. Class schedules not suitable for many students.
22. Lack of free time for elementary teachers.
23. Scheduled conference periods.

Needs in Terms of Our School District:

1. More teachers and more classrooms. Purpose—to provide more individualized instruction for pupils.

2. More lunchroom facilities—lunchrooms for each school.

3. Coordinator for elementary education so that schools will be coordinated in use of materials, facilities, and activities.

4. Adequate testing procedures for Special Education so that the child will be tested properly and teachers and parents informed thereof.

Group II.

1. Equal allocation of funds between (a) elementary, (b) junior high school, and (c) senior high school.

2. Not enough teacher aides in elementary and junior high.

3. Some attraction for new teachers (get and hold teachers replacing teachers retiring).

4. Lack of organization and communication (a) third-grade pupils in first-grade chairs, (b) some desks falling apart—desk and chair replacement.

5. Follow up on inventory (a) where is equipment (b) central storage area.

6. In junior high not enough 16 mm. projectors—heating and cooling trouble in science building.
7. Need an elementary coordinator in order that ward schools might keep up with what is going on among the ward schools.

8. Clear-cut delegated authority throughout the system.

9. Overcrowded classrooms (a) elementary (b) junior high.

10. Transfer system needs improving (inadequate).

11. Superintendent--teacher correction--let them know individually.

12. Anonymous complaints to the newspapers.

13. Inform teachers before the public is informed.

14. Extra duties for teachers should be equal.

15. Faculty meetings only when something worthwhile or important needs to be discussed.

Needs in Terms of Our School District--Needs and Priorities:

1. Need to set up a procedure for allocating funds for the 1969-70 school year according to departments and school. This is to be done with teacher representatives.

2. Need to implement program for teachers by establishing a system of conferences for individual teachers.

3. Set up a system of procedure for employing an elementary coordinator.

Group III.

1. A fine arts program is needed at all levels in our school system. Teachers who are specially trained in art and music are needed.

2. A larger number of vocational subjects.

3. Specialized electives should be offered to attract the advanced students.

4. Special education programs need to be followed through in junior and senior high schools.

5. Differentiated diplomas (although they are illegal) would be ideal to separate vocational and "college-bound" courses of study.

6. We need to design courses containing more remedial work for the student who does not qualify for special education.
7. If teachers are required to be at school by 8 o'clock, then why wait until 8:35 to begin classes. Our schedule would be more flexible to provide a longer lunch period.

8. There is a great lack of communication between teachers in elementary, junior high, and high school. Teachers need to know what subject matter is being taught in the grades before and after the grade in which they are teaching.

9. A lower student-teacher ratio would facilitate a better learning situation.

10. If the elementary schools were consolidated, specialized teachers in the areas of physical education, art, music, etc. could be utilized by all students.

11. Some teachers are required to make too many preparations in different subject areas.

12. More motion picture and filmstrip projectors are needed.

13. Each teacher should be allotted $100 to order books in a particular subject area to be placed in the library.

14. Adopted textbooks do not meet the needs of the students. There is a great need for a more flexible curriculum and better courses of study.

15. Interest in foreign language should be promoted.

16. Mid-semester break should occur prior to the Christmas holidays.

17. Some attempt should be made to provide better scheduling in the UIL events so that students may participate in more than one event.

18. Teachers should be notified in advance if a student is to be taken out of class.

Needs of the School System:

Better teacher-teacher communication in each subject area was the priority need that we discussed. A faculty committee to meet with the administration was suggested as one means to help communication.

Group IV.

1. Too much time taken away from the student: (a) meetings such as this (faculty participation) for Region IX (b) assemblies, P.T.A.'s, preparation for Public School
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Week, (c) class interruptions—delivery of mail, announcements, "yellow slips."

2. Teachers do not know of called assemblies, meetings, or other activities that will interrupt the day or class, but the students know—need seen for program for the week given to teachers on Monday morning, or previous week if possible, so that the week's work can be accurately planned.

3. First semester should end before the Christmas holidays begin—post-Christmas interlude before mid-term tests should be eliminated, even if calendar has to begin in mid-August.

4. Teachers need a work day at mid-term test time as badly as they need it at the end of school.

5. Too much emphasis placed elsewhere to the detriment of language arts in sixth, seventh, and eighth, especially the latter two. (a) Reading, writing, and spelling in sixth grade in one 55-minute period per day. (b) Reading, spelling, English, and dictionary usage—for which course four books are issued—given only one 55-minute period per day, while band students have band and music, a total of 110 minutes per day in seventh grade (7th only).

6. Overcrowded condition: (a) classes too large (b) ninety students, grades one through four, ride on one sixty-passenger bus for transportation to cafeteria for lunch.

7. Lack of communication between head office and teachers—not told of reports due until the day they must be finished—drop everything—nitpicking about reports, yellow slips, etc.


9. Curriculum changes needed: (a) two required credits in physical education could be obtained in two years, leaving time for additional vocational courses or other electives (b) senior-level mathematics course badly needed—some working knowledge of time-payment interest data, review of fundamentals, especially fractions (c) program for slow learners—I.Q. 70-90. (d) need for vocational courses—real vocational courses—automotive mechanics, electronics, etc.

10. Need better public relations on activities other than athletics—note wonderful job being done by students on safety on radio but only one small item has ever been in the newspaper.
11. Practically no recognition given to academic achievement—jackets for football, vocational ag., band, letters or sweaters for other athletics—banquet for National Honor Society and Mu Alpha Theta cited as a good beginning.

12. Funds: (a) insufficient funds for materials (b) unfair distribution of funds available—$300 for one entire department (science) in high school, $200 for entire English department, $25 for each individual teacher on other campuses—thousands of dollars spent on select few in athletics.

13. Need seen for student participation assembly programs and a proper place to present them—high school gym not suitable for fine arts.

At the appointed time these gripe sessions broke up, the members went back to the auditorium, and there the service center director took over again and had the secretary from each group come sit at the head table. Then he asked each secretary to stand, one at a time, and read the gripes that they had recorded. Then these gripes were categorized into three different categories. One category was gripes that tended to make the individual teachers uncomfortable. Another group had to do with allocation of funds, and the third group had to do with student interests.

As far as accomplishing anything, these gripes don't, the group was told. They must go through a process of first translating these gripes or problems into needs, then setting priorities, then formulating specific objectives, then developing programs and conducting them, then evaluating to identify successes and failures and problems that still exist and needs that still exist, and then replicating this.
cycle, before the gripes do any good. The faculty once again met in four groups and attempted to identify some needs. In other words, they took some of the gripes they had listed, and oriented these gripes to action. They were told to state these gripes in terms of outcomes. The four groups went off into their separate rooms, and they listed needs.

Curriculum Study Meeting Number 6

Educational Materials

Following is a summary of the speech given by the service center director:

We have just about come to the conclusion that all educational materials that need to be invented, have been invented. There might be some things that need to be invented in the educational field, but this isn't the big problem; the big problem is sorting through the many materials that already have been presented and coming up with the ones that are worth using, or the ones that are best for the purpose at hand. This is a real problem. There are so many gimmicks and gadgets on the market--there are so many good materials available--that the problem has come to be picking out what is best for the purpose at hand. Material that might be best in one teacher's class for one particular subject, or at least one segment of a subject, might not be worthy of use at all in another teacher's class.
We have talked about listing problems, and determining needs, and setting priorities. Now, when you get into a program, what do you do? Well, as a classroom teacher, you use materials. You're teaching youngsters with the use of materials. How do you go about working with materials, deciding whether you can use them? All of you look at materials; all of you look at catalogs; some of you talk to salesmen; you go to conventions and you visit the booths. Well, we don't have an answer to how you choose materials. What we do have today by video tape is the presentation that our staff put together on one kind of material selection. That is, deciding whether a material is instructional (that is, for use by a teacher in an instructional situation), or whether it is educational (that is whether it can run without a teacher). Sometimes, it is very difficult to tell whether an item really can be used in the classroom. There are some highly educational materials that aren't worth anything in a classroom because they do some of the things that only the teacher can do.

A video tape presentation followed the introductory speech and attempted to help teachers select, with a little more wisdom, those particular materials which fit their particular needs. "Now in order to do this, first I would like to talk about behavior and what's specifically the kind of behavior that we want students to show. After we've decided what the objectives are, in terms of what the
behaviors are that we want them to show, we then have to select the materials that are in harmony with these objectives."

Two film strips were presented to show the extremes of this kind of material and to illustrate the ideas.

The first filmstrip was an example of educational material which states its own objective. The second filmstrip was an example of instructional materials which are the kind of materials that need an instructor in order to set the goal. Materials themselves do not set the goals, they need a teacher.

Essentially then, educational materials would be the kind that boys and girls working in a library and studying in their own home, would be able to use best because the materials themselves describe the goals, so that by following the activities, the youngsters come to the kind of behavior that the materials ask for. The other kind, the instructional materials, are the kind of materials that you would use in a classroom along with other exercises. Now, these particular behaviors that we are looking for are, of course, determined by us as teachers. Once we have these behaviors in mind then we can select which kind of materials will best achieve these conditions.

In looking at materials that you wish to use in your class, you should try to harmonize the kind of materials with the particular objectives that you are seeking. If the
material has objectives, and as a teacher you use them to try to fulfill other objectives, you will end with mass confusion. The boys and girls will be highly confused and will exhibit the kind of behavior that you ask for directly, like "sit down and shut up." If, though, you've got the material and the objectives brought into harmony with each other, whether you have the objectives or the material has the objectives, the youngsters will be able to know what you expect of them and will do it. This is the kind of behavior that we are interested in developing through media material.

Curriculum Study Meeting Number 7

Evaluating Educational Materials

The faculty was divided into four groups. Each group viewed two filmstrips, one of which was previously determined to be educational (having the goals stated), and one of which was previously determined to be instructional (having no stated goals).

The teachers in each group attempted, through group discussion, to determine which filmstrips were educational and which were instructional.

Curriculum Study Meeting Number 8

Techniques of Instruction

Following is a summary of the lecture presented by the service center director:
I'm not going to tell you what techniques of instruction to use, because I don't know what techniques of instruction to use. The farther I go, the less I know about that particular area of the teaching profession.

Another thing that I'm not going to tell you today is that what you are doing isn't good. You know, we customarily start off in inservice training with the assumption that what's being done must not be very good. I'm sure that what you are going is good. I'm sure that many of the things that you are doing are quite good. I'm not sure that something that's new is necessarily better than something that's old. I'm sure that some of the things that are old probably ought not to have been allowed to get old, that probably we shouldn't be doing some of the things that we are doing. But, at the same time, there are some new things coming along that look like they have a lot of promise and so we try them and it's very difficult to find out whether they are really worth a great deal or not.

What I thought we might do today, rather than just talk about techniques as such, is to talk about some of the things that we are beginning to learn about how children learn. For many years we have run on instinct in this area and we've drawn heavily on our own personal experience and on the experiences of others that have been shared with us. But in the last dozen or so years a good deal of very competent research has been done in the field of how children
learn. We are finding some very startling things that are becoming more and more apparent as real truths in education, not just someone's idea. One of these truths is that some rather substantial percentage of what a youngster is going to be intellectually has already been developed before we ever touch him in a public school program. We know that we're missing the best years because we don't have the four-year-old and the five-year-old in some kind of formal program. We know that some of the handicaps that youngsters come to school with are very difficult to overcome after age seven, eight, or nine. I'm not talking about the handicapped child, I'm talking about the normal child, and even the gifted child, but the child who has lacked stimulation, who has lacked positive reinforcement, who has lacked a great many of the advantages which we have hoped children would get, and we know that the school is not organized always to do the kind of job in education that we already know how to do. I think many times we're not organized to do what we know to do because we're so organized along a traditional pattern in education. We build brick boxes and inside of these brick boxes we make plaster boxes, smaller boxes, and in each plaster box we put one teacher and a certain number of pupils, and the certain number of pupils is determined on some basis, other than what we know about how children learn. It's usually determined on state accreditation requirements. You know, if you can get by
with twenty-five, that's what you have. If you can get by with thirty, then you have thirty to teach. That's the basis on which class size is developed. Or it may be on square footage or some other criterion.

We have misnamed the adult in the classroom all of these years. We've called that adult the teacher, and the farther we go the more we are aware of the fact that nobody teaches anybody anything. You really can't tell people what to do. The best that you can hope to do is warn them about what you think they may be doing, but the child is teaching himself. Whether you like it or not, he's teaching himself. Now the thing that the teacher can do is provide an atmosphere in which learning can take place. I think that the teacher has a role, but it's a leadership role and not a pushing role. A lot of talk has been given attention in recent months to a concept called individualized instruction, and another fact that I would like to present to you is that individualized instruction is probably the only kind of instruction that is effective, and it can take place without regard to how many people are present. The individualized instruction is a frame of mind and not of numbers.

Let me diagram some things that go on. When we're in a classroom, we have a teacher and we have a pupil. We have twenty-five pupils in the classroom. What you need to think about for a moment is the fact that you do not have a teacher and twenty-five pupils. What you have is twenty-five
relationships involving a teacher and a pupil, because if the child is going to teach himself and do a fairly good effective job at it and the teacher is going to exercise any kind of influence that's meaningful in that relationship, the only real relationship that counts is the fact that there is a teacher and there are some pupils. The teacher says something which the pupil hears, internalizes, reacts to, provides an input to the teacher, who internalizes it and reacts to it. That's the cycle.

I think we have a lot in the regular classroom to learn from the things that have developed in the special education area, because this is the area that started off with the assumption that there was only one relationship in the classroom and that was a teacher-child relationship in multiples according to the number of children in the class. If there are ten children in the class, then there are ten teacher-child relationships in the class. I think that it holds a great deal of value for us in all of the classrooms in a school system to know that when we have the child-directed program we stand a much better chance of being put into a position where we can reward positive behavior, where we can support positive intellectual growth and we can do something more than give lip service to the idea of working with every child.
Curriculum Study Meeting Number 9

Developing Techniques of Instruction

Following is a summary of the material presented by the service center director:

I don't think much of a teacher who decides that the only way you can teach a kid social studies is to have him keep a notebook, or the only way to teach foreign language is with a lab, or by the direct method, or some other method. There is no "only way" to reach youngsters. We all put forth a great many outputs as we deal with other people and they organize and take in the ones that they can use, and then they put them in this corkscrew mental process and out they come as multiple outputs and we, in turn, organize the ones we think we can use. It's a pretty dangerous relationship, unless somebody is paying attention to what's going on, and I think that's really a teacher's responsibility in the classroom. Pay attention to what's going on. Now, there are several methods, several approaches to this thing. Let me very quickly talk about four traditional techniques of teaching and simply relate them with a one or two-word description.

The rote method is a technique, you know. You learn the multiplication table by the rote method; you multiply by memory on the multiplication table. You memorize; that's the rote method. The one-word description for the rote
method is "impersonal." There isn't anything personal about the rote method.

The lecture method is not at all like the rote method. It's entirely different, and I'm not making any judgments; I'm not telling you rote's good or rote's bad, or lecture's good or lecture's bad. I think there's probably a place for everything. That's what we're going to talk about, but I think that we have to know that when we use the rote method of learning we're using an impersonal method of learning, and we have to be sure that we have an appropriate time for an impersonal approach. The lecture method is personal, but it's a one-way personal. That's what we're doing today; we're having a one-way personal. You're learning about my feelings, but I'm not learning much about you. It's a one-way thing, but it's personal. If I had written this down and given it to you in writing, then it wouldn't be personal, but this is personal here; we can react to each other.

Then, we can go to a recitation method. We had that a minute ago when we were asking for responses and some of you responded as to how you felt; this is a recitation, and this is a two-way personal. You see, we react personally on this; it's an inactive two-way personal. The person doing the recitation is not really very active. The reaction here is a pretty quick one. Input occurs; it very quickly is translated into response, and response occurs. Now, if we had time, or somebody had time to do an awful lot of
research on it, I'm sure we could learn a great deal about the persons who spoke, who gave a reaction. If we really wanted to analyze real carefully the tone of voice, the facial expression, what they said, the order in which these responses occurred, what suggestions they followed, etc., we could learn a lot, but it hardly is worth that. It's a pretty inactive thing.

Another technique is an active personal, two-way kind of thing. The kid comes in and says, "What shall I do," and the teacher say, "What do you want to do? What do you think would be meaningful to do?" The child says, "I'll paint a picture; I'll make a scrapbook; I'll write a story; I'll do something; see, I'll make something; I'll construct or collect, or describe or do something," and the teacher supports this and says, "That's good; that's constructive." There's a little bit of the teacher in this thing; there's something of the teacher's personality in this relationship; there's something of the child's personality in this relationship. It's a pretty personal thing; it's a pretty active thing.

Now, how does it relate to this theory. See, we've described impersonal; we've described a one-way personal; we've described an inactive two-way personal and an active two-way personal relationship. That's a spectrum.

Now, there are some innovative things going on in techniques of instruction. There are so many things so far out,
that I hesitate to mention them to you. There are some other things that are being done in a lot of places now and have been done for a long time, but are still highly innovative in other places. For example, team teaching. The inquiry method of learning, inquiry and discovery, is another thing that is big. Way out into the twenty-first century is computer-assisted instruction. The kid comes in and punches his number onto the terminal, and the computer goes back and picks up where he was the last time he was there. It asks him the next question, and if he answers it wrong, the computer takes him back a certain number of steps and starts him again. If he answers that one wrong, it takes him back a certain number of steps. If he answers that one right, it jumps him forward a few steps and finds out where he is before proceeding with him in very small increments of information.

If we can choose instructional techniques in terms of trying to figure out exactly where that kid is, what doesn't he know, and what isn't he in command of; and if we can bracket it back and forth until we find out where he is, and then take him from there in increments that he can handle, we probably can do a pretty fair job of teaching school. We're going to have to learn to listen more than we talk. We're going to have to listen to the output that the student makes.
There is a different way to teach school besides just walking in and saying, "All right, everybody shut up and let's get to work." There's a different place to start, and if you start at the different place--by listening to what the kid has to say and reacting to that--and working from this output, you're going to find yourself in a very exciting situation. You're going to find yourself running very hard to stay up even, and you're probably going to find that the youngsters that you're dealing with are going to love what they're doing, get a great deal out of it, and remember you for the rest of their lives.

Curriculum Study Meeting Number 10

Evaluating the Educational Process

A short review of all material covered in the first nine meetings was followed by a lecture on evaluation. Following is a summary of the lecture:

Why evaluate? We evaluate for four reasons. First, to determine whether our goals have been achieved. Second, to predict future progress. Third, to adjust deficiencies, and fourth, to gain information for the next planning cycle.

How evaluate? We evaluate four different ways. First, we evaluate in terms of objectives; second, we evaluate in terms of validity with identifiable variables; third, we evaluate in terms of reliability with consistency rather than happenstance, and fourth, we evaluate in terms of representativeness, using valid samples.
What do we do with the results of the valuation? We should use the results to accomplish three ends. First, self-evaluation; second, product evaluation; and third, the evaluation should result in a planning tool.

The faculty then divided into four groups. Four speakers went from room to room, each discussing a different topic. The topics discussed were (1) "How to Use Standardized Test Results in the Evaluation and Planning Process," (2) "Using Teacher-Made Tests," (3) "Community Evaluation and Public Relations," (4) "Esoterical Congeries of Sophisticated Pedagogical Cognates."

Finally, the faculty reassembled in one group for a brief presentation by the service center director entitled "Where Do We Go From Here."

The service center director concluded with the thought that from now on it was up to the teachers. Service center personnel have shown you some of the things that are going on in the educational world and some methods that can be used to implement new ideas and techniques in teaching.

The faculty was invited to call upon the service center, through their superintendent, if they felt that the service center could be of assistance with any future plans.
APPENDIX D

PRESENTATION OF CERTIFICATES MEETING

Each person who participated in the curriculum study was presented with a certificate of completion. The superintendent was also furnished with a letter to be inserted in each teacher's permanent file certifying that the teacher had completed a course in Educational Planning conducted by the Region IX Education Service Center.
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