A pilot study of the suitability of the audio modular instructional approach for the continuing education of school administrators.

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A PILOT STUDY OF THE SUITABILITY OF
THE AUDIO MODULAR INSTRUCTIONAL APPROACH FOR
THE CONTINUING EDUCATION
OF SCHOOL ADMINISTRATORS

A Dissertation
By
Ernest Donald Herriman

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September, 1971
Dedicated to
Dr. Roger H. Peck
a teacher,
a scholar,
a colleague,
and most important
a friend
Acknowledgements

The completion of this study required the assistance of many understanding and dedicated individuals. The sincere appreciation of the investigator is extended to the school administrators, teachers, secretaries, housewives, and students who gave many hours of their time to participate in the study.

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Despite the many sacrifices she was required to make, are a source of pride to the investigator. In addition, her typing and assistance in the tabulation of the data were instrumental in the completion of the study. A special thanks to the investigator's son, Jeff, for his patience with a father who was many times not so patient.
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FIELDS OF STUDY

Secondary Education

Guidance and Counseling

Educational Administration
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CHAPTER I
INTRODUCTION

The demand for changes in the educational institutions of this country emanate from seemingly endless sources. Student protests, emphasizing dissatisfaction with the present curriculum and degree of involvement in the total school program, are becoming a common occurrence. Teachers are becoming militant, demanding not only a larger share of the financial resources but also a greater voice in policy and decision making. Citizen concern with the effectiveness of education received proportionate to funds spent has created a renewed emphasis on educational accountability.

Carl R. Rogers avers, "Education today is faced with incredible changes, different from, more serious than it has ever met in the long history. It will be clear that I see our whole educational system at a crisis point--a point of desperately important choice.¹ Galbraith portends a bright future for education as a social power factor if it makes certain changes, but he cautions:

These changes, important as they are, will not come easily to American Education. For one thing, next only to business men educators have acquired the habit of lecturing each other on their social responsibilities and as a necessary counterpart, since reaction to this flood of adjuration would be impossible, or ignoring it.²

Charles Silberman on the other hand intersices scathing criticism of education throughout his recent book, Crisis in the Classroom³ and Toffler writing in Future Shock comments:
Yet for all this rhetoric about the future, our schools face backward toward a dying system, rather than forward to the emerging new society.

The Changing Role of School Administrators

These, and other recent events, have mandated that the role of the school administrator, particularly the school principal, be redefined. The principal of the past, who dominated the school setting strictly by his role of authority-figure, is no longer acceptable. Rogers suggests that the successful administrator "will be responsible for organizing the resources of the institution—the teacher, the students, the funds, the equipment, and materials in such a way that all of the persons involved can work together toward defining and achieving their own educational goals." This role definition necessitates that the administrator develop skills to assist individuals in the determination of their goals. Recent research completed by Herzberg, McGregor, and others have demonstrated that individuals in our society no longer respect authoritarian management, and they function more readily when they are personally involved with the organization. This research points out that when individuals in an organization are involved in developing the goals of the organization and can determine that in satisfying the organization goals they are satisfying their own goals, the success prospects of the organization are enhanced. To develop the skills necessary to facilitate this type of organizational behavior requires the administrator to participate in continuing
learning process. The additional responsibilities and demands of the position, however, consume more of the individual’s time and energy, and negate his opportunities for returning to the university for additional professional improvement. How to provide the practicing administrator opportunities to acquire the necessary knowledge and skills in current educational trends and innovations has been an imposing concern of educators, which can be traced to the embryonic stages of American public education. The technique of in-service education has attempted to provide a solution.

Educational Opportunities for School Administrators

In-service education for administrators, prior to 1950, was meager and limited to university courses and national conventions sponsored by professional associations. University offerings consisted of a relatively few evening and Saturday classes, with the main emphasis on summer program offerings. The national conventions’ format usually consisted of a major address by the main speaker and continuous dialogue among the participants. The main speaker at the convention was usually a fellow administrator or college professor who had recently been an administrator. Following the address by the main speaker the convention participants congregated in groups to discuss current practices employed in their local districts. Callahan points out that although the conventions did not always produce significant educational changes, very often the decisions reached at these conventions determined the prevailing educational
These two approaches to in-service education, although of value to some, presented distinct disadvantages. One disadvantage was the time commitment required of the administrator. Many could not attend evening and Saturday classes at the university because of job-related obligations. The national conventions were not long range commitments, but required a concentrated time commitment which forced them to abdicate responsibilities—which was detrimental to administrators with a limited staff. Another disadvantage was the distance involved traveling to either the university or the convention when mobility was not as feasible as in contemporary times.

Serious concern regarding the involvement of more administrators in in-service education and in the development of new programs was first generated by the National Conference of Professors of Educational Administration in 1947. Two years later the group received financial support from the W. K. Kellogg Foundation, and "This proved a launching-pad for the activity of this group which subsequently has been instrumental in improving college and university programs for preparing educational administrators". The concern of these groups was that administrators had not fully divested the profession of the remnants of the scientific management philosophy as espoused by Fredrick Taylor. "Some people were saying that it was time for the educational administrator to leave his post as manager of technical details and to accept the role of educational statesman". Their combined statement regarding in-service education for administrators expresses many contemporary concerns:

10
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Most major positions in American schools are filled by men who completed their pre-service preparation programs several years ago. Since then there has been a great advance in the discovery of new information about the educative process and about community organization and new 'know-how' with respect to administrative duties. If practicing administrators are not promptly given the benefit of recent research findings and other contributions to knowledge, a considerable time-lag exists between the discovery and use of this new knowledge. ...Therefore, there is an overwhelming need to transmit to the men on the job as much new knowledge as possible to enable them to carry on more effectively their work of improving the educational systems of the United States and Canada.

This need for in-service training will probably increase in future years as civilization becomes more complex and as research is accelerated. Even the well-trained administrator of today will need in-service education tomorrow.12

Financial support from W. K. Kellogg Foundation provided the impetus for a flurry of interest in the area of in-service education for school administrators. In addition to the increase in university in-service programs there was an increase in the number of national conventions, state conventions, regional conferences, workshops, conferences, and more recently, programs sponsored by private corporations. The results of the effectiveness of the programs are inconclusive but Goldhammer states:

Although neglected at the present time by most of the preparatory institutions and related agencies, the continuous in-service education of administrators is one of the most imperative needs for the revitalization of education in our society. To provide those experiences which can effectively assist the trained professional to modify his behavior, to obtain the new knowledge which he needs, and to build new skills based upon contemporary technology is probably the greatest challenge facing the field of educational administration and all of its institutions and agencies today.13
In a survey made by the U.C.E.A. staff they concluded:

Recently published assessments of current in-service programs for educational administrators present a discouraging picture. The U.C.E.A. Central Staff, for example, has observed that there has been much less progress—in terms of organizational innovation and effective synthesis—in continuing education programs than in pre-service programs for school administrators, and this relative failure is indentified as one of the major problems which those in universities must seek to resolve within the next five years.¹⁴

The responsibility for in-service programs for educational administrators, although not delegated to a specific organization, has been assumed, in varying degrees and with questionable success, by numerous organizations. Briefly mentioned have been the participation of universities, professional associations, and private foundations in developing in-service programs. Other organizations concerned with the need for additional training programs for administrators, presently assigned administrative positions, have been the various state departments of education. The remainder of this section will focus on attempts made by one state department of education, in conjunction with a university, to provide the necessary technical and financial assistance for developing one component of a comprehensive in-service program.

The Florida State Department of Education

Florida State Department of Education has exerted educational leadership and has been instrumental in obtaining favorable legislation relative to differentiated staffing, in-service programs for teacher aides, and pre-service training programs for potential administrators.
The department also has recognized the need for in-service programs for practicing school administrators as an integral component of the differentiated staffing proposal. During planning meetings for the development of a state-wide program for flexible staff utilization, it became apparent that many problems would be encountered concerning the role of administrators in a differentiated staffing organization.

Proposed legislation had been submitted to the legislature regarding pre-service training for future administrators, but training for administrators presently in the position had been neglected. After further consideration, an informal survey was conducted to determine the extent of present in-service opportunities for school administrators. The results of the survey revealed that existing programs would not provide an administrator skills necessary to function in a flexible staffing situation. The state universities were contacted to determine their interest in developing training modules for school administrators, and when passive interest was expressed, the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, University of Massachusetts was contacted. The Center for Leadership and Administration, at the School of Education, expressed an interest in developing the proposed in-service program and was awarded the contract.

Development of Audio Instructional Modules

Following a study of various programmed learning devices the decision was made to design a "leadership training module" similar
to those being used in industry; of particular interest were those emphasizing a single concept through written material, simulation exercises, and audio tape recordings. The training modules developed (later referred to as audio instruction modules) were designed to provide school districts with an on-going training program which would afford educational leaders an opportunity to obtain leadership skills at their own learning rate and functioning within their own learning and working environment. The modules were designed as an in-service component for personnel presently assigned administrative positions.

During the initial planning stage of the in-service program, it was anticipated that five training modules would be developed for dissemination and field testing at the Florida Supervisor's Conference to be held in late September. One of the modules was to explore the decision making process, and four were to explore specific communication skills. It was assumed that field testing would provide some evidence as to the value of the modules as a viable in-service training technique.

Pilot Tests of Audio Modular Instruction

The first two in-service training modules were pilot tested at the Florida School Staffing Conference held at Crystal River, Florida, September 30-October 2, 1970. The purpose of the conference was to provide an opportunity for school districts participating in the Florida School Staffing Study pilot programs to come together and
discuss their various programs. A secondary objective of the conference was to inform the project participants of the in-service leadership training program being developed at the School of Education, University of Massachusetts. The conference also provided the participants an opportunity to become actively involved in the experiences provided by the modules, and to offer criticisms and suggestions for improvement of the modules. The two modules presented for pilot testing were: 1) Barriers to Effective Two-Way Communication; and 2) Feedback and Group Self Evaluation. The feedback received at the conference was generally supportive of the modular approach, and the constructive criticism appeared to concentrate on specific procedures used in certain parts of the modules.

Following the initial pilot testing at the Crystal River Conference, the completed modules were returned to the University of Massachusetts for revision based on the feedback. Upon completion of the revision of these modules and the development of the three remaining modules, a network for dissemination will be established, and coordinated through the Department of Education, Tallahassee, Florida.

Summary

It is obvious that the role of the school administrator in the future will change. The reality of the situation, that of thousands of practicing administrators presently in the field who have been trained for roles which are now antiquated, is rapidly becoming one
of education's greatest problems. This problem is surfacing at a time when very little developmental work has been done in the area of needed components for a comprehensive in-service program for school administrators.

The Florida State Department of Education has taken an initial step in investing a small amount of developmental money for the development of one possible component for such a comprehensive program. Some may question whether such developmental work should be undertaken before the conceptualization of all the possible components of a comprehensive in-service training for school administrators has been made. This is a legitimate concern, although it is also reasonable to conclude that until various possible components have been developed and tested, there will be no basis on which to decide the alternatives available or the strengths and weaknesses of the alternative components.

The proposed study will focus on testing the suitability of utilizing the audio modular instructional approach as one of the possible approaches to be included in a comprehensive in-service training program for school administrators.

Statement of the Problem

A major objective of the study was to determine the suitability of utilizing the audio modular instructional approach as an in-service training technique for presenting selected concepts and skills to school administrators.
The purposes of the study were:

1. Through the use of a field testing approach, have sixty individuals participate in one of the three audio modular units or set of units which have been developed. Twenty individuals participated in one of each of the three units or sets of units.

2. Through the use of "closed" and "open-ended" questions on a written questionnaire, determine the participant's attitudes toward their experience with the modular unit.

3. Through the use of questions soliciting a rank ordering process, and through a semantic differential scale determine the participant's attitude toward the audio modular approach as it compares with other forms of in-service training for school administrators.

4. Through the use of a posttest-only nonequivalent control group quasi-experimental design determine the cognitive and attitudinal changes which took place as a result of participating in the audio modular unit.

5. Through observing the individuals as they participate in the modular units, and through interviewing a number of the participants after their experience with the units determine the attitudes of the participants toward the audio modular approach.
6. Through an analysis and synthesis of the data develop conclusions and recommendations as to the effectiveness of the existing modules; the refinements which should be made in these modules; and the suitability of the utilization and further development of the audio modular instructional technique for in-service training of school administrators.

Definition of Terms

The following terms were defined operationally as used in this study.

Administrator—generally refers to an individual charged with administrative responsibility, but for the purpose of this study the term will be limited to a local school principal.

Attitude—the degree of positive or negative affect associated with some psychological object.

Audio-instructional module—a learning activity package including an audio tape containing instructions and a narration emphasizing, through a series of logical and sequential experiences, a single specific concept. It is comprised of: 1) performance objectives, 2) an audio tape, 3) a guidebook and selected references.

In determining the suitability of audio modular instruction as one component of a comprehensive in-service program for administrators
several factors were considered. One factor considered was the potential for future development to ascertain directions for developing future modules. Another factor in determining the suitability of the audio modular instruction approach was the motivation and interest expressed by the participants and their willingness to participate in additional modules. The success the participants attained in achieving the stated objectives of the modules, and the effectiveness of the modules in creating attitudinal changes were other factors which were considered.

Suitability--the extent to which audio modular instruction can be incorporated as an effective component of an in-service program for administrators. Criteria utilized were:

1. Potential for future development - The perception of the individuals, who have participated in the presently existing modules, concerning:
   a. the general value of the audio modular instructional techniques;
   b. the administrative skills and concepts which could best be learned through the audio modular instructional techniques as opposed to other techniques;
   c. strategies for the dissemination of modules and the possible barriers to getting administrators to utilize the modules;
2. Participant motivation and interest - Do the modules present the skills and concepts in such a manner that the participants will elect to participate in additional modules?

3. Achievement of the stated objectives - Generally, the extent to which the participants achieve the behavior as stated in the performance objectives for the modules.

4. Attitudinal changes - The degree to which participation and experience provided by the modules effect changes in the participants' attitudes.

In-service programs—any program of study undertaken after the completion of requirements for certification and during the tenure of service in the field of education.

Assumptions in the Study

1. Respondents would react candidly and honestly to questions concerning the strengths, weaknesses, and general value of the existing audio instructional modules.

2. The participants would follow the instructions as given in the modules.

3. Respondents would react to an attitudinal instrument in terms of their own attitudes as felt at the time of responding to the items.
Limitations of the Study

1. The design used in the attempt to determine the change effected by the modular experience was the posttest-only nonequivalent control design. This quasi-experimental group design has a major weakness, namely, the uncertainty as to whether the control group and experimental group would have been similar on the criteria measured in the study, before the training experience had taken place. Because of this, the findings regarding achievement and attitudinal changes must be viewed discriminately.

2. By the modular experience there was no extensive attempt to validate or to test the reliability of either the achievement tests or the attitudinal instruments. Again, because of these limitations, the findings regarding achievement and attitudinal changes must be viewed with caution.

3. Due to the length of the time required in completing the modules and assessment instruments there was a limitation as to the availability of participants who were receptive to participating in the study. In order to acquire a sufficient number of individuals to participate in the study, persons other than paracting administrators were utilized. Due to this factor discretion must be used in viewing the perceptions of the participants as to the value of the modules in aiding the school administrator.
Design of the Study

The study was exploratory in exploratory in nature, in that it was an initial attempt to determine the suitability of utilizing audio modular instruction for the in-service training of school administrators in selected skills and concepts. The study incorporated a field study technique utilizing a combination of five assessment procedures. The assessment design as it was used in the study is summarized in the following sections.

The participants attitude toward the module; the "closed" question technique: After each of the participants completed the modular unit they were asked to respond to a number of "closed" questions on a written questionnaire. These questions related to the participant's attitude toward this experience with the module. The focus of these questions was on such areas as interest, value to his own learning, and attitudes toward the technical aspects of the module. The number and percent of responses made for each response category was determined, and each question was analyzed separately.

The participants' attitude toward the audio modular approach with other in-service approaches: The participants were asked to rank-order a list of six different in-service approaches. Within this list was included the audio modular approach. Blanks were provided for the respondent to add any approaches which were not included. The data was analyzed two different ways. The first was to determine the number of times each approach was assigned a
certain rank value. The second approach was to weight the
responses and determine the weighted mean for each in-service
approach on the list.

Through the use of a semantic differential scale the participants
were asked to react to two concepts 1) "audio modular instruction as
one alternative approach for in-service education for school adminis-
trators" and 2) "in-service educational programs for administrators
in which you have participated (excluding the audio modular
approach)". The mean polarity scores were determined for the factors
of evaluation, potency, and activity. These mean scores for the two
concepts were subjected to a statistical analysis of variance to
determine if the differences in the mean scores reached a statistical
level of significance.

The cognitive and attitudinal changes that occurred. The post-
test-only nonequivalent control group quasi-experimental design was
used in an attempt to determine the cognitive and affective changes
which may have occurred from participating in the modules. The
groups were given two types of measurements. For the first method
three different achievement tests, based on the objectives for each
of the modular units, were constructed. Each member from the two
groups took one of the achievement tests. The difference in mean
scores between the groups was analyzed separately for each of the
three tests.

The second method incorporated the use of the semantic dif-
ferential scale. The connotative meanings for five different
concepts were determined for the members of the control group and the experimental group. These connotative meanings related to the traits of evaluation, potency, and activity. An analysis was made of the mean polarity scores for these traits as these traits related to the five separate concepts. The differences in these mean polarity scores between the control group and the experimental group was analyzed for each of the five concepts.

The perceptions of the investigator: The investigator made notes from his observations of the sessions in which the participants were participating in the modules. The data from these notes were analyzed and these findings were considered in making the final conclusions for the study.

Treatment of the Data: A Summary

The questions posed by the measurement instruments used in the framework for the analysis and treatment of the data collected. Since a combination of data-gathering methods were used, the data was presented in such narrative, tabular, or graphic form as was dictated by the data encountered. This was done in order to most appropriately depict the findings. The data were analyzed to provide impersonal, objective, and anonymous responses related to questions posed in the study.

Whenever quantitative analysis of the data were made the investigator utilized mathematical means, standard deviations, percentages, and analysis of variances. Subjective statements made by the participants were categorized and utilized extensively.
The conclusions and recommendations drew heavily on these subjective statements as well as the analysis of the quantified data.

Study Population

The study population for the present study consisted of two separate groups; the experimental group and the control group. The experimental group for the study were 59 of the sixty individuals who participated in the audio modular units during the field testing of the units. These individuals were from Florida, Massachusetts, Georgia, and Washington, D. C. They included school administrators, teachers, school secretaries, and wives of administrators. The control group consisted of 46 members who had not had the opportunity of participating in the modules at the time they responded to the assessment instruments. The members of the control group were from Massachusetts and Washington, D. C. They included school administrators, school secretaries, and teachers.

The field testing of the modules was conducted two different ways. For a portion of the study group the modules were completed in small group settings with the investigator being present. For the remaining portion of the study the modules and evaluation instruments were sent to the individuals for them to complete on their own. At least one fourth of the study group completed the study in the latter manner.
Significance of the Study

The increasing complexities of education confronting the school administrator necessitate a greater time commitment to the responsibilities of the position. Advances in educational technology, learning theories, etc. mandate that the educational administrator keep current and experience continual learning. The increasing responsibilities of the position however, prevent most administrators from returning to institutions of higher learning for any extended period of time. One solution to the dilemma is a meaningful in-service education program designed for administrators.

Audio instruction modules were designed to serve as one component of a comprehensive in-service program for school administrators. A basic function of the modules is to provide the administrator new information and materials in a succinct manner. The need for this type of in-service opportunity was expressed by the University Council for Educational Administration as one method for improving in-service education for administrators. They stated that a need exists for:

...designing a set of materials intended to inform administrators of the nature and use of new sources of information relevant to their problems and needs. 15

The development of meaningful in-service programs for administrators is an area that has been neglected by education in the past. A survey of the literature reveals that the majority of current in-service programs for administrators concentrate on past
and current problems providing "band-aid" solutions to crisis events. The responsibility for in-service program development has neither been assigned to nor assumed by any educational organization. Universities, professional organizations, state departments of education, private foundations, and private corporations have all dabbed with in-service programs for administrators, but it has been a secondary concern to these organizations. The need for meaningful programs is dire and unless educational administration becomes a profession, and provides continuous learning experiences for its membership, other interest groups will assume the responsibility.

Business and industry have recognized the need for providing its mid-management personnel continuous training. These groups have spent vast sums of money developing training programs, very much like audio modular instruction, and they will not hesitate to update, revise, and adapt the programs to in-service programs for school administrators. The reader may consider this an economically feasible procedure for obtaining in-service material, but discretion must be exercised. Are the goals of education compatible with the goals of business and industry?

An important component of this study was the opportunity afforded to evaluate audio modular instruction as an instructional technique. A main focus of evaluation was assessing the needs of the educational administrator in the State of Florida. The information and feedback gathered from the evaluation were collated and analyzed to determine areas of consensus regarding the effectiveness of the
present modules and directions for future development. A significant factor in the process was the involvement of the administrator in designing future programs to meet his needs as perceived by him.

A unique factor in the study was the distinct educational units involved. Cooperative planning and development of in-service programs between a state department of education and a university is not uncommon; it is less usual, however, when two different states are involved. A major factor impinging on this study was the geographic locations. This limitation necessitated that representatives from the University of Massachusetts travel approximately three thousand miles for on-site field testing.

**Organization of the Dissertation**

In Chapter I of the dissertation a description of the problem, its significance, the general design of the study, and the assumptions and limitations was set forth. Chapter II presents a review of the research and literature related to in-service and pre-service training of school administrators, and the problems and approaches to the assessment of training. In Chapter III is presented a description of the methodology used in the study. In Chapter V the findings of the study are presented and analyzed. In Chapter VI is found the summary, conclusions, and recommendations.
CHAPTER II
REVIEW OF RELATED RESEARCH
AND RELATED LITERATURE

The present study concerned itself with determining the suitability of using the audio modular instructional approach for in-servicing school administrators. The literature dealing with in-service training approaches which have been offered to school administrators is covered in later sections of this chapter. The literature describing the techniques utilized for assessing training programs is also set forth. The following sections include 1) a brief overview of the pre- and in-service training of administrators from 1900-1962; 2) the AASA Commission on In-service Education for School Administrators; 3) a view of the current in-service programs for school administrators; 4) research studies focusing on in-service training for school administrators; and 5) the assessment of training: problems and approaches.

Pre-service and In-service Training of Administrators from 1900-1962: A Brief Overview

In the first decade of the twentieth century courses to improve school administrators' skills were an exception rather than the rule. As Frank Spaulding wryly noted, "administrators entered their work with far less adequate preparation for it than the young woman for teaching who has never heard of a normal or training school." ¹
Following the turn of the century several internal and external factors converged to effectuate dramatic changes in education and create a demand for specialized educational administrative training. One of these internal factors was the sudden and unanticipated over-population occurring in many schools creating a shortage of trained staff and resources. Another, an external factor effecting a change in public education, was the Nation's infatuation with the charisma of the leading industrialists and business leaders and the techniques used by these individuals to achieve success. One of the more successful techniques which became shibboleth was scientific management as expounded by Fredrick Taylor and his disciples. This management philosophy infiltrated almost every aspect of American life including public education and the training programs of educational administrators. Citizens began clamoring for financial accountability and increased efficiency, and harried school administrators began searching for training programs which would provide them the skills necessary to meet the demands of their clientele. Compounding the administrators plight further was the pressure being exerted by newspapers, weekly magazines, and educational reformers for massive instructional improvement. These and other factors were instrumental in altering the self-image of administrators.
Callahan and Cremin both infer that the leading administrators prior to 1900 regarded themselves as scholars and educational statement, but the new trend appeared to demand more—an educational manager.

Callahan contends that "by 1930 the professional work in administration had reached a kind of maturity, and the pattern of work which was being taken by hundreds of students was firmly established." The pattern of programs offered at universities was such that administrators were being trained to concentrate on the technical aspects of the job:

.. .in these training programs any practical problem was a worthy subject for investigation even for the doctoral thesis. With the acceptance of this idea, the floodgates were opened. For years the leaders in administration had ignored the substance of education and had centered their attention on the mechanics of administration, in which area the number of fairly significant problems was limited and since there were hundreds of candidates who had to have research problems, someone was bound to end up with the plumbing. This work not only provided training in trivia for the individual candidates, it also lent the dignity of the great universities and the scientific label to these problems. 

Training programs for school administrators emphasized the management and technical aspects of the position for two more decades, and during the 1948-1949 regional conferences conducted across the country to study problems facing school administrators, it was found that:
Community leadership responsibilities had increased at a pace which was alarming to superintendents, most of whom felt inadequately prepared to meet these new responsibilities. One phase was repeated so often in conference after conference that it quickly became a professional cliche. It went something like this: 'The people in our communities demand educational leadership from us, but our training has been largely in the managerial aspects of the job'.

Another salient feature of educational training programs for school administrators during the first half of this century, was their neglect of administrative theory. The effect of this omission was reflected in the administrator's attitude, and was evident at their professional conferences as reflected by the following statement.

The administrators exchange shop talk on successful techniques and relate how they have solved problems in their local districts. Unlike critics say they swap recipes and tell personal success stories. Is there any talk about the theory of educational administration? Not much. Theory may be all right for the college professor in his ivy covered tower, but we are practical men faced with the tough job of administering real schools in real communities, and theory usually is impractical, visionary and idealistic.

Numerous forces were responsible for the type of educational training programs developed for school administrators during the first half of this century. A few of these have been cited,
but Callahan contends the major responsibility for development of training programs which prepared school administrators, more interested in a smooth functioning plant than in educational quality, must be assigned to university schools of education and their professional staff.

The nature of the courses and programs that were established and of the work done by students (e.g. on doctoral dissertation) was determined to a considerable extent by men who were in the relatively secure shelter of the universities. Since these men were in a less vulnerable position and therefore had more freedom of action, and since they were the guardians of the knowledge and the symbols of expertise (credits and degrees), they were in a strategic position to influence the nature of the professional work in educational administration, and so, to influence the nature of the superintendency. 10

Although the type of training opportunities available to administrators during this period were restricted and the program quality questionable, there was, at least, an attempt to provide educational experiences to individuals entering the profession. The opportunities for additional formal educational experiences after individuals assumed administrative positions, however, were negligible. So many resources, human, material, and financial, were focused on preparing future school administrators, that there was little available for the development of individuals established in administrative positions.
The in-service opportunities for school administrators prior to 1950 were limited to "professional magazines, publications coming from professional associations, annual conventions, consultation from state departments of education, and from various kinds of on-the-job extension courses conducted by colleges." 11

Thus a pattern was established for programs to train educational administrators during the 1915-1930 era continued as a training model for the next twenty-five years. The focus of the programs was on the preparation of school administrators, and preparation programs emphasized the development of technical skills required for the position. One salient feature of the training programs was the omission of educational opportunities for administrators once they acquired an administrative position. Callahan described the type of administrators produced by the program:

The whole development produced men who did not understand education or scholarship. Thus they could and did approach education in a businesslike, mechanical, organizational way. They saw nothing wrong with imposing impossible loads on high school teachers, because they were not students or scholars and did not understand the need for time for study and preparation. Their training had been superficial, and they saw no need for depth or scholarship. 12

Perhaps most important was the multiplying effect of the programs:

Between 1915-1929, thousands of men had received professional training at the master's degree level and had gone into important educational positions all over the country. More important, hundreds had received their doctor's degrees in educational administration and had gone into even more important positions as superintendents of large cities, as officials,
in state departments of education, and most important of all, as professors of education in teachers colleges and universities where they taught teachers and other student administrators and directed research studies even for the doctor's degree. 13

Following World War II, a renewed interest was expressed in the improvement of school administration and educational training programs for school administrators. The reason for this renewed interest was due largely to the increased enrollment in elementary school and more interest in adult educational programs. On this point the Kellogg Foundation Report concludes:

...more important than quantity was quality. The times demanded the very best education that the nation could provide.

If the schools were to educate more and more people and do it better and better, if they were to answer their critics with solid educational achievements—the effectiveness of educational leadership in America had to be improved. The key position for providing this essential leadership was occupied by the educational administrator. Some people were saying that it was time for the educational administrator to leave his post as manager of technical details and to accept the role of educational statesmen. 14

In a effort to assist educational administrators in accepting the challenge of role redefinition, various interested groups and professional organizations merged to study the problems confronting educational administrators. The four groups most instrumental in the developmental phase of the study were the W. K. Kellogg Foundation, the American Association of School Administrators, the National Conference of Professors of
Educational Administration, and the Council of Chief State School Officers. 15

In the first phase of the project, five regional exploratory conferences were established across the country with "the major purposes of identifying and defining the chief problems of American school administrators and of suggesting courses of action to be taken in dealing with these problems." 16 The results of these conferences demonstrated there was indeed an urgent need to study the changing nature of public school administration in this country, and to in-service those practitioners already in the field. It was concluded that

Perhaps most important of all was the need for effective in-service help to administrators now on the job whose pre-service training was already complete but who still needed the benefit of new research. For them must be found ways of sharing new practices with other administrators. 17

Following compilation and evaluation of the information received from the exploratory conferences, the second phase of the project was implemented. Eight regional university training centers were established with "the purpose of conducting demonstrations and experiments relative to the pre-service and in-service training of school administrators as well as the coordination of the programs of various participating institutions within their regions and the dissemination of resultant ideas to the profession of the nation." 18
In the same decade, 1950-1960, which saw implementation of the Cooperative Program in Educational Administration Project, there were numerous studies relating to the improvement of training programs for school administrators. Farquhar refers to the latter part of the decade as the puberty stage of professional preparation in educational administration:

If the childhood of professional preparation in educational administration was reflected in the glorification of individualized prescriptive techniques, then its puberty might have been the discovery and use in the late fifties and early sixties of generalizable concepts and modes of inquiry in the social sciences, which were joyfully embraced because of both their apparent relevance and their academic acceptability. 19

One example which demonstrates this directional change in professional preparation was the perception of administrators and their professional organizations regarding training requirements for potential administrators. A study completed for the National Association of Secondary School Principals, established fourteen basic preparation requirements for secondary school principals.

Among these requirements were:

1. Philosophy of education
2. Study of youth and their needs
3. Curriculum and method
4. Community life and needs
5. Comparative and international education
6. Municipal administration in relation to public education
7. Organization and administration of the secondary school in terms of the meaning of democracy
8. Interships 20

Six years later a study conducted by Adolph Unruh focused on
practicing administrators' perceptions of effective training programs for potential administrators and the results indicated that: (1) one year of graduate training was inadequate for most school administrators; (2) greater emphasis should be placed on courses representing academic areas impinging on administrative work; (3) programs should include training in specialized areas of administration; (4) there should be a differentiation of training between individuals preparing for the superintendency. 21

Summary

The training of educational administrators prior to 1962 was based primarily on pre-service activities, yet there was a growing realization for the need of in-service programs. As Wynn has stated:

For every young person equipped with preservice education and about to enter administrative work for the first time, there are about ten veteran administrators struggling with problems on the job, facing the tremendous task of trying to keep abreast of rapid developments... The vast, relatively unexplored area of the future lies in the promotion of continual professional development. . . There is evidence that present inservice programs are spotty and uncoordinated. 22

The years following the launching of Sputnik I forced realization of the fact that school administrators had to be the educational leaders of society, that they were true "professional" men in a field that was probably the least tangible and had the least specific content of any, and that new types of training activities were needed.
AASA Commission on In-service Education for School Administrators

In 1962, the American Association of School Administrators came to the conclusion that the dizzying pace of cultural change had brought American school administrators a multiplicity of new problems, ranging from the introduction of new technological inventions to the geometric increase of a body of new knowledge crucial to the culture of the times. Every superintendent was confronted with the need for broader understanding and greater skill as a professional leader. The superintendents needed help, but it did not appear that help was available. An AASA report stated it as follows:

To put it simply and bluntly: If he will do his job well, he must have help. But to need help and to secure help are two entirely different matters. Traditionally, the people of this country have not lodged with any agency or institution a substantial measure of responsibility for providing in-service assistance to school administration. 23

Against a backdrop of these circumstances the Association created a special Commission on In-service Education for School Administration and charged it with the specific responsibility of making a comprehensive report on the whole problem of upgrading the knowledge and skills of the school administrator.

After several meetings the Commission concluded that to develop and sustain a continuing program of services to school administration, attention must be focused on 25 crucial points. A summary of some of these crucial points is listed below:
1. **Initiation.** Circumstances must prevail wherein it is relatively easy to get in-service programs under way.

2. **Planning.** Responsibility for planning any in-service program should be shared by those who receive the service and those who provide it.

3. **Finance.** The in-service program should be so financed so that nobody in the state will be deprived of services essential to the effective operation of the schools in the district because of the lack of funds.

4. **Orientation.** The in-service program should be indigenous to the locality in which the service is rendered. It should fit the situation. It should be applicable.

5. **The Point of Beginning.** To start where the people are—a well-established principle of teaching and learning—is as essential to an in-service program as it is to any other aspect of the educational enterprise.

6. **Know-How and Knowledge.** An in-service education program that limits its purpose merely to the development of know-how falls far short of its full purpose.

7. **The Individual.** The individual's role in an in-service program, particularly if he is the superintendent, must be an active one. He must want to grow and profit from his experience.

8. **Personnel.** The people who take major responsibility for making the contacts and providing the cluster of services that constitute a total in-service program to school administration must be capable, thoroughly informed, and highly successful in working with mature people in informal situations.

9. **Credit.** Administrators and other educational leaders in school districts in every state are motivated toward further professional growth, and as standards are set by certification
requirements, criteria for employment, and membership in professional organizations in terms of a degree or a specified number of college hours, it is sheer nonsense to pretend or to assume that the ablest people in the profession will not want to meet these requirements. And it is equally nonsensical to believe that any great percentage of them can leave their positions and their responsibilities for a full year or two to meet these requirements.

10. Flexibility. The element of flexibility is predominant in any in-service program that is problem oriented and adapted to the needs of local districts. Cooperative planning opens the way for flexibility that may be achieved through a wide variety of approaches.

11. Team Spirit. People who seek assistance and receive help through an in-service program should not get the impression they are being talked down to or that they are being regarded as unequals of the people providing the service.

12. Simplicity. An in-service program is likely to be most effective in its early stages if it is simply organized, if it avoids undertaking too many things at once, and if it does not become involved too early in a problem or issue that is so complex and so intricate that a long span of time will be necessary to arrive at any appreciable goals.

13. Resources. The in-service education program should draw on a wide variety of resources--information, materials, and personnel--outside as well as inside the field of education.

14. Policy. After careful study and deliberation, the local school board, following the recommendations of the superintendent, should adopt a policy that establishes the general framework within which an in-service program can be developed and
operated. This policy should be well publicized so that people in the school district will clearly understand the ends to which school funds allocated for this purpose are being used and be fully aware of the special efforts school personnel are making to improve their professional competencies.

15. Payoff. The in-service program must stand up well under the rigid test of usefulness. 24

The Commission conducted an extensive survey to determine the number and types of in-service programs being conducted throughout the nation at that time, directing inquiries to approximately 250 educational leaders--heads of state administrative groups, state school boards associations, and schools of education in public and private institutions of higher learning throughout the United States.

In reporting the results of the survey the Commission selected types of programs in colleges and universities, state departments of education, professional associations of school administrators, and local school districts. In studying institutions of higher learning, the Commission chose to give a detailed description of the organization and operation of the in-service programs of Indiana University, the components of which were quite similar to those programs found in other universities at that time. This descriptive report was followed by pinpointed descriptions of more specific aspects of in-service programs in several other institutions of higher learning.
The following is a description of the context in which the components of the program function:

The University's Division of School Administration, its Bureau of Field Services, and its Placement Bureau work closely with the State Department of Public Instruction, the State School Boards Association, and associations of school administrators on a wide variety of educational undertakings, problems, and issues. The Division of School Administration is responsible for preservice preparation of school administrators, placement of administrators and teachers, and provision for other services as needed by school corporations. The director of the Division and his staff have established rapport and communicate effectively with practitioners in several organizations of school administrators. For example, the director of the Division works closely with the Indiana Association of School Administrators. Another staff member spends half of his time serving as the executive secretary of the Indiana School Boards Association and the other half of his time as professor of school law. Another staff member serves as chairman and sponsor of the Indiana North Central Association of Colleges and Secondary Schools, and still another acts as sponsor of the Indiana Elementary Principals Association. 25

In-service programs at the Indiana University had been provided through extension classes, school surveys, workshops, consultant service, and publications.

Many of the institutions responding to the Commission's inquiry reported continuing programs comparable, in many respects, to the in-service program at Indiana University. Most of these programs operate within an area in relatively close proximity to the University. 26

The following are examples of programs which appeared to be somewhat unique:
**Regional Study Group.** Superintendents in the state of Virginia were meeting regularly in five regional groups to study problems affecting public education. Each group was acting independently in planning its programs and projects, but, in instances when the advantages were readily discernible, two or more groups planned joint programs.

**Advanced Administrative Institute.** The executive director of the Center for Field Services, Graduate School of Education, Harvard University, in reporting on the in-service educational program at this institution, called attention in particular to the Advanced Administrative Institute. Due to the nature of the program and the limitation of facilities, attendance at this Institute was by invitation only. The Advanced Administrative Institute had grown out of the recognition by the Graduate School of Education of the need for programs particularly aimed at the practicing school superintendent.

**Practicums.** The School of Education, University of Miami, was working with the Dade County (Florida) Public Schools, which were in close proximity to the university campus, in a series of self-study practicums. The leadership for each self-study practicum was vested in the school principal, with the county school supervisor and a university professor serving as consultants. Participants could earn academic credit, and the program might involve the total faculty of the school. The practicum set the stage for continuing in-service education under the principal's leadership.

**Social Science Institutes.** The University of California at Berkeley was sponsoring a series of social science institutes. These institutes were designed to increase the administrator's knowledge and understanding of the social sciences which undergird the practice of school administration—economics, sociology, social psychology, and public administration. Participation in these institutes was limited to 35 selected superintendents.

**Interinstitutional Workshop.** The Interinstitutional Workshop at Michigan State University was a course
that was to be expanded to include in-service training for selected administrators in the state of Michigan. This program had been organized and conducted to give school administrators opportunity to meet distinguished scholars and leaders from all over the United States and from other countries of the world face to face and to engage in direct give-and-take discussion with them.

Research. A state research committee in Michigan, working in conjunction with institutions of higher education, had been organized to study educational issues on a state-wide basis. A coordinator from the State Department of Public Instruction, who was qualified to direct the research activities of all cooperating agencies, made special effort to bring to the attention of skilled research workers problems of real concern to administrators.

Interdisciplinary Seminar. Michigan State University was operating an interdisciplinary extern class for practicing school administrators and persons training for school administration. Outstanding people in education, communications, industry, philosophy, and other disciplines made presentations and joined in the discussion at the meetings. The membership of the extern classes included veteran school administrators, secondary principals, elementary principals, and graduate students training for administrative positions. The group would think through and react to problems in government, human relations, social control, power structure in community life, curriculum content, leadership, and cultural change.

Conference on Administrative Problems. Of the many continuing in-service programs sponsored by Teachers College, Columbia University, the annual conference on administrative problems of superintendents of schools and other administrative and supervisory officers was perhaps best known. This was an invitational conference, with membership limited to approximately one person per state. Through intensive day and evening sessions, six days a week for a three-week period, the participants worked with outstanding resource persons from communications, government, political science, science, banking, and education.
A Clearing house. The School of Education, University of Denver, through its Bureau of Educational Research, was working closely with the Rocky Mountain School Study Council in an extensive and continuous program of services to school administration. Through this cooperative working arrangement, a clearing-house for information and ideas pertaining to the work of all phases of school administration was maintained. School administrators in the entire Denver metropolitan area were involved.

Resident Seminars. The University of Chicago had initiated a series of resident seminars for superintendents. The underlying purpose of these seminars was to clarify objectives and to reassess procedures in the schools as they faced the tremendous task of organizing into comprehensible form the increasing bodies of information in mathematics, science, and the social studies. 27

In-service programs of the state school boards associations surveyed by AASA emphasized cooperation with state associations of school administrators, institutions of higher learning, and state departments of public instruction. The common mode is the use of work conferences and publications.

The Commission felt that state associations of school administrators were--to a greater extent than in previous years--feeling and accepting responsibility for the profession of school administration.

The Commission described two programs sponsored by state associations: (1) School Management Institute (described in detail later in the present document) and (2) area study groups. They described the area study group as follows:
Area Study Groups. The Texas Association of School Administrators and the Texas Education Agency were working together in a state-wide project for the improvement of school administration. This project was begun in 1955 by dividing the state into 28 work-project areas. In each area, there was an organization of superintendents to direct such activities as summer conferences, workshops, study groups, and a state-wide curriculum study. Services of consultants from colleges and universities, strong public school systems, and the Texas Education Agency were utilized. Publications produced included 10 study guides for school superintendents, guides to instruction in 10 subject areas, and a handbook for school board members. 28

The Commission, in studying state educational agencies, found that many state departments of education had joined with institutions of higher education in sponsoring institutes, workshops, and conferences for school superintendents, school board members, principals, and supervisors. These programs usually take the form of annual state-wide conferences devoted largely to planning, annual orientation conferences for new personnel, drive-in conferences held periodically in various sections of the state, and staff conferences with administrators and supervisors in local school districts.

The following are some examples of state department programs.

Educational Conference Board. The New York State Department of Education had worked effectively for many years with the Educational Conference Board in this state. This was an agency composed of the New York State Teachers Association, and New York State School Boards Association, the New York State Congress of Parents and Teachers, the New York State Association of District Superintendents, the New York State Council of City and
Village Superintendents, the New York State Association of Elementary School Principals, the Public Education Association, and the New York State Citizens Committee for the Public Schools.

Any member of the Conference Board could bring before it an educational problem or project for discussion by all members. If all were agreed that a given program was desirable and sound, the Conference Board sponsored it by gathering significant facts, promoting research, and publishing the results for use in the promotion of programs for the improvement of education. The Conference Board had been instrumental in securing funds for research and sponsoring research basic to state-wide educational need.

Instructional Improvement. The supervisory staff in each Florida county school system annually filed a statement of plans with the State Department of Education for the improvement of instruction during the current school year. Members of the State Department of Education studied these plans and then met with the local supervisory staff to consider possibilities for strengthening and improving them.

Joint Conferences. "Operation Bootstrap" was the descriptive title of a series of 3 day conferences in Georgia in which superintendents had the opportunity to hear outstanding speakers from all over the nation. The State Department of Education, the Georgia Association of School Superintendents, and the University of Georgia worked together in developing and supporting these conferences. The director of the Division of Surveys and Field Studies at the University of Georgia served as conference coordinator. Professional staff members of the State Department of Education brought superintendents up to date on new policies of the State Board of Education, new legislation, plans, and programs sponsored by the State Department of Education.
Study Councils. The State Department of Education in Tennessee worked closely with four study councils. Listed in the order of their origin, they were councils for school superintendents, principals, system-wide supervisors, and local attendance teachers. Each council was designed for cooperative problem study by people with similar jobs and some common problems.

Sponsorship provided (a) consultants as needed from the Department or from elsewhere, (b) executive secretarial services by a member of the State Department, (c) travel expenses for the meeting of the State Steering Committee, and (d) travel expenses for the over-all annual meeting. Sponsorship did not bring control from the State Department, for each council selected its own problems for study, conducted its study as it saw fit, and decided what it would include in its report.

Curriculum Development. The Oregon State Department of Education operated a series of workshops to strengthen administrative leadership in curriculum development. Well-versed authorities in educational administration and curriculum were employed by the Department to work with its own members in providing consultant services in the workshops. The purposes of these workshops were to help school administrators understand the reasons for curriculum revision and to give them the understandings and skills necessary for initiating and carrying out local curriculum development programs.

School-Plant Planning. The Oregon School Board Association and the Oregon Association of School Administrators had cooperated in a series of school-plant planning conferences over a period of eight years. The purpose of these conferences was to keep people who were primarily responsible for school-plant planning abreast of the latest developments in design, building materials, lighting, heating, ventilation, space utilization, and construction.
Although there was a great variation in depth and breath, the commission found that in-service programs for administrators and school board members were common in local districts. Most larger city districts had extensive programs within their own units and participated widely in in-service programs at national, state, and regional levels. Smaller school systems generally depended on programs planned outside the local district. The following summarizes the programs being conducted in the smaller districts:

Smaller Districts. In-service programs for administrators in small districts could include—

(1) Attendance at national, state, and regional meetings and workshops. Generally, the total cost of registration, travel, and subsistence was paid by the district. (2) Credit courses offered by institutions of higher learning either on campus or at extension centers. Many school districts partially subsidized or even paid the total costs of such study, though, sometimes administrators paid registration fees for credit courses if the credit was used in meeting requirements for an advanced degree. (3) Use of outside consultants. State governmental agencies and many tax-supported institutions of higher education offered such services on a no-fee basis, but, due to the increase in demand and the lack of funds to meet the demand, an increasing number of colleges and universities were being forced to charge for consultant services. (4) Subscriptions to magazines, bulletins, and other publications. Sometimes, such publications were purchased with school district funds, but in many instances, they were paid for by the superintendent himself and regarded as an investment in his own professional growth.

Larger Districts. In the numerous and variety daily tasks to be performed in the large school district, new information was
developed, new insights were obtained, and workable solutions to problems were found, thus in-service growth on the part of everyone involved inevitably took place. But over and above these workaday activities, most large school systems had developed in-service programs. Some of these programs are described below.

Graduate study. In 1954, the Flint Graduate Center for Community School Leadership was organized in conjunction with Eastern Michigan University. The purpose of this program was to prepare educational leaders. The community was used as an experience laboratory. Administrators in the Flint school system were required to enroll in this program, which could lead to the M. S. degree at Eastern Michigan or to the six-year degree at Michigan State University. This program had been opened to people outside Flint and attracted 400 to 500 enrollees each semester.

Business, industry, and education. The Leadership Training Seminar, sponsored in cooperation with the University of Chicago Industrial Relations Center, was another in-service program that was operated in the Flint school system. This program enrolled 120 school administrators and the same number of Flint business and industrial administrators. Spread over three semesters, this seminar covered leadership techniques, communication skills, and management-employee relations for business, industry, and education.

A doctoral program. Chicago had initiated a program for administrators which might be considered both in-service and pre-service. It was so termed because administrators on the job, as well as individuals preparing for administrative positions, might enroll. This administrative internship program was a cooperative project supported by universities in the area and the Chicago public schools. It was a part of a two-year doctoral program in which the candidate spent one year at a university and one year as an intern with a principal or with a district assistant or associate superintendent who directed his field activities.
District superintendents and principals. The district superintendents in Chicago were providing the leadership for and giving direction to in-service education for men and women already employed as school administrators in the city system. There were 20 district superintendents, each of whom had under his supervision 20 to 30 principals of elementary and secondary schools. In each of the 20 districts, study groups and committees of principals worked on projects growing out of needs in the district.31

The Commission concluded from the data that:

Clearly, there was a tremendous range and variety of programs under way. Nearly everything that could be thought of or imagined that had implications for improving school administration, and for making the schools better was being tried somewhere in some degree and in some fashion. Programs range all the way from high-level, concentrated seminars involving carefully selected people over a period of several weeks to informal evening meetings of administrators and school board members in which procedures for purchasing school supplies were discussed.

From this overview, one received the impression of a ferment, of a stirring, of something in the making with more promise than accomplishment. Administrators and school boards were groping for deeper insights and clearer vision.

This overview of an in-service program, despite all that was being done, indicated that only a small number of school systems and superintendents were being reached with worthwhile programs. For the most part, it was the stronger school systems that were served best.32

In the following section is presented a view of the in-service programs for school administrators as they exist presently; approximately ten years after the AASA Commission's report.
A View of the Current In-service Training Programs Available to School Administrators

It appears that the current state-of-the-field, as it relates to in-service programs available for school administrators, looks about the same as it did when the AASA Commission conducted their study in 1962. Although there has been some change in content in the past ten years, the in-service techniques employed by universities, state departments of education, professional associations, and local school districts appear to be the same. Concerning the content of the present programs, there appears to be ten more emphasis on humanistic concerns and the concerns of the inner-city schools. Two other content areas which are being emphasized more are, 1) systemic programs, planning, and budgeting techniques, and 2) the role of the humanities in school administration.

In the discussion below are presented some of the aspects of the current in-service programs for administrators, as determined by studies conducted after the AASA Commission report in 1962.

Aspects of Current In-service Programs, as Determined by Studies Conducted Since 1962

The most obvious source of continuing education is individual reading, research, or writing. This method is dependent on adequate library facilities and one's own ability to select appropriate material. Also, this method depends on what can be read rather than on the interaction of another person or group.
The university still appears to be a logical resource for the in-service role of the university, but that interest has not been expressed into programs of action to date. Reporting on a survey of UCEA members in 1966, concerning the status of university in-service programs for school administrators, Howsam reports:

I am led to venture the expression of the feeling that the overall picture, with relatively few exceptions, is one of sporadic activities conducted in rather traditional patterns...There was little evidence of any ferment in the area of inservice education. Few responded to the request for information about any new development in prospect. Experimentation may be implied in the reports of some other institutions, but it certainly is not emphasized. One gets the impression that we are, by and large, sitting on our collective hands at a time when we can ill afford to be warming our hands in this fashion.34

Goldhammer confirmed this survey a year later with specific references to practicing superintendents:

In practically all of the mature professions, preparatory institutions maintain considerable resources for the continuing educational needs of practitioners throughout their careers. In educational administration, it seems that little is being done in the inservice education of superintendents, and even less is done well.36

In 1970, Becker surveyed 87 colleges and universities of which only 23 percent had some program of formalized in-service for principals on-the-job. Becker reported on one university program which had been in existence since 1956, and had served 7000 administrators through a series of year long workshops covering
a variety of topics of interest to the participants. A second program which Becker described an "extern" plan where principals attended a series of 10 weekend meetings which concentrated on teaching "fact-finding" skills in relation to current social issues. At the end of the year, each extern principal submits a critical analysis of a problem in his school for critique by university staff members.

Another major medium for in-service is still the convention or meeting of a professional organization. The limitations of this method are largely those of size and time. Gatherings of this type usually can only superficially deal with specific topics of interest and are often characterized by lengthy business meetings, addresses, and socializing. While these meetings do serve useful functions, it is unrealistic to expect very much in the way of in-depth professional re-training at a three day national or state convention. A promising trend, however, has developed recently with the Association for Supervision and Curriculum Development and the National Association of Elementary School Principals in providing a number of topical, in-depth seminars which one may attend during the duration of the convention. Workshops and conferences on a specific problem area are also offered by professional organizations; however, these are often infrequent and necessitate travel from the job site.

A notable exception to the general program development efforts in in-service education by the professional associations is the National Academy of School Executives (NASE sponsored by the AASA.
The Academy was founded in 1968, to "meet the professional growth needs of well-prepared and fully credentialed school administrators living in a period of continuous change". Realizing the shortcomings of national conventions as vehicles for in-service training, the Association launched the Academy which then systematically determined the training needs of practicing school administrators. After an analysis of the reported needs was made, the Academy has offered a continual program of week-long seminars/workshops which concentrate on the skills a practitioner will need in order to deal with a particular issue. The meetings are held at various locations in the country and the enrollment is limited to a manageable number. Frequently in the planning stage are two other dimensions of the original model for the Academy—a longer (3 month) training program offered at a residential center concentrating on broad, strategic concerns in education, and a "think tank" component for the generation and development of new ideas. The Academy would seem to have the potential to become the parallel of the management training courses offered by the American Management Association. During 1970, 863 administrators attended Academy sessions; however 74 percent of these were superintendents of assistant superintendents. Nothing such as the Academy exists mainly for school principals at present.

State departments of education are still involved in some in-service efforts; however, these are often aimed at instructing local administrators in the technical implementation of a state
department program or procedure. Again, it appears the large size of the potential clientel limits the effectiveness of state department programs. Only a small percentage of principals during any given year will be able to attend state department offerings. Becker also concluded from his survey that there was a general lack of confidence in the professional expertise of state department of education personnel on the part of principals.

On the local school system level, the writer could find no evidence of a comprehensive plan for the in-service training of principals. In 1971, Crocker conducted a survey to determine the extent to which such programs existed. After reviewing the literature and finding no reported programs, he sent out a letter to 16 selected school systems, requesting information on current programs for in-service training of school administrators. Replies were received from 12, of which 5 indicated some type of in-service program for administrators. In 1968, Plele surveyed the literature on in-service training of school administrators, and no reference is cited dealing with any local plan for action. In fact, only two references are listed which even propose a systematic program. One of these plans is on a state wide basis, and the other would be on a nation wide basis under the direction of a professional organization. Apparently, most school districts rely on the initiative and resourcefulness of the individual principal to meet his own in-service needs. Some districts provide a sabbatical leave plan to allow the principal to leave his job for an extended length of
time for study, but the district does not assist the principal to identify his needs nor guide him to resources. Also, some districts will provide in-service for principals who are undertaking a new curriculum venture, which usually means granting professional leave for a few days to allow the principal to attend the training sessions given by an outside agency. The extent of most local efforts is the publicizing of programs or workshops which began to be held in the immediate geographical area. In 1969, the chairman of the AASA Commission on Professional School Administrators stated:

Content of inservice programs may have been changing somewhat. . . but the resources for inservice education remained largely the same. Professional organizations, universities, and state departments continued to be the primary sources of inservice programs. The techniques used and the resources applied, however, were largely traditional. 43

In summarizing the 1970 survey of elementary school principals, Becker 44 comments that all principals, regardless of their competency, were asking for assistance, but that the sources of assistance were inadequate:

The adequacy of the services available to elementary school principals is questionable. The principals' own associations do not appear geared to give assistance, or to offer the specific kinds of aids which are needed. . . Nationally as well as on the state and local levels, the associations tend to deal with generalized problems in their professional activities. State departments of education appear to have some concern but generally lack the resources to render the specific assistance desired. . . Although the state departments provide some inservice programs,
with few exceptions these programs involve disseminating information which would be of value to the state department and the accomplishment of its objectives. Universities offer few means of assistance other than what is made available through formal graduate programs... In less than a handful of states are systematic and consistent inservice programs provided, but even these are not requirements for maintaining either contracts or certificates to practice. Few school districts seem to enforce regulations for maintaining currency of knowledge and fewer school districts actually develop their own well-devised programs that particularly identify their needs.45

The 1963 Commission on In-service Education for School Administrators stated:

Traditionally, the people of this country have not lodged with any agency or institution a substantial measure of responsibility for providing inservice assistance to school administrators.46

Almost ten years later, this same situation exists.

Summary

It can be concluded that although there are several potential organizational resources for the in-service training of principals, none has realized this potential to date. The school principal is left to his own devices to provide for his continuing education.

In the following section is presented a description of the research studies which have been conducted in an attempt to determine the effectiveness of various in-service training programs for school administrators.
Research Studies Focusing on
In-service Training for
School Administrators

Specific research studies in the area of in-service education of school administrators, are exceedingly limited. While the body of literature in this field is rapidly expanding, most of it is addressed to: (a) a recognition of the need for administrators to continue their development after beginning their practice, (b) a reporting of new or current practice, or (c) a projection of the need for new innovations in this field.

Illustrative of the dearth of research in this area, in 1957 Moore cited some twenty-six references specifically related to in-service education of administrators. Of these only one alluded to determining the effects in-service education had on administrators. It, too, proposed research procedures rather than the consequences of such procedures. Thus the related literature seems to express more of an awareness and renewed interest in the in-service education of administrators than actual research in the area.

Because of the lack of reported professionally conducted research studies in the area of in-service education for school administrators the investigator has had to rely on two major resources for the data in this section. These sources are (1) the studies conducted by Ogletree and his associates at the University of Kentucky and (2) studies conducted as dissertations by doctorial candidates.
Although no extensive effort was made to search the literature for studies on training outside the field of educational administration, one study focused on training of industrial personnel is reported in the following sections. This study, conducted by Belasco and Trice appears to have sufficient application to the present study to warrant its inclusion in this report.

The following section describes the experimentation conducted at the University of Kentucky.

Program of Experimentation in Preparing Educational Leaders: University of Kentucky

Between the years 1960-1964, Olgetree and his associates conducted a series of experimental investigations attempting to study the effects of utilizing teams of college personnel to assist local school leaders in their day by day tasks on the job. From these studies, the investigators concluded

1. Educational Programs in public schools improve more rapidly and more permanently when their leaders (superintendents, principals, and supervisors) receive part of their graduate training as they serve in their official positions in local school districts than when they are provided preparational experiences in college classrooms, periodic seminars or conferences.

2. Greater improvements in the educational opportunities provided for children result when university (college) staff members work on real problems with the team of local school leaders in that district rather than when they work with these same leaders individually in typically organized classes, conferences, or seminars.
3. Contributions of college personnel to the professional development of school leaders on-the-job is greater when such persons themselves work as a team with local school leadership teams, on real problems in those districts than when they work as individuals with the same leaders in conferences, seminars, general workshops or college classes.

4. College personnel themselves grow more rapidly in their own understandings, insights, and instructional effectiveness by working as teams with leadership teams in local districts than by working as individuals with local school leaders in workshops, conferences, seminars, or graduate classes.

This literature also validates the futility of sporadic efforts to provide in-service education for only one or two administrators in a district where the problems are of such a nature as to require the concerted efforts of all a school district's official leaders. Further, the data supported the notion that college consultants should work in the field on specific problems of the local school leaders. By doing this the local leaders and consultants develop new skills for facilitating solutions.

Between 1964-1966, Ogletree and his associates conducted a second series of extensive and intensive studies supported by the Cooperative Research Program of the Office of Education. This study focused on developing procedures for in-service education of school administration.

As a developmental activity, this project sought to develop procedures for extending the educational horizons and improving the performance of school administrators practicing in four selected
rural, culturally deprived and economically depressed areas by:
(1) using the administrators' school districts as laboratories in
which greater competency in school administration could be
developed, and (2) using a college team of "specialists" to work
with teams of local school district administrators on-the-job to:
(a) analyze their present administrative practices, (b) identify their
most pressing inadequacies, (c) acquire the knowledge and skills
for planning and initiating needed administrative modifications and
(d) develop and employ procedures for evaluating the consequences
of such modifications.

Data were collected so that the following factors could be
determined:51

1. Changes in individual and/or teams': (a) Concepts
   of their jobs, (b) ability to identify administrative
   problems, (c) ability to acquire competencies
   needed to resolve administrative problems,
   and (d) ability to develop and apply procedures
   for improving their performance as administrators.

2. Changes in the administrative procedures
   at both the district and individual school
   levels.

3. Changes in the instructional programs
   initiated during this project.

4. Procedures used by the college team in
determining and developing procedures for
use in each school district.

5. Procedures used by the college team in
its efforts to provide in-service
experiences for individuals and teams
in the participating districts.
Several positive general conclusions and limitations were reached from the data of the study. These are summarized below.

**Positive Conclusion #1.** The local school or school district provides an unique laboratory for developing programs of professional growth for practicing school administrators. The local environment does offer a type of laboratory in which realistic and productive activities can be developed to extend the knowledge and understandings of school administrators.

Limitation. While the local school or school district offers a unique laboratory, its full exploitation of such for the in-service education of school administrators is extremely expensive in terms of both college staff time and financial expense.

**Positive Conclusion #2.** The development of an administrative team within a school district is a significant factor if a college staff is to provide assistance in local activities from which school administrators can abstract "learnings" and thus grow professionally.

Limitation. While development of an administrative team is an essential ingredient of an effective school operation and while such a team simulates a "class" or reference group for in-service education, there appears to be a limit to which such "development" can be pursued profitably. Beyond a point such a "team" would assume responsibility for its own development as it pursues its own concerns.

**Positive Conclusion #3.** The problem solving approach--identifying and attacking local educational problems--provides an appropriate and productive avenue whereby a college staff can assist administrators in growing professionally. The function of the college staff, however, is not only to participate in such problem solving ventures, but also to help the administrators abstract personal "learnings" from such ventures.

**Positive Conclusion #4.** The utilization of a college team of specialists is a more efficacious procedure for providing in-service education for administrators
than the assignment of one college staff member to this task.

Limitation. A college team of interdisciplinary specialists to be sure can become an effective team. However, it takes a lengthy period of time for such to clarify responsibilities and roles. To be productive in short-range operations, the permanent staff can probably best use the sociologists, anthropologists, political scientist and social psychologists on a consultant basis calling them in for highly specific purposes.

Positive Conclusion #5. Participation in such a developmental research project provides unique learning opportunities for graduate students preparing to become school administrators.

Limitation. As a preparational experience for advanced graduate students, such an endeavor would be more productive if: (a) such students spent one semester full time in such an enterprise or (b) such students' schedules could be arranged for them to have at least two consecutive days a week free from other campus responsibilities.

Limitation. Change induced through a developmental educative process is extremely slow. Fully employed participants owe their primary allegiance to the responsibilities of their jobs. Consequently, "learning activities" over and beyond such jobs take low priority in their value systems. Therefore, developmental changes are likely to be relegated low priority in the choice of time and effort expenditure in school districts such as those included in this project.52

The staff members of this project are convinced, both by research data and by experience, that in-service growth of school administrators is a requisite for effective educational change in the schools.
Other Studies:

Other reported studies focused on in-service training programs for administrators appear to fall into two major categories; (1) national, state, and local surveys attempting to determine the types of in-service programs being experienced by administrators and their perceptions of these programs in general, and (2) analysis of a specific type of in-service experience or a sequence of closely related experiences. The findings from the first category of studies have been discussed in prior sections of the present document. Below is a description of five studies conducted to analyze the effects of specific types of training approaches for school administrators.

In 1959, Luckenbach conducted a study to determine the effect of a principal's in-service training course upon his operational behavior pattern and upon attitudes of teachers, pupils, and parents.53

During the academic year 1956, under the auspices of the University of Florida, a two-semester in-service leadership training course was offered to a group of 34 principals. The purpose of this study was to determine within the time interval of one year, measured at the beginning of the course and one year later, whether the principal's operational pattern of behavior changed in the democratic direction and what effect, if any, the leadership training of the principal had upon the attitudes of the teachers, students, and parents. The findings of the study were:
1. The principal's operational patterns of behavior after the leadership course, as rated by the principals, changed in the democratic direction; whereas, their patterns of behavior after the course, as rated by teachers, did not change.

2. Teachers did not change their attitudes toward the profession, other teachers, the children, the principal, the school, and the community after the principal's leadership training.

3. The pupils did not change their attitudes toward self, each other, the teachers, the principal, and the entire school after the leadership training of the principal.

4. Parents had less favorable attitudes toward the entire school after the leadership training of the principal. The decline in parent attitude could have been due to the increase in the criticisms of the schools following the launching of Sputnik I. The difference between the changes of parental attitudes for the experimental and control schools was not significant, however.54

In a more recent study55 Thomas sought two questions:

(1) Does an elementary school principal change his behavior in working with his staff as a result of a five-day interpersonal relations laboratory? (2) Does the social-emotional climate of an elementary school change subsequent to the principal's participation in a five-day interpersonal relations laboratory?

A group of 14 elementary school principals was selected from the early pre-registrants to an educator's laboratory in interpersonal relations. A similar group of elementary school principals was selected on a matched-pair basis to serve as a control group.
Data were collected by a questionnaire administered prior to and nine months after the laboratory. The data consisted of responses from 204 teacher-observers who completed the questionnaire both before and after the laboratory.

Additional data were gathered five months after the laboratory by means of a free-response, perceived-change questionnaire asking selected teachers and the principal himself to report any specific changes noticed in the way the principal worked with others.

Nine months after the laboratory, significant differences between the changes of the two groups were found in the variables consideration, tact, collaborative decision-making leadership, and better staff morale. Support was also found for hypothesized changes in the experimental-group principals' use of collaborative decision-making in the area of deciding how teachers should be supervised.

An unexpected finding in the study was that the control group showed a change toward less desirable scores in 18 out of 20 variables during the period of evaluation—from May, 1969, to March, 1970.

The findings indicated that the principals who participated in the five-day laboratory in interpersonal relations did change certain aspects of their behavior in working with their staff. The effects of the principals' laboratory experience were reflected in increased staff morale.

The findings were interpreted as supporting the use of laboratory training, as one means of effecting change in the interpersonal
relations of elementary school principals with their teaching staff.

In still a more recent study analyzing the effects of a human relations training program on modifying the behavior of the school administrator, Robinson attempted to focus on two basic questions: (1) can administrators change their opinions about their leadership effectiveness through a planned program of problem awareness, discussion, and attempts at behavior change; and (2) if so, will their attempts at behavior change be transferred to their real school setting in such a way that teachers will change their attitude toward these administrators in a positive direction?

The findings leave little doubt that the experimental group changed its perception of its administrative effectiveness. It changed its ability to predict accurately on the School Survey, in a positive direction. In contrast, the comparison group showed a slight regression in this ability from pre to posttest.

The findings also show the experimental group was different in a positive direction as reported on the Purdue Rating Scale. The comparison group was not perceived differently by its teachers from pre to posttest on this instrument.

"The Effects of a Task-encounter Workshop on the Administrative Staff of a Public School System" is the title of a dissertation recently completed by Green. Under the supervision of Carl Rogers, this study was designed to ascertain the effects of a group task-encounter workshop on the attitudes of members of an administrative staff of a public school system. The workshop
was coordinated by staff members of the Center for the Studies of the Center for the Studies of the Person in La Jolla, California and took place over the course of one weekend. The group met together for a total of 24 hours.

A total of fourteen subjects comprised the experimental group. They were selected on the basis of their membership in the "Administrative Council" of the Poway School District in Poway, California, and their willingness to participate in the workshop. This group included the superintendent and his district level staff plus the school principals and vice principals.

Each participant was asked to select a "significant other" person who would be willing to complete a Semantic Differential rating scale. A "significant other" person was considered one whom the participants were closely associated either at work or at home. The participants along with the significant others filled out the Semantic Differential before and immediately after the workshop.

For the participants, the concepts considered on the Semantic Differential scale were "self-concept" (how I see myself) and "social self concept" (how others see me). For the significant others the concepts were "perceived concept of self (how I see him) and "perceived self concept" (how he sees himself). Eight hypothesis were tested relating to attitudinal change pre to post test and the difference in relationships of participants and significant others' attitudes pre to post test. In all hypothesis, there was no indication of significant change although there was a trend in the
results toward an increase in congruence of perceptions of the participants and significant others.

This study included, in addition to the statistical data, a narrative report of specific activities of the group participants that resulted from their involvement in the workshop for the two years following the workshop. Two of the major points discussed in the narrative report are listed below:

1. After the weekend workshop, the participants agreed that their encounter activities resulted in increased communication abilities which had the by-product of easier and more effective solutions to the mechanical problems of running a school district. Consequently the group unanimously decided to hold all regular district administrative meetings according to an "encounter" format.

2. Two years after the original encounter workshop it was noted that of the fourteen original participants eleven had made a significant change in their professional position. While some moved out of the district others were promoted or demoted within the system. It was also noted that all of the participants who were promoted had consistently expressed strong "anti-encounter" feelings while the ones who were demoted or left the district had endorsed and promoted encounter meetings.58

A study has recently been conducted by Sparks59 which appears to have particular relevance to the present study. The Sparks study is entitled "A Pilot Study of the Suitability of an Individualized Program in the Continuing Education of School Administrators."
The rationale for the study is stated as follows, "The effects of the 'knowledge explosion' have been felt in many professions. The public school administrator is currently feeling the pressure of
needing to know more about more, with less and less time available from his duties to read the research and journals in his field."
The purpose of this study was to determine the suitability of a communication system using an individualized, programed, audiovisual medium as a means of disseminating information to the busy school administrator.

The study involved four general steps: a survey of the target audience for program content desired by them, the production of two programs based on the results of the survey, the distribution of the programs to the school administrators, and the evaluation of the suitability of the programs.

The measurement of the "suitability' of the information system included: (1) The measurement of the program's effectiveness as a learning instrument. (2) The acceptability of the system to school administrators. (3) The interrelationships of program content and design to the acceptability by the school administrator. (4) The economic feasibility of such a system, based on cost per program analysis.

Prior to producing the two programs used in the study, every school superintendent and principal in Los Angeles County was sent a letter requesting topics they would like to have if the proposed system was available to them. Four hundred and twenty-nine replies were received with the request for more information on innovations in instruction being mentioned most often.
A random sample of twenty four Los Angeles County school administrators was selected consisting of eight superintendents, eight assistant superintendents, and eight principals. Two programs were produced on innovative methods of instruction in use outside Los Angeles County.

The programs were produced in a sound filmstrip format, designed for use on an automatic, rear screen, table top projector. Each program included a program booklet which contained a pretest, a posttest, an evaluation form, and program questions. The program questions were to be answered at predetermined stops while viewing the program and were based on previous material covered in the program.

The findings of the study were: (1) The sample did learn from each program as measured by the content tests. The mean of the modified gain scores for the two programs was 80 percent and 93 percent. (2) More than three-fourths of the sample school administrators found the information in the programs important and useful to them personally and to the profession as a group. (3) Even when the information was new to the sample, none of them found it difficult to follow or understand in the format used in the study. (4) More than two-thirds of the sample said the programs kept their attention well. None of the sample would prefer not to take the information as presented in the audio-visual format. (5) The programs were rated significantly higher than other sources of information by the eight superintendents, slightly higher by the
eight assistant superintendents, and equal to other sources of information by the eight principals. (6) Comments by the school administrators indicate that if the equipment did not function perfectly they had a tendency to reject the communication system. (7) Over two-thirds of superintendents in the sample preferred the audio-visual format to their existing sources of information. Almost one-half of the assistant superintendents and one-half of the principals would prefer the information in the audio-visual programs to their other sources of communication. There were no significant preferences for an alternate source of information. (8) The cost of producing programs in the format used in the study would be commercially feasible on a mass production basis with wide distribution of programs.

In the following section is presented a description of the problems which have been identified in attempting to assess training programs. A description is also presented of some of the assessment approaches which have been tried as an attempt to alleviate the problems of trying to assess the outcomes of participating in training programs.
The Assessment of Training: Problems and Approaches

It was discovered, upon searching the literature on training in general, that evaluation of training is much like the weather—everybody talks about it, but almost nobody does anything. And as Belasco and Trice note, "Furthermore, even those rare evaluation efforts, like the efforts of the old time rainmaker, often are undertaken with tools inadequate for the task."60 This appears to be the case in the field of education, business, and even in therapy in the field of medicine. Over the past decade Belasco and Trice have been exerting a major effort in raising questions focused on the evaluation of training efforts in many different types of organizational settings.61 They have found that the problems in planning and executing a good evaluation effort are enormous. On the other hand they do not feel that these problems are insurmountable. Relating to this point, they state

For all of the growing interest in evaluation, the attitude toward it remains essentially ambivalent. On the one hand, evaluation is the only way that one can be both personally satisfying to those administering the change agent and useful in the improvement of current techniques. On the other hand, evaluation may discover that the change efforts are ineffective, and this information can be destructive of one's occupational self-image, one's ego, and even one's livelihood. Thus, evaluation is like Pandora's box—utterly fascinating from the outside, but frightening because of what it might contain. Despite the fact that evaluation yields benefits to both the practitioner and the academician, probably 99 percent
of all ongoing training efforts still are not systematically evaluated. This is due in part to the central problems inherent in the design of any evaluation study. However, while problems of planning and executing a good evaluation effort are enormous, by and large they are not insurmountable. 62

It appears that the problems involved in assessing training efforts can be categorized into two major areas; (1) the attitudinal and organizational obstacles to evaluation, and (2) the strategic problems to evaluation. In the following section some of the attitudinal and organizational obstacles to evaluation are described.

Attitudinal and Organizational Obstacles to Evaluation

There appear to be several identifiable attitudinal and organizational obstacles to evaluation. The first of these resistances stems from the critical nature of the evaluation process and the evaluator himself. The very act of evaluation assumes that the change effort can be improved and raises the threatening question "Why couldn't it have been better in the first place?" Inherent in the role of the evaluator is the concept of a corrective agent who, through his findings, will help practitioners improve their practice. Thus the role of the evaluator brings him into conflict with the practitioner. 63 It appears that this conflict between the evaluator and the practitioner is present even when the two roles are filled by the same person.
Another form of resistance appears to come from the training specialist. Many training specialists and therapists point out that evaluation is essentially unfair to them. The changes they seek to induce are subject to undermining from many other sources which are independent of their control. The training or therapy may accomplish significant changes in attitude, knowledge, and behavior, only to have these changes eliminated when the individual returns to normal patterns of working and living. \textsuperscript{64}

In recent years, another serious objection to any form of evaluation has been raised. This objection springs from a concern for the privacy of individuals. Testing, psychological screening devices, and attitude questionnaires in general recently have come under attack as invasions of individual privacy, particularly when the evaluation is conducted by individuals from inside the organization. \textsuperscript{65}

The attitudinal and organizational obstacles summarized above appear to be great enough to be causing a serious negative attitude toward future attempts to evaluate the change process (that is the change process). \textsuperscript{66} Added to these obstacles are the strategic problems to evaluation. These problems are briefly described in the following section.

Strategic Problems to Evaluation

To understand the strategic problems to evaluation one should first be knowledgeable of the two basic approaches which have been
used in assessing training efforts. These are the subjective and the objective approaches.

The Two Basic Approaches to Evaluation

The subjective approach seeks to learn how the trainee or patient feels about the training or therapy. The trainee or patient answers questions which are designed to find out how much he liked the program, how he believes it could be improved, and how it helped him. This approach usually, but not always, does not involve a precise design such as a "before-after" measure. The subjective approach has the advantage that it involves less time, cost, personnel, and skill than the objective approach. Questions are more easily framed; they need be administered only once; and often smaller samples of respondents are needed to participate. These advantages, however, are overshadowed by the disadvantage that results yield only a self-report of the respondent's feelings about the training and do not indicate any actual change within him.

The objective approach, rather than seek the participant's feelings and reactions, attempts to identify the amount and specific kind of change that occurred and can be attributed to the training or therapy. Questions which the respondent completes involve subjects external to him. When the questions are administered before and after training, the differences in responses
serve to measure the amount and kind of change. This approach, then, usually involves some design, either the traditional before-after design or the comparative design, which seeks to identify the effects of the change agent with considerably more precision and rigor. While the objective approach requires greater investment in time, money, personnel, and skill, it is a more exact method to study change because it can both identify and explain it more easily.

The inherent difficulties in studying change, using either the subjective or the objective approach, fall into four problem areas. These are the problems of criterion, control, contamination, and detective work. These four problems appear to be the major ones that plague most efforts to assess change. They are briefly discussed in the following sections.

The Problem of Criterion

Even though two essential elements are necessary to produce a good criterion (i.e. a statement of objectives in measureable terms followed by a yardstick to indicate whether objectives are accomplished), at least four difficulties encountered in the development of a good criterion have been identified. The first is the vague nature of the training objectives. Obviously it is impossible to provide appropriate evaluation methods for a training program unless there is a clear idea of the expected results of that program; however, the specific change for which the
training is geared is often difficult to pinpoint.

The second difficulty in the development of a criterion is the conflict over whether the objective of training is individual change or organizational change. While improvement in organizational effectiveness is desirable, most training programs, because of the difficulty in measuring organizational effectiveness, define their objectives in terms of changes in the individual.

The third difficulty identified in developing a criterion emerges from confusion about the length of time in which training objectives may be accomplished. The distinction is often made between the immediate, intermediate, and ultimate objective of any training experience. Kirkpatrick suggests that increased knowledge can be an immediate objective, changes in job behavior an intermediate objective, and changes in production, turnover, absenteeism, and morale an ultimate objective. Thus, the time at which criteria measurements should be taken to indicate progress toward any objective becomes a concern. According to the evidence from Fleishman's study the time of an evaluation will influence the recorded results. His criterion measures taken immediately after the conclusion of the training experience indicated a positive change in the direction desired by the trainer. The same measures taken at a later date indicated that much of the change had been eliminated and even that some supervisors had become more negative concerning the subject matter of the training.
From the evidence it could be concluded that the time of measurement must be adjusted to consider the time implied in the objective.

It has been argued that a training course can add very little to the stock of ideas, skills, and capacities accumulated over a person's lifetime. Therefore, the question is raised as to whether it is possible to evaluate change at all. In reaction to this argument, Belasco and Trice suggest a very important point.

Education is a lifetime process. Even though the change experience itself may add few original thoughts, it may provide a stimulus to the rethinking of previously held and now ignored ideas. Thus exposure to a change experience may precipitate into behavior those potentialities present in some participants but not in others. It is possible, therefore, to state the expected outcome of the change experience and then to evaluate the degree to which the experience contributed to the precipitation of these outcomes. 72

The Problems of Control and Contamination

The dilemma posed by the twin problems of control and contamination may be stated as follows:

Control is necessary in order to eliminate the possibility that factors other than the change experience produce the results recorded by the criterion yardstick. The essence of effective control lies in the comparison between exposed and unexposed groups. In order to ensure the legitimacy of the comparison--this is, that the two groups are truly comparable except for the change experience--some form of measurement
of both groups must be made usually before the change experience takes place. This measurement, which is essential to establish comparability, introduces many additional factors to further contaminate the result. Thus, control inexorably brings with it contamination.  

Three major sources of possible contamination have been identified. First is the contamination which arises from obtaining a measure of the criterion before the onset of the change experience. This measure of the criterion may sensitize the participants so that the change results are affected. The contamination exists whether the yardstick is objective or subjective in nature. An example of this is described by Richard Solomon:

We feel that the pretest operates directly upon the effectiveness of the training or interacts with the training process. That is, there is a great possibility that merely taking a pretest changes the subject's attitude toward the training procedure. Or it may conceivably change the set or attentional factors important to the effectiveness of training. Thirdly, it may actually change the manner in which the subjects perceive the training material.

Therefore, the completion of questionnaires or an interview before training, requiring an individual to think about a certain subject may predispose that individual to be more aware of that subject when it is referred to during the change experience.

The experimental data to support or refute Solomon's contention is sparse. Studies have provided data which indicate that i.e. the effects of training alone would have been greater had the questionnaire not been administered, and conversely the data
from other studies indicate that completing questionnaires before a change experience does not sensitize the subjects and, therefore, does not significantly alter the reported results. Nonetheless, there is a possibility that this source of contamination can seriously bias the results.

The second source of possible contamination is the effect of the passage of time and occurrence of uncontrolled events.

A third identified source of contamination arises from the sources of the data and the manner in which the data are collected. Previous training evaluation studies have utilized at least six different sources for the collection of data. Lundburg cites the following sources: (1) data from subordinates or superiors, (2) data from observers about the effectiveness of change occurring in trainees, (3) trainer's opinion of attitude and progress of trainees, (4) opinions of trainees about the value of or their acceptance of a particular change agent, (5) the measurement of relevant attitude feelings and beliefs of trainees, and (6) company personnel and/or productivity records. It is apparent that each of these data sources has peculiar contamination problems.

These three contamination problems—the criterion yardstick, the passage of time, and the collection of data—are endemic to all evaluation efforts. In order to effectively deal with them, additional control must be incorporated into the evaluation design.

The Solomon Four-way Design is frequently proffered by methodologists as the answer to this control-contamination
dilemma. On Figure 1 is presented the process for implementing this design.

<table>
<thead>
<tr>
<th>Experimental group</th>
<th>Control groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Before measure</td>
<td>Yes</td>
</tr>
<tr>
<td>Training</td>
<td>Yes</td>
</tr>
<tr>
<td>After measure</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Fig. 1--Procedures for implementing the four-way research design.

As is illustrated here, a total of four independent groups participate differently in the three experiences consisting of the training experience, the pretest, and the posttest.

With the four-way design, it is possible to precipitate out four different factors--three contaminants plus a purer change-agent effect. These are:

1. A test or questionnaire effect. By comparing the pretests and the posttests for only group C, the twice-tested but untrained group, the effect, if any, of the administration of the questionnaires or yardsticks can be ascertained.

2. An interaction effect. By comparing the posttest results of group A with the posttest results of group B, the effect of the interaction of the questionnaire with the change experience itself can be ascertained. Another way of isolating a possible interaction effect is to compare the posttests of group A with those of group D. This comparison reveals the full impact of the combination of the initial questionnaire and the change agent as compared with a complete absence of either.
(3) The passage-of-time effect. By comparing the posttest results of group D with the pretest results of groups A or C, or an average of both, the contaminating effects of any extraneous event can be isolated.

(4) A change-agent effect. The possible changes introduced by the change agent can be ascertained in two ways. The two traditional comparisons—before-after of group A, and group A compared with group C—yield an approximation of the changes associated with the change agent. They are contaminated, however, by the first three factors. A purer change-agent effect can be deduced from a comparison of the posttest means for groups B and D, neither of which has been contaminated by a pretest.

Although the four-way design has obvious advantages, several methodologists have found many disadvantages to the design. Many of these related to the practical disadvantages to carrying out the design. For example, in some assessment approaches the administering of the evaluation instruments takes from four to ten hours.

In reference to the four-way design Belasco and Trice conclude:

Upon reflection, it seems that the Solomon design arose in response to the instrument contamination problems associated with the traditional evaluation designs. Rather than dealing with the overt symptoms of the problem, however, it might be more profitable to examine its root course and question the utility and necessity of the pretest itself. If the pretest could be eliminated, it would obviate the basic need for the four-way design.
Presumably, the pretest is necessary in order to establish a starting point from which to compute change. The assumption is that individuals will vary in their initial attitudes, knowledge, and behavior. In comparing the results of two groups, one trained and one untrained control, if the researcher does not know the starting points on his criteria for both groups, any differences after the training may be attributable to different starting points. Yet, this information is secured at a high price.

Upon reviewing several studies Cantor, et. al. concluded that evaluation study after another indicated that the two groups on the pretest are very similar on criteria considerations. This suggests the possibility that the pretest may not be necessary at all.

Due to this factor Belasco and Trice proposed a more practical design. They state:

In reviewing the problem there is at least one alternative to the pretest. With large numbers of 200 or more, through random division into two unpretested groups consisting of one training group and one untrained control group, in all probability the sampling process will yield groups with comparable starting positions on the criteria and eliminate the need for a pretest. The probability of drawing comparable groups increases greatly if the sample is stratified on those variables which probably lead to differential attitudes, knowledge, or skills. In our training evaluation study, for instance, stratification on the basis of sex, division employed in, and type of work supervised minimized the possibility of drawing groups which would have been significantly different from each other. Stratification on certain personality traits would even further remove the possibility of drawing groups with
different starting points.

The Problem of Detective Work

This problem relates to such aspects as, (1) contacting the persons to complete the evaluation measures; (2) getting the participants to fully complete the measures and returning them; (3) locating a valid control group; (4) and maintaining the original design of the study. These problems often become major inhibiting factors in attempting to assess a training approach.

Many of the problems associated with the detective work relate to the gathering of evaluation information. In the following section is a brief description of this aspect of assessing training.

Gathering Evaluation Information

Regardless of whether the researcher employs the objective or subjective approach, it is apparent that there are two techniques that he can use for gathering information. The first is the use of the written questionnaire which reveal either the trainee's reaction to the training (subjective approach) or his attitudes on subjects external to him (objective approach). The second technique is personal interviewing. There are two essential problems in framing effective questions. The first is whether to use open or closed questions. Questions are open if they ask the respondent to answer in an unrestricted fashion in his own words but within the broad limits of a topic. They are closed if they force the respondent to choose
from presented alternatives. There are advantages and disadvantages to both types of questions. Obviously, the greatest advantage of the open question is that the respondent is able to convey a greater amount and variety of information; therefore, more facts can be learned from very few questions. But the open question has many disadvantages when applied to evaluation. Since the responses are so diversified, much time and money is required to interpret and classify the data. Comparability on a common issue, from respondent to respondent and from group to group, is usually impossible. In addition, use of the open question assumes that the trainee is sufficiently motivated to formulate and express his own ideas, and this may not be the case. Furthermore, if questions are in any way embarrassing or anxiety-producing, there is a tendency to repress those feelings when responding to the open question. The respondent's concern to avoid appearing foolish and ignorant adds to his unwillingness to answer freely. 84

These disadvantages of the open question are not characteristic of the closed type. On the contrary, quite the opposite is true. Because the closed question eliminates diversity and ensures the same stimuli for response from every trainee, it can be easily and specifically quantified. If well prepared, the closed question permits comparability between individuals or groups. Also, by providing specific choices and the actual words, the closed question reduces barriers to response.

Forcing a response is probably more likely to produce error
in closed questions and reduce the validity of the responses. Severe bias may result for two reasons: (1) The respondent is forced to take a position even though he may not have one, and (2) the choices may not fit the respondent's feelings, and he has no way to express them. For example, he may be quite ambivalent about his training experience; he may not care either way in responding to a question. These different feelings are impossible to express in response to a closed question. It has been found that even if the closed question includes a space to indicate responses other than the choice given, this may be relatively useless since respondents tend to avoid the "other" category and force themselves into the mold provided.

In an attempt to test out several of their hypothesis concerning the problems of and approaches to the assessment of training, Belasco and Trice conducted an intensive evaluation of an industrial training program. The training program which was evaluated utilized a conference leadership discussion pattern based on case material and organized around key guiding questions. A professor from a major university, a recognized expert in this field, led the discussions. As explained to the participants, the basic program strategy was to use difficult problem-employee situations to shed light on the process of general supervision.

The following specific training objectives were defined in advance of the training:
1. More knowledge about specific kinds of employee behavior and methods for handling that behavior.

2. More favorable attitudes toward problem employees.

3. More willingness to identify, confront, and take constructive action toward problem employees.

The four-way research design was implemented in the study. The measurement devices consisted of action scales, knowledge scales, and semantic differential scales; plus oral interviews with the participants after the sessions were completed. The following conclusions emerge from the question "What changes are associated with training?"

1. The changes associated with training are small.

2. Testing is a potent change agent independent of training.

3. The combination of testing and training, or the interaction effect, is more effective than training alone.

4. The traditional evaluation designs do not yield an adequate means of assessing these changes associated with training since they introduce major contaminants.

5. The Solomon Four-way Design, although an improvement over traditional evaluation methods, poses serious operational difficulties including the problems of small sample size, rigid training content, and sampling inadequacies.

6. One way to improve the probability of change associated with training is by selecting individuals for training on the basis of the match between their predispositions the demands of training.
Training serves many unintended ceremonial functions. Supervisory training can act as a ceremonial to produce:

a. Feelings of inclusion and organization identity
b. Therapeutic and cohesive results
c. Boundary identity between groups and organizations
d. Fewer internal aggressions
e. Stability in organization undergoing change and reduction in anxiety of individual members involved
f. The removal of one role identity and the placement of another in its stead.

Belasco and Trice list five implications for practical application from their studies. Below is a summary of three of their recommendations which are appropriate to the present study.

First and foremost, in training we urge a functional role for the questionnaire as a change agent, either independent of, or in concert with, training. As this study demonstrates in many ways, completing the questionnaire before actual training can add to the training effect by sensitizing the trainee to important information or by raising doubts and anxieties which create a readiness to seek additional information. Furthermore, questionnaires may be useful not only where training deals with new information, but also where it reviews information presumably already possessed by the trainee.

Second, the ceremonial aspects of training should be deliberately planned for and fostered. Training, for instance, might be a good way to reduce tensions arising out of major organizational and technological change.

Enhancing the ceremonial aspects of training may increase the change power of the training program itself. In short, thoughtful managers may increase the change poser of the training
not only for the bread-and-butter changes in individual skills, knowledge, and attitudes it can produce but also for the ceremonial side effects that produce improved supervisory morale, increased identification with the organization, and decreased organization.

Third, they suggest the use of the simple unpretested two-group design as the most efficient and valid evaluation mechanism. The comparison of after-training scores of one group which has been trained with those of another group which has not been trained avoids all the contaminants introduced by the pretraining questionnaire administration. The sensitivity of this two-group comparison can be increased through either random sampling from the entire group if the group is large enough (larger than 200 for instance) or random selection after the overall group has been stratified on those variables which probably lead to differential attitudes, knowledge, or skills. In addition, stratification on certain personality traits would even further remove the possibility of drawing groups with different starting points.

In addition, the instructional concerns relating to ceremonial aspects to training (discussed in an earlier section of this report), it appears that these ceremonial aspects must be taken into account when approaching the assessment of the training program. Techniques should be devised in order to more accurately determine the affects of these ceremonial aspects.

Summary

In the present chapter the literature dealing with in-service training approaches for school administrators was covered. The literature describing the techniques utilized for assessing training
programs was also set forth. In the following chapter is presented a description of the background and development of the audio modular instructional units used in the present study. The composition of the units and the procedures used in the field testing of the units is also set forth.
In the previous chapter, an examination was made of the types of in-service programs which are currently available for school principals; research findings from various in-service training approaches; and approaches to the assessment of training in general. It is the purpose of the present chapter to describe the factors influencing the initiation and development of the audio instructional modules; and to provide a description of the four modules which were tested in the present study.

Factors Influencing the Initiation and Development of the Modules

The request for the development of the modules came from the Florida State Department of Education. In the following section is a summary of the incidents that took place in the State Department which encouraged this request to be made.

The Movement Toward a Performance-Based Certification Program for Teachers

For the past three years the Florida State Department of Education has been attempting to move in the direction of a performance-
based certification program for the teachers in the state. In order to implement this thrust, the decision was made to utilize the funds provided by the "Education Professions Development Act (Title V of the Higher Education Act of 1965)." This program for teacher training became known as the Florida EPDA B-2 Program. A major objective of the 1969 Florida EPDA B-2 Program was to develop individualized teacher training materials. These materials were designed to be used in either pre-service or in-service teacher education. They were prepared in the form of self-contained "packaged" modules aimed at specific teaching skills or specific concepts fundamental to teaching. Each module was expected to include all of the information and directions needed to accomplish a set of observable goals.

The design or model used in preparing these materials was set up so that each of the important elements would fulfill specific functions in assisting a user to achieve the stated goal of the module. Materials which follow this basic model would fulfill these specifications. A summary of the elements to be included in the module are summarized below.

1. **Objectives:** the objectives were to describe clearly what the user should be able to do after successfully completing the activities. They were to be stated in terms of observable, measurable behavior of the user.

2. **Rationale:** the rationale provided the reasoning which justifies the acquisition of the skill.
3. **Materials**: all of the materials needed to complete all the suggested activities were either to be included or described, and source references were to be given if it would be necessary to order supplementary print or non-print materials.

4. **Procedures**: procedures were to be designed so that the user could follow them in chronological sequence as he worked to achieve each specific objective. Whenever possible, alternate activities and materials were specified. The sequence for each objective would normally include three types of activities; a) exposure to information (perceptual input), b) information-processing (concept formation) and c) appropriate practice with feedback.

5. **Evaluation**: the major purpose of the Evaluation activities were to assess the level of mastery of each of the specific objectives for the module as a basis for deciding whether further instructional activities should be pursued. Pre-assessment measures were to be used to determine whether the user was ready for the objective or whether he already knew the skill and did not have to do the package. Post-assessment measures were to be used to determine either that the objective had been achieved, or that further instructional activities should be pursued.

The State Department sought the help of hundreds of teachers in the state to produce these B-2 Modules. Many of the teachers were given released time from their teaching duties to work on the Modules,
and others were given financial support in the summer to produce the Modules. The modules which were produced were disseminated by the State Department to teachers throughout the State of Florida. Due to the positive feedback concerning the effectiveness of the instructional packages from the teachers in the state, several of the State Department officials decided to explore the feasibility of utilizing the B-2 Module approach for in-service training of the elementary and secondary principals in the state.

Initial consideration was given to following the developmental process utilized in the teacher training program. The salient feature of that process was teacher involvement; teachers had been instrumental in the development of all the "instructional packages." This developmental process required that a number of teachers be released from instructional obligations for a semester. It became evident that school districts would be reluctant to release administrative staff for that duration; therefore, another approach had to be tried. An informal survey was then conducted among the post-secondary institutions within the State to determine their interest in designing a developmental training program for administrators; but, this group expressed minimal interest. One of the sources which expressed interest in the program was the Center for Leadership and Administration, School of Education, University of Massachusetts.

Following the initial contact with the University of Massachusetts, agreement was reached between the Florida Department of Education and the Center for Leadership and Administration that five modular packages
would be developed. In the following section is a description of
the development of four of the modular packages for use in in-service
training of principals.

The Initial Development of the Audio
Modular Instructional Units

Personnel in the Center for Leadership and Administration (CLA)
examined several of the B-2 Modules which had been developed for the
Florida teachers. It was decided not to utilize this format for the
training packages for the principals. The format and instructional
approach utilized in the IBM Audio Instructional Units appeared to
provide a more appropriate approach for the in-service training of
school principals.

The IBM units were based on a modified form of the programmed
instructional technique. They utilized basically two components;
1) an audio tape, and 2) a Guidebook including pages in a notebook
binder (these pages included graphs, charts, review questions and
answers, written case studies, etc). The audio tape carried the
heaviest load for the instruction, while the pages in the notebook
binder were designed to complement the audio presentation. The written
Introduction in the notebook included the following elements:

Purpose of Audio Instruction: this included a description of the
audience for which the unit was developed, and a description of the
general purpose for which the unit had been developed.

Description of the Module: this section included a general de-
scription of the content included in the unit, and some of the ex-
periences in which the participant will become involved. This section also includes the objectives to be achieved by the participant upon completion of the unit (these objectives were not in performance terms).

**Prerequisite:** this section suggests to the participant the units which he should have completed before pursuing the present unit.

**Time Required:** this section stated the approximate time required for completion of the unit.

**Materials and Resources Required:** this section listed the equipment and materials which were needed by the participant for completing the unit. These were such items as a tape recorder, the materials included in the Audio Instructional Unit, a pencil and some scratch paper.

**Instructions to the Participant:** this section explained to the participant that he would derive the greatest benefit from the unit if he took it some place where he would not be interrupted, and if he set aside a sufficient amount of time to finish it to its conclusion. It also explained the mechanics of the use of the audio tape and the Guidebook.

The majority of the IBM Audio Instructional Units appeared to have been designed to train technicians and engineers in sophisticated technical skills. An example would be the skill and knowledge of flow charting and use of PERT charting. The decision was made to focus the initial modules for principals on the area of Staff Development which involved human relations skills rather than technical skills.
Due to this fact, major changes had to be made in adapting the IBM Audio Instructional Unit approach for use in the development of training modules for school principals.

For this study it is important to recognize the rationale that the developers of the audio modular instructional units had used for utilizing the IBM unit approach, rather than the approach used in the B-2 Modules. This rationale is discussed in the following section.

The Rationale for Utilizing the IBM Unit Approach Rather than the B-2 Module Approach

The decision to develop an in-service program utilizing the IBM Instructional Unit model rather than the B-2 model was determined by several factors. These factors included: 1) the weakness of the wholistic approach emphasized in the B-2 approach; 2) the assumption that school administrators would be more receptive to a program in which the learning materials had been synthesized for them; 3) the need for an approach which doesn't require a great amount of reading; 4) the need for an approach with greater flexibility for use; 5) the potential offered by the IBM approach for creating a behavioral change; and 6) financial considerations.

One of the positive features of the IBM approach was that it was not designed as an all inclusive training program. The IBM Units were designed to be one of several components of a training program. Therefore, individuals were free to participate in the unit if they wanted this form of instruction, with the realization that other
learning options were available to them. On the other hand, it appeared that the B-2 Modules were designed to function as a wholistic or complete in-service program.

A second factor in the decision to utilize the IBM model was the perceived need for development of a program which provided administrators the concepts, skills, and information in a synthesized form. The IBM model utilized individuals who were specialists in their field or who were trained researchers. These individuals were responsible for gathering and synthesizing materials for presentation to the participants. On the other hand, a major feature of the B-2 model, was the utilization of several alternative learning modes. The participant was to choose one or several of these modes to read or view. He was then asked, through questions, to synthesize what he had learned from these various modes of presentations. A major disadvantage of this technique would be that few school administrators take the time to participate in the alternative modes of presentation, and to expend the amount of mental discipline required in synthesizing the learning.

Another drawback in the B-2 design was the amount of reading required of the participants. The design of the B-2 model utilized a printed text to present major learning experiences. These experiences were often supplemented by audio-visual materials, but the basic content had to be acquired by reading the text. The problem presented by this approach was the development of materials which would sufficiently motivate the participants. Rather than presenting
the basic material in a written text and supplementing it with other learning experiences, the IBM Units presented the basic material on a tape recording and complemented it with a guidebook and other learning experiences.

A third reason the IBM Instructional Unit approach was selected as a model was the greater flexibility it provided. The physical flexibility was enhanced by allowing an individual to participate with minimal equipment. Instead of obtaining the various audio visual equipment--filmstrip projectors, movie projectors, slide projectors, screens, etc.--often required for participation in the B-2 modules, the participant was only required to obtain a tape recorder. This increase in physical flexibility was extended to the facilities in which the individual participated. Participants were no longer restricted to a room which would facilitate the various equipment, but were now free to select their own learning environment.

A fourth reason for the development of a model based on the IBM Unit approach was the greater potential for bringing about a behavioral change in the participants through more active involvement in the experiences presented in the unit. It was perceived that the more active and involved a participant became in the learning experience the more receptive he would become to making a behavioral change. It appeared that the opportunity for active participant involvement in the B-2 approach was limited. This approach restricted the participants to activities which required passive involvement--reading, viewing films and filmstrips, and completing written exercises.
A final determining factor for the selection of programs similar to the IBM model was the expense involved. The expenses for development of a program similar to the IBM Instructional Units appeared considerably less than the B-2 Modules. Although the development of the modular units require highly skilled personnel, a fewer number of such personnel had to be involved. In addition, the expense for the hardware used in the IBM units was less.

This was the rationale established for the development of audio modular instruction based on the IBM Instructional Unit model. The following section presents a short description of each audio instructional module.

A Description of the Audio Instructional Modules.

The audio instructional modules were not designed to be a completely finite, neatly programmed in-service package for school administrators. Rather, the modules have been designed to function as one component of a comprehensive in-service program, and act as a catalyst for change through group interaction and individual experimentation. The modules were designed to stimulate new or previously held thoughts regarding a selected concept, and stimulate the participant to explore other aspects of the concept. Audio instructional modules are individualized instructional units allowing the participant to select the skill he wishes to improve, and progress through the module at his optimum learning pace. The modules are self-evaluative, providing the participant an opportunity to deter-
mine his progress as a result of the experience.

The four completed audio instructional modules were developed around a selected aspect of staff development relating to the administrator's role in the process. The titles of the completed modules are:

1. Staff Development: The Use of Supportive Feedback
2. Staff Development: Basic Elements of the Communication Process
3. Staff Development: The Helper-Helpee Relationship—Part I
4. Staff Development: The Helper-Helpee Relationship—Part II

The physical appearance of the four completed modules is basically the same; all of the module's components are enclosed in a plastic three-ring binder of various colors. The basic components included in the binder are: a cassette tape, a plastic envelope which houses the cassette tape and exercises, and a printed text. The specific commonalities in each text are: (1) a title page, which includes the name of the individual who developed the module, (2) a table of contents, (3) an introduction stating the objectives of the module, a description of the module, the prerequisites required for participation, and the time required to participate in the module, (4) instructions to the participants, and (5) a follow-up activity.

The cassette tape included in each audio instructional module provides the audio portion of the instruction which is the essence of each module; all other components are designed to complement the audio presentation. Directions are provided on the audio tape to
assist the participant's progress through modular instruction and complement the printed instructions included with the text. The audio portion also presents a short introduction related to the subject being presented; the actual instructional presentation; and a summary of the presentation. The instructional presentation features questions directed to the participant, practical examples relating to the concept, and scenarios.

The printed text included with each module has been designed to emphasize the main points of the presentation. The pages of the text may include a word, a phrase, a sentence, a paragraph, or an illustration; the text pages in one module are illustrated with cartoon caricatures. The final section of the text contains a list of reference materials and a posttest. The Introduction pages for each of the four modules are included in appendix C of this report. From studying these Introductions, one can discover the similarities and differences among the approaches utilized in the four modular units.

Summary

In the previous sections the factors influencing the initiation and development of the audio modular units and the composition of these units were described. In the following section is presented a description of the procedures used in the field testing of the modules for the study.
The Procedures Used to Field Test Audio Modular Instruction

The field testing of audio modular instruction was conducted in various States and under differing conditions. Field tests were conducted at Tallahassee, Florida, Washington D.C., and at various locations in Massachusetts. The field tests were conducted in workshop settings as well as self-selected test sites. The following presentation is an account of the procedures used in conducting the various field tests.

Florida Field Test

The initial filed testing of audio modular instruction was conducted utilizing a workshop setting at Florida A. & M. University of Tallahassee, Florida. The individuals participating in the field test were eleven practicing school administrators enrolled in a graduate class in school administration. The composition of the experimental group included principals and assistant principals representing nine school districts in Florida and three school districts in Georgia. Initially, the experimental group consisted of nine members, which increased to eleven upon the late arrival of two additional participants. Following a brief presentation concerning the development of audio modular instruction, the participants were requested to select two other group members with whom to work. Each group was issued the audio instructional modules, "Staff Development: The Helper-Helpee Relationship Parts I & II"; in addition, each member of the group was issued an evaluation packet which included: (1)
a biographical questionnaire, (2) an objective and subjective questionnaire, (3) a posttest, and (4) a semantic differential.

The various groups were then encouraged to adjourn to a secluded area--prior arrangements had been made for the use of several rooms--and proceed through the module and evaluation packet. Following the adjournment of the groups to various locations, two additional participants of the experimental group arrived, and they were issued the module, "Staff Development: The Use of Supportive Feedback" and an evaluation packet. The issuance of a different module to the individuals arriving late, and at different intervals, was necessitated by the pre-requisites of the modules--"Staff Development: The Helper-Helpee Relationship Parts I & II" and "Staff Development: The Basic Elements of Communication"--which required the participation of at least two individuals.

At the completion of the experiment all materials were returned to the investigator, and the materials were coded as to the site of the field test and the individual participating.

Massachusetts Field Testing

The field tests conducted in Massachusetts were arranged by contacting local superintendents of schools or by contacting potential participants individually. In the former instance, superintendents responding positively to the experiment were requested to allow the investigator an opportunity to make a brief presentation to the administrative staff of the school district. (This procedure was
utilized in the field tests conducted at Rockland, Stoneham, and Turners Falls, Massachusetts.) The presentation delivered at these administrative staff meetings consisted of providing a brief background concerning the development of audio modular instruction, the objectives of audio modular instruction, and a description of the completed modules. Following the presentation the administrators were provided the opportunity to participate or not to participate. Individuals opting to participate were encouraged to select a module of most interest to them, and they were issued an evaluation packet corresponding to the selected module. Arrangements were made before the participants dispersed concerning the amount of time required to complete the experiment (one week was the usual agreed upon time) and a central location for returning the audio instructional modules. The investigator returned on the established date to the designated location, collected the materials, and answered any questions pertaining to the modules. This procedure was utilized at the Rockland, Stoneham, and Turners Falls field test sites.

The second procedure employed in the Massachusetts field tests consisted of contacting one elementary principal active in a local elementary principal's association and explaining the concept of audio modular instruction. Following the explanation and description, the prospective participant agreed to become involved in the experiment and selected Staff Development: The Basic Elements of Communication to field test. The necessary materials were left with the participant and a completion time of one week was agreed upon. The investigator
returned one week later, collected the materials, and was provided with the names of five more prospective participants. Three of the potential participants were contacted, and when they agreed to participate in the experiment, similar field test arrangements were established.

Washington, D.C. Field Testing

Final field testing of the audio instructional modules was conducted in Washington, D.C. Individuals participating in the field tests were school administrators representing the Washington, D.C. School District, and who were participating in a summer institute sponsored by the school district. Contact had been established with the director of the institute regarding the possibilities of involving institute participants in the field testing of audio modular instruction. The director's response was positive and arrangements were made to establish an experimental group which would participate in the field test. Several rooms were made available and selected administrators were requested to provide cassette tape recorders for the field test.

The format of the institute was designed to provide numerous alternatives for individuals participating and audio modular instruction was included as one alternatives. The field testing of the audio instructional modules extended over a two day period and an extra day was utilized to administer the evaluation instruments to a selected control group.
Procedures utilized with the Washington experimental group were similar to those implemented during the Florida field tests. One difference, however, was in the presentation delivered before the individuals began participating in the modules. During the Florida field test a summary was presented explaining the development of audio modular instruction and including a description of each module. The Washington presentation was limited to a description of the individual modules. A second, and perhaps significant difference, in the two field tests was the amount of alternatives presented to each group. The Florida experimental group had only two alternatives—to participate or not participate. The Washington participants had these two alternatives in addition to opportunities for participating in other learning experiences available. The Florida experimental group, opting to participate, was also limited to one day for the experience, whereas the Washington experimental group was provided the opportunity to participate either or both days.
CHAPTER IV

METHODOLOGY OF THE STUDY

In the previous chapter, a description was made of the four audio modular instructional units which have presently been developed. The chapter also included a description of the procedures used in the field testing of the modules for the present study. It is the purpose of this chapter to 1) describe the study population, including the experimental group and the control group; and 2) to report and explicate the assessment procedures used in attempting to determine the suitability of utilizing the audio modular instructional approach as one alternative in-service training technique for presenting selected concepts and skills to school administrators.

Study Population

The study population for the present study consisted of two separate groups; the experimental group and the control group. The experimental group for the study were 59 of the sixty participants who participated in the audio modular units during the field testing of the units. (A description of the field tests was presented in Chapter III of this report.). The reason for ending with 59 of the participants was that the data for one of the participants were not complete enough to use.

Due to the nature of one of the approaches used in the assessment procedures, a second group, the control group, had to be
employed in the study. The control group consisted of 46 members who
had not had the opportunity of participating in the modules at
the time they responded to the assessment instruments.

In the following sections is presented a description of
the composition of the experimental group as it compares with
the control group in relation to the following factors: 1) sex,
2) age, 3) present position, 4) number of years of administrative
experience, 5) the state in which the member resides, 6) the setting
of the school in which the member was employed, and 7) highest
academic degree held by the member.

The Composition of the Experimental Group Compared
with the Control Group in
Relation to Sex and Age

The composition of the two groups in relation to the sex and
age of the members is presented in Table 1. As is illustrated here,
41 males and 18 females participated in the modules, indicating that
69.5 percent of the participants in the field tests were males. This
compares with 87.8 percent of control group consisting of males.

The data in the table indicate that the largest number of the
participants (40.7 percent) who experienced the modular units was
in the age group of 31-40; while the smallest number of participants
(8.4) was in the age group of 21-30. This compares with 47.0 percent
of the members of the control group being in the age group of 41-50,
and 10.2 percent being between the ages of 21-30. Approximately
TABLE 1

A COMPARISON OF THE COMPOSITION OF THE EXPERIMENTAL GROUP WITH THE CONTROL GROUP IN RELATION TO SEX AND AGE

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Experimental Group (N=59)</th>
<th>Control Group (N=49)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Sex:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41</td>
<td>69.5</td>
</tr>
<tr>
<td>Female</td>
<td>18</td>
<td>30.5</td>
</tr>
<tr>
<td>Age:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-30</td>
<td>5</td>
<td>8.4</td>
</tr>
<tr>
<td>31-40</td>
<td>24</td>
<td>40.7</td>
</tr>
<tr>
<td>41-50</td>
<td>20</td>
<td>33.9</td>
</tr>
<tr>
<td>51-Over</td>
<td>10</td>
<td>17.0</td>
</tr>
</tbody>
</table>

three fourths of the members in either group ranged in ages between 31-50.

The above findings indicate that the composition of the experimental group is substantially different from the control group in relation to the sex and age of the members.

The Composition of the Experimental Group Compared with the Control Group in Relation to the Present Position

The data presented in Table 2 illustrate the composition of the experimental group as compared to the control group as related to the present position of the members.
TABLE 2
A COMPARISON OF THE COMPOSITION OF THE EXPERIMENTAL GROUP WITH THE CONTROL GROUP IN RELATION TO PRESENT POSITION

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N=59)</td>
<td>(N=49)</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Elem. teacher</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Sec. teacher</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>5.1</td>
</tr>
<tr>
<td>Elem. Asst. Prin.</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Sec. Asst. Prin.</td>
<td>9</td>
<td>15.3</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>15.3</td>
</tr>
<tr>
<td>Elem. Prin.</td>
<td>21</td>
<td>35.6</td>
</tr>
<tr>
<td>Sec. Prin.</td>
<td>9</td>
<td>15.3</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>50.9</td>
</tr>
<tr>
<td>Central Office Admin.</td>
<td>10</td>
<td>16.9</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>11.8</td>
</tr>
</tbody>
</table>

As is illustrated by this data, the group participating in the modules was composed of three teachers, nine assistant principals, thirty principals, ten central office administrators, and seven members referred to as others. This latter category was composed of four wives of administrators and three school secretaries. The largest single group represented were elementary principals which made up 35.6 percent of the experimental group.

In the control group, the largest group represented were central office administrators (40.9 percent). Elementary principals made up only 16.3 percent of the control group.
The results indicate that the experimental group was not equivalent to the control group in relation to the present position of the members.

The Composition of the Experimental Group Compared with the Control Group in Relation to the Years of Administrative Experience

The data presented in Table 3 shows the composition of the experimental group compared with the control group as related to the years of administrative experience of the members.

**TABLE 3**

A COMPARISON OF THE COMPOSITION OF THE EXPERIMENTAL GROUP WITH THE CONTROL GROUP IN RELATION TO THE NUMBER OF YEARS OF ADMINISTRATIVE EXPERIENCE

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Experimental Group (N=59)</th>
<th>Control Group (N=49)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Number of years of Administrative Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>9</td>
<td>15.2</td>
</tr>
<tr>
<td>2-3</td>
<td>4</td>
<td>6.7</td>
</tr>
<tr>
<td>4-9</td>
<td>16</td>
<td>27.1</td>
</tr>
<tr>
<td>10-15</td>
<td>10</td>
<td>17.0</td>
</tr>
<tr>
<td>16-over</td>
<td>10</td>
<td>17.0</td>
</tr>
<tr>
<td>Other*</td>
<td>10</td>
<td>17.0</td>
</tr>
</tbody>
</table>

* Participants who were not in an administrative position at the time of the study.
This information indicates that the largest number of members in both groups had between four and nine years of administrative experience. This category makes up 27.1 percent of the experimental group and 26.6 percent of the control group. Nine administrators, or 15.2 percent of the members of the experimental group, had up to one year of administrative experience, while 10.2 percent of the members in the control group were in this category. Eleven members (22.4 percent) of the control group fell into the category of 10-15 years of administrative experience, while 17.0 percent of the members of the experimental group were in this category.

These data indicate that there was a substantial difference in the composition of the two groups in relation to years of administrative experience.

The Composition of the Experimental Group Compared with the Control Group in Relation to the State in which the Member Resides and Setting of the School

The composition of both groups in relation to the state in which the member resides and the setting of the school in which the member is employed is presented in Table 4.

The data in the table indicate that the largest number of members from either group resided in the state of Massachusetts. For the experimental group 55.9 percent of the members resided in Massachusetts, while in the control group, 77.6 percent of the members resided in this state.
TABLE 4

A COMPARISON OF THE COMPOSITION OF THE EXPERIMENTAL GROUP WITH THE CONTROL GROUP IN RELATION TO THE STATE IN WHICH THE MEMBER RESIDES, AND THE SETTING OF SCHOOL IN WHICH THE MEMBER IS EMPLOYED

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N=59)</td>
<td>(N=49)</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td><strong>Geographic Location of School (State)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>33</td>
<td>55.9</td>
</tr>
<tr>
<td>Washington, D. C.</td>
<td>12</td>
<td>20.3</td>
</tr>
<tr>
<td>Florida</td>
<td>11</td>
<td>18.7</td>
</tr>
<tr>
<td>Georgia</td>
<td>3</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Setting of School</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>22</td>
<td>37.4</td>
</tr>
<tr>
<td>Suburban</td>
<td>27</td>
<td>45.8</td>
</tr>
<tr>
<td>Rural</td>
<td>5</td>
<td>8.4</td>
</tr>
<tr>
<td>Other*</td>
<td>5</td>
<td>8.4</td>
</tr>
</tbody>
</table>

* Refers to participants who were not employed in a school.

Twelve members (20.3 percent) of the experimental group resided in Washington D. C., 18.7 percent were from Florida and three members or 5.1 percent had residence in Georgia. This compares to 24.4 percent of the members from Florida and no members from either Florida or Georgia in the control group.

The data in Table 4 also indicated that the largest number of members in either group were employed in schools within suburban
settings. For the experimental group this included 45.8 percent of the members, and for the control group this was 55.1 percent. Twenty two members or 37.4 percent of the experimental group were employed in schools from urban settings, while 34.5 percent of the members in the control group were from urban schools.

The data in Table 4 indicate that there was a substantial difference between the two groups in relation to the state in which the members resided, and also in the types of setting for the schools in which the members were employed.

The Composition of the Experimental Group Compared with the Control Group in Relation to the Highest Academic Degree Held

In Table 5 are presented the data illustrating the composition of both groups in relation to the highest academic degree held by the member.

This data indicates that the majority of the members in either group had their Masters degree plus additional academic credits. For the experimental group the number of members in this category was 32 (54.2 percent), and for the control group it was 32 members, or 65.3 percent of the group. Four members of the control group, or 8.2 percent, had Doctorate degrees, while 3.4% of the members of the experimental group had Doctorates.

These data appear to indicate that the two groups were non-equivalent in relation to the highest degree held by the members of the group.
TABLE 5
A COMPARISON OF THE COMPOSITION OF THE EXPERIMENTAL GROUP WITH THE CONTROL GROUP IN RELATION TO THE HIGHEST ACADEMIC DEGREE HELD

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Experimental Group (N=59)</th>
<th>Control Group (N=49)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Highest Degree Held</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelors</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>Bachelors +</td>
<td>7</td>
<td>11.9</td>
</tr>
<tr>
<td>Masters</td>
<td>13</td>
<td>22.0</td>
</tr>
<tr>
<td>Masters +</td>
<td>32</td>
<td>54.2</td>
</tr>
<tr>
<td>Doctorate</td>
<td>2</td>
<td>3.4</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Summary
In the previous sections was presented a description of the composition of the experimental group (the participants in the field testing of the modular units) and the control group. From the data presented, it appears that the two groups were substantially different in relation to the following characteristics: 1) sex, 2) age, 3) present position, 4) number of years of administrative experience, 5) the state in which the member resides, 6) the setting of the school in which the member is employed, and 7) the highest academic degree held by the member.
Methods of Gathering and Processing the Data

The study incorporated five distinct types of assessment procedures to determine the suitability of using the audio modular instructional approach for in-servicing school administrators. These procedures were 1) a determination of the participant's attitude toward his experience with the modular unit through the use of "closed" questions on a written questionnaire; 2) a determination of the participant's attitude toward his experience with the modular unit through the use of "open-ended" questions on a questionnaire; 3) a comparison of the participant's attitude toward the audio modular approach with their attitude toward other forms of in-service programs, determined through the use of "open-ended" and "closed" questions on a questionnaire; 4) an examination of the cognitive and attitudinal changes that occurred in the participant due to participating in the unit as determined through the incorporation of a posttest-only nonequivalent control group quasi-experimental design; and 5) a determination of the participant's attitude toward the audio modular units as determined by the perceptions of the investigator based on his observation of the participants during their participation in the units and through taped interviews with a selected number of participants. These approaches as they were used in the study are described separately in the following sections.
The Procedures for Determining the Participant's Attitude toward his Experience with the Module Through the Use of "Closed" Questions

After each participant completed the modular unit he was asked to respond to a number of "closed" questions on a written questionnaire. These questions related to the participant's attitude toward his experience with the module. The rationale for utilizing these questions, in addition to the content of the questions, are described in the following sections.

The Questions Relating to the Degree of Interest and Value of the Learning Experience

Two questions were included in an attempt to determine 1) the participant's perception as to how interesting the modular experience was, and 2) how valuable this experience was for his own learning. These questions are presented in Figure 2. As is shown here, both questions incorporated the use of the Likert-type five scale response categories. Two of the categories solicited responses indicating positive attitudes and two solicited responses indicating negative attitudes. One of the categories solicited a response which would indicate a neutral attitude.

Additional Questions Incorporating the Likert-type Five Scale Categories for Soliciting Responses

Four additional questions were asked which incorporated the Likert-type five scale categories for soliciting responses. These
1. I found participating in the audio instructional module, "Staff Development: The Use of Supportive Feedback",
   ___ a) very interesting.
   ___ b) somewhat interesting.
   ___ c) neither interesting nor boring.
   ___ d) somewhat boring.
   ___ e) very boring.

2. I found participating in the audio instructional module, "Staff Development: The Use of Supportive Feedback",
   ___ a) a very valuable learning experience.
   ___ b) a learning experience of some value.
   ___ c) an experience which is neither valuable nor worthless as far as my own learning.
   ___ d) an experience somewhat worthless.
   ___ e) an experience which was completely worthless.

Fig. 2--The questions relating to interest in the modular experience and value to own learning.

questions are presented in Figure 3. All of these questions solicit the type of responses set forth in the two questions presented in Figure 2; that is, two of the response categories solicit positive attitudes, two solicit negative attitudes and one solicits a neutral attitude. The procedures used in the study to process and analyze the data collected from these questions is described in the following section.

The Procedures Used in Processing and Analyzing the Data from these Questions

Two methods were used in the analysis of the data generated from these questions. The first method was to simply examine the number and percent of times a response category was marked for each
11. How excited would you be in recommending to a fellow administrator that he/she participate in this module?
   ____ a) very excited
   ____ b) somewhat excited
   ____ c) no feeling either way
   ____ d) would be reluctant to recommend it
   ____ e) definitely would not recommend it

6. I feel that the experience I gained from participating in this module
   ____ a) was definitely worth this amount of time.
   ____ b) was probably worth this amount of time.
   ____ c) may or may not have been worth this amount of time.
   ____ d) was probably not worth this amount of time.
   ____ e) was definitely not worth this amount of time.

7. Now that I know what the modules are like, if I had had the choice I would
   ____ a) have definitely participated in the modules.
   ____ b) have probably participated in the modules.
   ____ c) not know whether I would or would not have participated in
       the modules.
   ____ d) have probably not participated in the modules.
   ____ e) have definitely not participated in the modules.

13. If you had the opportunity would you participate in additional modules?
    ____ a) yes, definitely
    ____ b) yes, probably
    ____ c) I don’t know
    ____ d) probably not
    ____ e) definitely not

Fig. 3—The additional questions incorporating the Likert-type five scale categories for soliciting responses.
question. These response categories ranged from (a) to (e). The categories of (a) or (b) in each question indicated a positive attitude, while the (d) or (e) category indicated a negative response. The (c) category indicated a neutral attitude toward the question or statement. In most cases the data were interpreted by combining the responses for categories (a) and (b) to determine the attitudes in the positive direction, and combining (d) and (e) to determine the attitudes in the negative direction. The responses for (c) were not considered in the interpretation of the results.

The second method that was employed in the study was to determine a weighted mean for the group for each question. The values assigned to the response categories are as follows: (a)=4; (b)=3; (c)=2; (d)=-1; and (e)=0. For this study, the use of the weighted means for these questions was used mainly for the purpose of determining the differential attitudes that might exist toward the modules. In other words, were there differences between the males and females, among the participants from different school settings, and so on.

Other "Closed" Questions Relating to the Participant's Attitude Toward the Modules

The questions presented in Figure 4, are a series of questions included in the questionnaire for the purpose of determining attitudes toward more specific aspects of the modular units.
The following items focus on the technical aspects of the audio instructional modules, and the effect these aspects have on the modules. Please circle the numeral at the right of the statement which best represents your evaluation of the particular aspect mentioned in the statement. Use the following scale:

1
2. Outstanding
3. Good
4. Average
5. Needs improving
6. Very poor

a) The general appearance of the module.......................... 1 2 3 4 5
b) The clarity of the module instructions ......................... 1 2 3 4 5
c) The statement of objectives ................................. 1 2 3 4 5
d) The appearance of the pages in the text portion ............... 1 2 3 4 5
e) The quality of the cassette tape ................................ 1 2 3 4 5
f) The use of the cassette tape in the presentation ............. 1 2 3 4 5
g) The synchronization between the text and the audio portion ...1 2 3 4 5
h) The usefulness of the selected references ..................... 1 2 3 4 5
i) The ease with which the materials (exercises, cassette tape, extra guidebooks, etc.) can be utilized .................. 1 2 3 4 5

Fig. 4—Questions relating to the technical aspects of the modules.

The processing, analysis, and interpretation of these questions were handled in the same manner as those described in the previous section.

In an attempt to determine whether the participant would take time out from his duties during a "typical work-week", a question was included focused on what priority would be given to using the module if the participants were to receive one. This question is presented in Figure 5.

For this question there are seven levels on the scale from "low priority" to "high priority". The procedures for processing,
25. For the following question place an X between the : : which best represents your feeling.

During your "typical" workweek how much priority would you give to taking time out to participate in an audio modular instructional unit:

High Priority :___ :___ :___ :___ :___ :___ :___ Low Priority

Fig. 5--A question which was included for the purpose of determining whether the participant would take time out to use the module.

analyzing and interpreting this question was essentially the same as for the previous ones. The exception being that the numerical weight given ranged from 0 for "low-priority" to 6 for "high priority".

The Procedures for Determining the Participant's Attitude toward his Experience with the Module through the Use of "Open-ended" Questions.

In addition to the "closed" questions, several "open-ended" questions were included in the questionnaire, for the purpose of soliciting attitudinal responses toward the modules. These questions were dispersed intermittently throughout the questionnaire and were included in order to supplement the data collected from the "closed" questions.

One group of these "open-ended" questions focused on the participant's attitude toward the specific module in which he had participated. These questions are presented in Figure 6.
3. If you had the opportunity to make changes in this module, what changes would you make?

What aspects of the module would you definitely want to remain the same?

4. If it was discovered that this module was too time consuming, and you were involved in revising it, what portion would you definitely keep in the module?

What portion would you remove?

5. Briefly state what you feel you have learned from these modules.

What other existing instructional method would you have preferred to participate in in order to learn this?

If you were given the time and the money, what would you have developed to provide another person the opportunity to learn what you have learned?

9. What was the major strength of this module?

10. What was the major weakness of this module?

Fig. 6--The "open-ended" questions focused on soliciting the participant's attitude toward the specific module with which he had experienced.
The purpose for these questions is to solicit responses related to 1) specific changes which the participant feels should be made; 2) the participant's perception of what he had learned from his experience with the module; and 3) the major strengths and weaknesses of the audio modular unit in which he participated.

The two sets of incomplete statements presented in Figure 7 were included in the questionnaire to solicit either positive or negative comments from the respondent. The first set of statements shown in this figure focus on soliciting comments about specific aspects of the module. The focus for the second set of statements was on the audio modular approach in general. The rationale for including both foci in the questionnaire was the feeling that the participant's attitude toward the audio modular approach, in general, will depend to a great extent on his attitude toward his experience with a specific modular unit.

The two sets of questions and incomplete statements presented in Figure 8 were included in the questionnaire in order to solicit more specific responses toward the audio modular instructional approach. The first set asks for the participant's perception of the strengths and weaknesses of this approach. The second set asks the respondent to suggest other types of learnings that could be gained through this approach.

In order to process and analyze the data generated from the "open-ended" questions, the responses for each question had to be categorized. After the categories were identified, the number and
12. Complete the following statements:
   a) The discussion questions in the modules

   b) The Exercises in the modules

   c) The diagrams in the modules

   d) The variety of voices in the modules

Please complete the following statements:

19. I would spend time participating in an audio modular instructional unit only if

20. I would definitely not spend time participating in an audio modular instructional unit if

21. For anyone to develop any more audio modular instructional units would

22. If I were to receive an audio modular instructional unit on a Monday of a "typical" work-week I would

Fig. 7--Two sets of completion questions soliciting the attitudinal response to a specific unit, and the modular approach in general.
16. The major strengths of the audio modular instructional approach as an in-service technique are:

17. The major weaknesses of the audio modular instructional approach as an in-service technique are:

28. What additional topics might be adapted to audio modular instruction?

14. What kinds of skills and knowledge do you think could be learned through the use of audio modular instruction?

15. Suppose you were given the time and the money to develop an audio modular instructional unit. Below briefly describe what the unit would include.

Fig. 8—Two sets of questions focused on soliciting attitudes toward the audio modular approach and possible learnings that can be gained through this approach.
percent of responses for each category were examined. The results from the categorization for these questions were compared with the results of the responses to the "closed" questions to determine if any patterns existed.

The Procedures Used for Determining the Participant's Attitude toward the Modular Approach as Compared with other Forms of In-service Training

Two procedures were used in the study in an attempt to determine the participant's attitude toward the audio modular approach as compared with other forms of in-service training in which he had participated. For the first procedure, the participants were asked to rank a list of six different in-service approaches in the order of the participant's preference for the specified approach. The question soliciting this rank ordering process is presented in Figure 9. As is shown from the format of the question, four blank spaces were included in the list for the respondent to write in any additional approaches.

The data generated by this question was processed in two different ways. The first method was to simply determine the number of times each approach was assigned a certain rank value. The second method that was employed was to assign a numerical value to each response, and then determine the weighted mean score for the group for each item listed. The numerical values that were assigned are presented in Figure 10.
18. Suppose you were given the time and the money to participate in the following in-service educational programs. Assuming they would be equal in cost and the amount of time required, rank the following approaches in the order of your preference. Start with the numeral one for your highest preference; numeral two as second, and so on.

- a) attend an administrative conference to listen to speakers.
- b) attend an administrative conference involving a number of seminars.
- c) purchase a professional level book and read it.
- d) visit a neighboring school district.
- e) participate in an audio modular instructional unit.
- f) have a discussion group session with other administrators from my district.

(Below add any more in-service educational program approaches you might choose as an alternative.)

- g) __________________________________________
- h) __________________________________________
- i) __________________________________________
- j) __________________________________________

Fig. 9--The question, included in the questionnaire, which solicited the rank ordering of in-service approaches according to the participant's preference.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Numerical Value Assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

Fig. 10--The numerical values assigned to the rank given each item for Question #18.
The second technique employed was the use of a semantic differential scale. This procedure is discussed in the following section.

The Use of the Semantic Differential Scale

Through the use of a semantic differential scale the participants were asked to react to two concepts 1) "audio modular instruction as one alternative approach for in-service educational programs for administrators in which you have participated (excluding the audio modular approach)". The format of the scale and the polar traits is presented in Figure 11.

Polarity differences were analyzed by assigning values to the possible response positions as illustrated below.


Mean polarity scores for the participant group were computed for each question. In addition, six of the polar traits were paired and averaged to determine the mean polarity scores for three factors; 1) evaluation, 2) potency, and 3) activity. For the evaluative factor the mean polarity scores for the polar traits of good-bad and pleasant-unpleasant were used. For the potency factor the scores for the polar traits strong-weak and deep-shallow were used. The scores for the polar traits of hot-cold and active-passive were averaged to determine the activity factor.
For the following two concepts, place an X between the : near the word which most nearly represents your feeling about the concept. The closer you place the X to the word, the more the word represents your feeling.

**23.**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Good</th>
<th>Pleasant</th>
<th>Promising</th>
<th>Relevant</th>
<th>Strong</th>
<th>Deep</th>
<th>Superior</th>
<th>Broad</th>
<th>Hot</th>
<th>Active</th>
<th>Bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDIO MODULAR INSTRUCTION AS ONE ALTERNATIVE APPROACH FOR IN-SERVICE EDUCATION FOR SCHOOL ADMINISTRATORS (CONCEPT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**24.**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Good</th>
<th>Pleasant</th>
<th>Promising</th>
<th>Relevant</th>
<th>Strong</th>
<th>Deep</th>
<th>Superior</th>
<th>Broad</th>
<th>Hot</th>
<th>Active</th>
<th>Bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN-SERVICE EDUCATIONAL PROGRAMS FOR ADMINISTRATORS IN WHICH YOU HAVE PARTICIPATED (EXCLUDING THE AUDIO MODULAR INSTRUCTIONAL APPROACH) (CONCEPT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 11--The format for the Semantic Differential Scale illustrating the concepts and the polar traits.
Statistical significance for the difference between mean polarity scores for the two concepts as related to each of the three factors was determined by t tests. The t scores were determined through an analysis of variance.

The Procedures Used in Examining the Cognitive and Attitudinal Changes that Occurred in the Participant as a Result of Participating in the Module.

In an attempt to determine the cognitive and attitudinal changes effected by the modular experience, the posttest-only nonequivalent control group quasi-experimental design was used. (The composition of the control group and experimental group was presented in an earlier section of this chapter.) Two types of measurement instruments were constructed; 1) achievement tests to measure cognitive changes, and 2) a semantic differential scale to measure attitudinal changes. These are described below.

Three different achievement tests were constructed, including one test for each of the three modular units. The questions for these tests were based on the objectives specified for each of the modular units. One of the three tests were administered to each member of the control group and experimental group. In the analysis of the data the difference in the mean scores between the groups was treated separately for each of the three tests. (Copies of these instruments are included in Appendix C.)

In attempting to measure the attitudinal changes effected by the modular experience, a semantic differential scale was administered
to all the members of both the control and experimental groups. On the scale the respondents were asked to react to five different concepts. These concepts were 1) "principal's role in staff development," 2) "principal-teacher conferences," 3) "administrator-staff communications," 4) "listening," and 5) "in-service education for school administrators. The format of the scale and the polar traits as related to one of these concepts is presented in Figure 12.

**Fig. 12**—The format for the Semantic Differential Scale illustrating the polar traits for one of the five concepts.
Polarity differences were analyzed by assigning values to the possible positions as illustrated below.

Good : 6 : 5 : 4 : 3 : 2 : 1 : 0 : Bad

Mean polarity scores for each of the two groups were computed for each question. In addition, the twelve polar traits were grouped into three groups of four traits each. The mean polarity scores for each group were computed in order to determine the mean polarity scores for the three factors; 1) evaluation, 2) potency, and 3) activity.

The specific polar traits related to each of the three factors are illustrated below.

1. Evaluative = (good-bad) (relaxed-tense) near-far)
   (healthy-sick)
2. Potency = (deep-shallow) (strong-weak) (rugged-delicate)
   (loud-soft)
3. Activity = (active-passive) (sharp-dull) (fast-slow)
   (hot-cold)

The difference in mean polarity scores relating to these three factors between the experimental group and the control group was determined. To determine this difference, each concept was treated separately.
The Procedures for Incorporating the Perceptions of the Investigator based on his Observation.

During the field tests, the investigator made notes from his observations of the sessions in which the participants were participating in the modules. In addition, he conducted interviews with some of the participants after they had completed the modular experience. A number of these interviews were recorded on audio tape. The information from these sources were considered in making the final conclusions for the study.

Summary

The findings from the five different assessment procedures set forth in the previous section were presented in tables and analyzed. The summary and conclusions made for the study were determined through an effort to synthesize the findings from these separate approaches, and to look for evidence of patterns that may exist. In the following chapter the data generated from these procedures is presented and analyzed.
CHAPTER V
PRESENTATION AND ANALYSIS
OF THE FINDINGS

In the previous chapter a description of the study population and the methods for gathering and analyzing the data was presented. In this chapter are presented the analyses of the data in assessing the effects of, and attitudes toward, the audio modular units. More specifically, the major task was to determine whether the audio modular instructional technique is a suitable means for in-servicing school administrators in certain concepts and skills. Two minor tasks were to 1) test out some training assessment techniques and 2) to compare attitudes toward the audio modular approach with other forms of in-service training for administrators.

The present chapter includes four major categories. 1) the participant's attitude toward the audio modular units; 2) a comparison of the attitudes toward the audio modular approach with other forms of In-service training for school administrators; 3) a comparison of the experimental group with the control group as related to achievement on a cognitive test and attitudes toward various concepts; and 4) general perceptions of the investigator from his observation of the participants as they experienced the audio modular units.
The two procedures which were used to determine the participants' attitude toward the modules were through the use of open and closed questions on the same questionnaire. Although these types of questions were dispersed intermittently throughout the questionnaire, they are presented separately in the following sections. The following section presents the data from the closed questions.

Data from the Closed Questions.

In Table 6 is presented the results of how interesting the experiences in the modules were to the participants.

<table>
<thead>
<tr>
<th>Response Pattern</th>
<th>Responses Made (N=59)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>&quot;very interesting&quot;</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>56</td>
</tr>
<tr>
<td>&quot;somewhat interesting&quot;</td>
<td>18</td>
</tr>
<tr>
<td>&quot;neither interesting nor boring&quot;</td>
<td>3</td>
</tr>
<tr>
<td>&quot;somewhat boring&quot;</td>
<td>0</td>
</tr>
<tr>
<td>&quot;very boring&quot;</td>
<td>0</td>
</tr>
</tbody>
</table>
As is illustrated on this table, almost 95 percent (94.9%) of the participants found the experience to be interesting, while none of the participants found the experience to be boring. The majority (64.4%) found the experience to be very interesting.

The respondents were asked to estimate the amount of time they had spent participating in the module; and then, to respond to a question asking whether the experience was worth this amount of time. The data presented in Table 7 indicate their reactions to this question.

**TABLE 7**

RESULT OF THE RESPONSE TO THE COMPLETION OF THE STATEMENT, "I FEEL THAT THE EXPERIENCE I GAINED FROM PARTICIPATING IN THIS MODULE...."

<table>
<thead>
<tr>
<th>Response Pattern</th>
<th>Responses Made</th>
<th>(N=59)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;was definitely worth this amount of time&quot;</td>
<td>37</td>
<td>62.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>88.1</td>
</tr>
<tr>
<td>&quot;was probably worth this amount of time&quot;</td>
<td>15</td>
<td>25.4</td>
</tr>
<tr>
<td>&quot;may or may not have been worth this amount of time&quot;</td>
<td>6</td>
<td>10.2</td>
</tr>
<tr>
<td>&quot;was probably not worth this amount of time&quot;</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>&quot;was definitely not worth this amount of time&quot;</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Responses Made: $\frac{37}{59} = 0.627 \approx 62.7\%$  
Responses Made: $\frac{15}{59} = 0.254 \approx 25.4\%$  
Responses Made: $\frac{6}{59} = 0.102 \approx 10.2\%$  
Responses Made: $\frac{1}{59} = 0.017 \approx 1.7\%$  
Responses Made: $\frac{0}{59} = 0.000 \approx 0.0\%$
As is illustrated here, almost 63 percent (62.7%) of the participants felt that the experience had definitely been worth the time spent on the module. Fifty two out of the 59 participants, or 88.1 percent, felt the experience was worth this amount of time to some degree. Only one respondent felt that the experience was not worth the time he had committed to it.

An attempt was made to determine whether the participant would repeat the same experience if he had had a choice. The information presented in Table 8 identifies their reaction to this concern.

**TABLE 8**

RESULT OF THE RESPONSE TO THE COMPLETION OF THE STATEMENT, "NOW THAT I KNOW WHAT THE MODULES ARE LIKE, IF I HAD HAD THE CHOICE I WOULD...."

<table>
<thead>
<tr>
<th>Response Pattern</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;have definitely participated in the module&quot;</td>
<td>34</td>
<td>57.6</td>
</tr>
<tr>
<td></td>
<td>54</td>
<td>91.5</td>
</tr>
<tr>
<td>&quot;have probably participated in the module&quot;</td>
<td>20</td>
<td>33.9</td>
</tr>
<tr>
<td>&quot;not know whether I would have participated in the module&quot;</td>
<td>4</td>
<td>6.8</td>
</tr>
<tr>
<td>&quot;have probably not participated in the module&quot;</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>&quot;have definitely not participated in the module&quot;</td>
<td>0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
It appears that over 90 percent (91.5%) would have either probably or definitely gone through this experience had they had the choice. Over half (57.6%) would definitely have done so. Again, one respondent would not have participated in the module had he had the choice.

The respondents were asked to answer another question, the focus of which, was to determine how valuable the experience was to their own learning. The data illustrated in Table 9 present the results of this concern.

**Table 9**

RESULT OF THE RESPONSE TO THE COMPLETION OF THE STATEMENT, "I FOUND PARTICIPATING IN THE AUDIO INSTRUCTIONAL MODULE..."

<table>
<thead>
<tr>
<th>Response Pattern</th>
<th>Responses Made (N=59)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>&quot;a very valuable learning experience&quot;</td>
<td>22</td>
</tr>
<tr>
<td>&quot;a learning experience of some value&quot;</td>
<td>34</td>
</tr>
<tr>
<td>&quot;an experience which is neither valuable nor worthless as far as my own learning&quot;</td>
<td>3</td>
</tr>
<tr>
<td>&quot;an experience somewhat worthless as far as my own learning&quot;</td>
<td>0</td>
</tr>
<tr>
<td>&quot;an experience which was completely worthless as far as my own learning&quot;</td>
<td>0</td>
</tr>
</tbody>
</table>
It appears that slightly over one third (37.3%) of the respondents felt that participating in the module was a very valuable learning experience while approximately half (57.6%) felt it to be of some value to their own learning. Taken together the data indicate that approximately 95 percent (94.9%) or 56 of the participants perceived the experience as having value to their own learning. None of the participants found it to be of no worth to their own learning.

The respondents were asked if they would participate in additional modules if they had the opportunity to do so. The data presented in Table 10 show the results of this concern.

**TABLE 10**

**RESULT OF THE RESPONSE TO THE QUESTION, "IF YOU HAD THE OPPORTUNITY WOULD YOU PARTICIPATE IN ADDITIONAL MODULES?"**

<table>
<thead>
<tr>
<th>Response Pattern</th>
<th>Responses Made (N=59)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;yes, definitely&quot;</td>
<td>26  {</td>
<td>54</td>
</tr>
<tr>
<td>&quot;yes, probably&quot;</td>
<td>28  {</td>
<td></td>
</tr>
<tr>
<td>&quot;I don't know&quot;</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>&quot;probably not&quot;</td>
<td>1  {</td>
<td>1</td>
</tr>
<tr>
<td>&quot;definitely not&quot;</td>
<td>0  {</td>
<td>0</td>
</tr>
</tbody>
</table>
As illustrated here over 90 percent (91.5%) indicated positive responses, while 44.1 percent indicated that they definitely would participate in additional modules if the opportunity arose. None of the participants gave a negative response to this question. The investigator felt that in addition to one's desire to participate in additional experiences, a person's attitude toward an experience can be determined by how excited he is towards recommending the experience to another person. The information presented in Table II provide the results of this type of question posed to the participants.

**TABLE II**

RESULT OF THE RESPONSE TO THE QUESTION, "HOW EXCITED WOULD YOU BE IN RECOMMENDING TO A FELLOW ADMINISTRATOR THAT HE/SHE PARTICIPATE IN THIS MODULE?"

<table>
<thead>
<tr>
<th>Response Pattern</th>
<th>Responses Made (N=59)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;very excited&quot;</td>
<td>22} = 52</td>
<td>37.3</td>
<td>88.1</td>
</tr>
<tr>
<td>&quot;somewhat excited&quot;</td>
<td>30} = 50.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;no feeling either way&quot;</td>
<td>5} = 8.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;would be reluctant to recommend it&quot;</td>
<td>1} = 2</td>
<td>1.7</td>
<td>3.4</td>
</tr>
<tr>
<td>&quot;definitely would not recommend it&quot;</td>
<td>1}</td>
<td>1.7</td>
<td></td>
</tr>
</tbody>
</table>
In this case slightly over one third (37.3%) of the respondents would be very excited about recommending the modular unit to another administrator, while 88.1 percent gave responses in the positive direction. Two of the respondents (3.4%) gave negative responses to the idea of recommending the module to another administrator.

In addition to the above-mentioned general attitudes toward the modules, the participants were asked to respond to a number of questions concerning the technical aspects of the module. The data provided in Table 12 present these reactions to these more specific aspects of the units.

As is indicated from the information on this table over 80 percent of the participants have responses in the positive direction on each technical aspect listed except one. On the technical aspect concerning the "quality of the cassette tape", 59.3 percent indicated responses in the positive direction while 40.7% indicated from average to very poor. The aspect which appears to have had the most favorable response is the one concerned with the "ease with which the materials can be utilized". On this aspect 91.5 percent of the respondents indicated "good" or "outstanding" while none of the participants indicated responses in the negative direction.

Another indication of a participant's attitude toward the experience with the module would be what priority he would set for this experience in relation to the on-going task he has to perform. An effort was made to determine the priority that participating in a module would take in relation to the other tasks that the
<table>
<thead>
<tr>
<th>Technical Aspects</th>
<th>&quot;Outstanding&quot;</th>
<th>&quot;Good&quot;</th>
<th>&quot;Average&quot;</th>
<th>&quot;Needs Improving&quot;</th>
<th>&quot;Very Poor&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>General appearance of the module</td>
<td>17 (28.8)</td>
<td>34 (57.6)</td>
<td>4 (6.8)</td>
<td>3 (5.1)</td>
<td>1 (1.7)</td>
</tr>
<tr>
<td>Clarity of the modular instructions</td>
<td>13 (22.0)</td>
<td>36 (61.0)</td>
<td>8 (13.6)</td>
<td>2 (3.4)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Statement of objectives</td>
<td>27 (45.8)</td>
<td>25 (42.3)</td>
<td>5 (8.5)</td>
<td>2 (3.4)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Quality of the cassette tape</td>
<td>19 (32.2)</td>
<td>16 (27.1)</td>
<td>17 (28.8)</td>
<td>6 (10.2)</td>
<td>1 (1.7)</td>
</tr>
<tr>
<td>Synchronization between the text and the audio portion</td>
<td>15 (25.4)</td>
<td>35 (59.3)</td>
<td>7 (11.9)</td>
<td>2 (3.4)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Ease with which the materials can be utilized</td>
<td>25 (42.3)</td>
<td>29 (49.2)</td>
<td>5 (8.5)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
</tr>
</tbody>
</table>
participant must perform during a "typical week". The results for this concern are illustrated in the data presented on Table 13.

TABLE 13

RESULT OF THE RESPONSE TO THE QUESTION, "DURING YOUR "TYPICAL" WORK-WEEK HOW MUCH PRIORITY WOULD YOU GIVE TO TAKING TIME OUT TO PARTICIPATE IN AN AUDIO MODULAR INSTRUCTIONAL UNIT?"

<table>
<thead>
<tr>
<th>Response Pattern</th>
<th>Responses Made (N=59)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>High Priority</td>
<td></td>
</tr>
<tr>
<td>(6)</td>
<td>2</td>
</tr>
<tr>
<td>(5)</td>
<td>16</td>
</tr>
<tr>
<td>(4)</td>
<td>24</td>
</tr>
<tr>
<td>(3)</td>
<td>12</td>
</tr>
<tr>
<td>(2)</td>
<td>3</td>
</tr>
<tr>
<td>(1)</td>
<td>1</td>
</tr>
<tr>
<td>Low Priority</td>
<td></td>
</tr>
<tr>
<td>(0)</td>
<td>1</td>
</tr>
</tbody>
</table>

As is indicated from this data 3.4 percent of the participants would place the module as the highest priority during the week. This compares with 1.7 percent indicating it as lowest priority. A little less than one third (30.5%) would rank the participation in the module as either highest or second to the highest in priority. The majority of the participants 61.0% ranked it as at about the mid-point in priority.
No conclusions can be determined from these results as to whether the administrator would take time out during a typical work week to participate in a modular unit.

Summary:

The above data appear to indicate that the participants had a positive attitude toward their experiences with the modules. On the questions focusing on the modules in general, the data in Tables 6 through 11, no less than 88 percent of the participants gave responses in the positive direction on any one item. At the same time, no more than 3.4 percent gave responses in the negative direction on any one of these same items.

Of the questions concerning the technical aspects of the modules, the lowest percent of responses in the positive direction on any one item becomes 59.3 percent; while the highest percent of responses in the negative direction on any one item would be 11.7 percent. If one were to remove the item on the quality of the cassette tape these respective figures would be 86.4 percent and 6.8 percent.

The investigator realizes that caution must be taken in making any definitive conclusions from this data. Due to the fact that respondents generally give responses in the more favorable direction on these forms of closed questions, the participants were also asked to respond to open-ended questions. These were provided in order to supplement or expand the information given on the
closed questions. In the following section is presented the findings from the information obtained from the open-ended questions.

**Data from the Open-ended Questions.**

A number of open-ended questions were dispersed throughout the questionnaire. The purpose of these questions was to supplement the information obtained from the participant's response to the closed questions. (A detailed description of these open-ended questions is presented in Chapter IV of this report.) In the following parts of this section are presented the results of the categorization of the responses made to some of these open-ended questions and statements.

For two of the questions, the participant was asked to list what he had learned from his experience with the module, and then to describe how valuable this was to him. These questions were then followed with the question, "What other existing instructional method would you have preferred to participate in in order to learn this?" The results of the categorization of the responses made to this question are presented in Table 14.

As is illustrated here, 50 of the participants responded to this question, while nine gave no response. Of the 50 responses made, 26 responses or 52.0 percent fell into the category of "no other approach would be better". Nine of the responses made, or 18.0 percent, were categorized in the area of such instructional methods as viewing movies, filmstrips, and video tapes. Workshops
TABLE 14

THE RESULTS OF THE CATEGORIZATION OF THE RESPONSES MADE TO THE OPEN-ENDED QUESTION "WHAT OTHER EXISTING INSTRUCTIONAL METHOD WOULD YOU HAVE PREFERRED TO PARTICIPATE IN IN ORDER TO LEARN THIS?"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Responses Made</th>
<th>Percent of Responses Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>No other approach would be better</td>
<td>26</td>
<td>52.0</td>
</tr>
<tr>
<td>View or listen to other audio-visual presentation, such as movies, video tape, and filmstrips</td>
<td>9</td>
<td>18.0</td>
</tr>
<tr>
<td>Participate in discussion groups</td>
<td>5</td>
<td>10.0</td>
</tr>
<tr>
<td>Attend a workshop for administrators</td>
<td>3</td>
<td>6.0</td>
</tr>
<tr>
<td>Learn it in the actual situation--on-the-job</td>
<td>3</td>
<td>6.0</td>
</tr>
<tr>
<td>Participate in simulation experiences</td>
<td>2</td>
<td>4.0</td>
</tr>
<tr>
<td>Attend a drama presentation or skit</td>
<td>2</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

* Nine participants did not respond to this question.

on learning on-the-job were mentioned three times each. Two, somewhat unique experiences, attending a drama presentation or skit and using a simulation approach were mentioned two times each.

These results appear to indicate that, for the majority of the participants, the audio modular approach was as good as any other method for the learning perceived to have taken place as a result
of experiencing the activities presented in the module.

Although the major task of the study was to determine the suitability of the audio modular approach in general, it was realized that a respondent's attitude toward the approach would be determined, to a great extent, on his experience with a specific module. In order to determine the participant's perception as to the weaknesses found in the modular approach, two questions were asked relating to the weaknesses he found in the module he had experienced. These questions were (1) "If you had the opportunity to make changes in this module, what changes would you make?" and (2) "What were the major weaknesses of this module?" Since the responses made for these two questions were very similar, these responses were combined and categorized together. Every response was counted, for example, if one participant gave "poor technical quality of the audio tape" as a weakness and as an aspect that should be changed, this was counted twice. The results of the categorization of the combined responses to these two questions are presented in Table 15.

As is shown here, a total of 117 responses were made to these two questions. Two participants did not respond to one of the questions, and six did not provide a response for the second question. Twenty three of the responses made, or 19.6 percent of the total responses, indicated that no changes should be made or no weaknesses were apparent. Twenty of the responses, or 17.1 percent, indicated that one of the weaknesses was the quality of
TABLE 15

RESULT OF THE CATEGORIZATION OF THE RESPONSES MADE TO THE TWO OPEN-ENDED QUESTIONS RELATED TO WHAT CHANGES THE PARTICIPANT WOULD MAKE AND THE MAJOR WEAKNESSES IN THE MODULE IN WHICH HE HAD PARTICIPATED.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Responses Made</th>
<th>Percent of Responses Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>No changes should be made, or no weaknesses found</td>
<td>23</td>
<td>19.6</td>
</tr>
<tr>
<td>Improve the quality of sound on the audio tape</td>
<td>20</td>
<td>17.1</td>
</tr>
<tr>
<td>Reduce the amount of time involved/it required too much time</td>
<td>17</td>
<td>14.5</td>
</tr>
<tr>
<td>Remove or change specific examples used in the module</td>
<td>15</td>
<td>12.8</td>
</tr>
<tr>
<td>Improve the clarity of the instructions/instructions were vague</td>
<td>12</td>
<td>10.3</td>
</tr>
<tr>
<td>Offer more solutions to the problems presented in the module</td>
<td>12</td>
<td>10.3</td>
</tr>
<tr>
<td>Use examples in the module which are more specifically related to education</td>
<td>6</td>
<td>5.1</td>
</tr>
<tr>
<td>Use more group participation to provide feedback</td>
<td>5</td>
<td>4.3</td>
</tr>
<tr>
<td>Incorporate a greater variety of audio-visual approaches such as movies, tapes, and filmstrips.</td>
<td>5</td>
<td>4.3</td>
</tr>
<tr>
<td>Remove some of the redundancy in the audio presentation</td>
<td>2</td>
<td>1.7</td>
</tr>
<tr>
<td>Total</td>
<td>117</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Two participants did not respond to the question related to making any changes; and six did not respond to the question related to the weakness found in the module.
the audio tape. As a point of interest, all of these responses came from participants who had experienced the module on feedback.

Seventeen responses, or 14.5 percent, were related to the time involved in participating in the module. These responses either indicated that the module was too long or that the participant did not have enough time to complete it at the time he participated in it for the study.

One of the interesting findings from these results is the relatively large number of responses (10.3 percent) indicating that they wanted more solutions provided in the module for the problems presented in the unit.

It appears that a relatively small number of responses (4.3 percent) indicated that the modules should incorporate a greater variety of audio visual approaches, such as movies, video tapes, and film strips.

Toward the end of the questionnaire the respondent was asked to complete the following statement, "The major weaknesses of the audio modular instructional approach as an in-service technique are:...." The results of the categorization of these responses are presented on Table 16.

Five of the participants did not respond to this statement. Of the 54 responses made, 13 responses or 24.1 percent indicated no perceived weaknesses to the modular approach. Ten of the responses or 18.5 percent indicated that the modular approach for in-service training was too time-consuming, while 9.3 percent of the responses
TABLE 16


<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Responses Made</th>
<th>Percent of Responses Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>No weaknesses found in the approach</td>
<td>13</td>
<td>24.1</td>
</tr>
<tr>
<td>Time commitment to the module is too long</td>
<td>10</td>
<td>18.5</td>
</tr>
<tr>
<td>There is not a sufficient variety of audio-visual materials used, such as movies, video tapes and filmstrips</td>
<td>5</td>
<td>9.3</td>
</tr>
<tr>
<td>A high degree of self-discipline is required for the participants to start and/or complete the module</td>
<td>4</td>
<td>7.4</td>
</tr>
<tr>
<td>The modules are inadequate if no provisions are made for personnel interaction</td>
<td>4</td>
<td>7.4</td>
</tr>
<tr>
<td>There is no consultant or facilitator present</td>
<td>3</td>
<td>5.5</td>
</tr>
<tr>
<td>The modules are inadequate unless the technical qualities, such as sound, are improved</td>
<td>3</td>
<td>5.5</td>
</tr>
<tr>
<td>No solutions to the problems are provided in the module</td>
<td>3</td>
<td>5.5</td>
</tr>
<tr>
<td>Too much equipment is required</td>
<td>3</td>
<td>5.5</td>
</tr>
<tr>
<td>The use of the tape and guidebook is too impersonal</td>
<td>2</td>
<td>3.7</td>
</tr>
<tr>
<td>There is a chance for the participant to misinterpret some of the ideas presented</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>More research is needed on the effectiveness of the modules</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>The speaker on the audio tape is too remote to the participant</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>The module can't be used in large group sessions</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Five participants did not respond.
called for a greater variety of audio visual materials to be used. This latter concern is interesting due to the fact that 5.5 percent of the responses indicated that too much equipment was needed for using the modules as they now exist.

The participants were then asked to respond to the statement, "The major strengths of the audio modular instructional approach as an in-service technique are: . . ." The results from the categorization of these responses are presented in Table 17.

Two participants did not respond to this statement. The data indicate that several of the ones that did respond to the statement gave more than one factor; therefore, the total number of responses made was 85. Of the 85 responses made, 16 of the responses, or 18.8 percent, were related to the ease and convenience with which the modules could be used. Ten of the responses, or 11.8 percent, indicated that one of the major strengths of the approach was that it allowed for the active involvement of the participants. One of the interesting points to note from these results is that 9.4 percent of the responses indicated that the modules were concise. One of the respondents "likes this approach because it doesn't require much reading".

In an attempt to determine whether the participant would take advantage of the modular approach for his own in-service training, the participants were asked to complete the following statement, "If I were to receive an audio modular instructional unit on Monday of a 'typical week' I would. . . ." The results of the categorization
### TABLE 17

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Responses Made</th>
<th>Percent of Responses Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease and Convenience with which materials can be used</td>
<td>16</td>
<td>18.8</td>
</tr>
<tr>
<td>Allows for active involvement of participants</td>
<td>10</td>
<td>11.8</td>
</tr>
<tr>
<td>Provides a mode for participants to work on relevant issues</td>
<td>8</td>
<td>9.4</td>
</tr>
<tr>
<td>The time involved in the experience is concise</td>
<td>8</td>
<td>9.4</td>
</tr>
<tr>
<td>Flexibility of use (can be used at any time)</td>
<td>7</td>
<td>8.2</td>
</tr>
<tr>
<td>All or parts of the module can be repeated when necessary</td>
<td>5</td>
<td>5.9</td>
</tr>
<tr>
<td>The low cost of the materials</td>
<td>5</td>
<td>5.9</td>
</tr>
<tr>
<td>Allows for a degree of control while participating in the experiences</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>The uniqueness of the approach</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>Provide a framework by which fellow administrators can get together</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>Sets a structure for group work, and allows for a flexible group size</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>Provides for a diversity of activities</td>
<td>3</td>
<td>3.4</td>
</tr>
<tr>
<td>Allows for a relaxed atmosphere while participating in the experience</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>Maintains the interest of the participant and is an enjoyable experience</td>
<td>2</td>
<td>2.4</td>
</tr>
<tr>
<td>Allows for self direction</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Does not require much reading</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>Provides feedback to the participant</td>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

* Two participants did not respond to this statement.
of these responses are presented in Table 18.

For this item, six of the participants did not provide a response. Thirty four percent of the participants indicated that they would use the module, and would complete it within a week. Fourteen of the participants indicated that they would use the module, but would do so when the opportunity arose. Two of the participants would work on the module immediately, while one of the participants indicated that he would not work on it at all.

These results appear to indicate that the participants would probably make an attempt to use the modules, but no conclusion can be reached as to the amount of time which would elapse before they would get to it.

It was felt that another indication of the participants' interest in the modular approach would be the number and variety of other skills and topics the participant felt could be presented through this method. Two separate questions were asked in attempting to generate this information. These questions were (1) "What kinds of skills do you think could be learned through the use of audio modular instruction?" and (2) "What additional topics might be adapted to audio modular instruction?"

The data presented in Table 19 and Table 20 provide the separate categorization of the responses to these two questions. As is illustrated in these tables, quite a variety of skills and topics were generated by the participants. Most of the skills appear to relate in some form or another to communication or human relations,
TABLE 18

RESULT OF THE CATEGORIZATION OF THE RESPONSES MADE TO THE OPEN-ENDED STATEMENT, "IF I WERE TO RECEIVE AN AUDIO MODULAR INSTRUCTIONAL UNIT ON MONDAY OF A 'TYPICAL WEEK' I WOULD . . . ."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Responses Made</th>
<th>Percent of Responses Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>finish the module within a week</td>
<td>18</td>
<td>34.0</td>
</tr>
<tr>
<td>finish the module at the first opportunity</td>
<td>14</td>
<td>26.4</td>
</tr>
<tr>
<td>use it but undecided about when</td>
<td>5</td>
<td>9.4</td>
</tr>
<tr>
<td>finish the module by Wednesday of that week</td>
<td>5</td>
<td>9.4</td>
</tr>
<tr>
<td>finish the module at the respondent's leisure</td>
<td>4</td>
<td>7.5</td>
</tr>
<tr>
<td>use the module when the assistance of associates could be solicited</td>
<td>3</td>
<td>5.7</td>
</tr>
<tr>
<td>work on it immediately</td>
<td>2</td>
<td>3.8</td>
</tr>
<tr>
<td>use it if the topic interested the respondent</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>not use it</td>
<td>1</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>53</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Six participants did not respond to this statement.
TABLE 19

The result of the categorization of the responses related to the open-ended question, "What kinds of skills do you think could be learned through the use of audio modular instruction?"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Responses Made</th>
<th>Percent of Responses Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most of the skills needed by the administrators</td>
<td>11</td>
<td>20.8</td>
</tr>
<tr>
<td>Listening skills</td>
<td>12</td>
<td>22.6</td>
</tr>
<tr>
<td>Group interaction or group dynamics</td>
<td>7</td>
<td>13.2</td>
</tr>
<tr>
<td>Communication skills</td>
<td>6</td>
<td>11.3</td>
</tr>
<tr>
<td>Skills in decision-making or problem-solving</td>
<td>6</td>
<td>11.3</td>
</tr>
<tr>
<td>Technical skills such as budgeting, research, etc.</td>
<td>5</td>
<td>9.4</td>
</tr>
<tr>
<td>Skills in negotiating</td>
<td>3</td>
<td>5.7</td>
</tr>
<tr>
<td>Classroom behavior/discipline</td>
<td>3</td>
<td>5.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>53</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

* Five participants did not respond to this question.
TABLE 20

RESULT OF THE CATEGORIZATION OF THE RESPONSES TO THE OPEN-ENDED QUESTION, "WHAT ADDITIONAL TOPICS MIGHT BE ADAPTED TO AUDIO MODULAR INSTRUCTION?"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Responses Made</th>
<th>Percent of Responses Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>16</td>
<td>17.2</td>
</tr>
<tr>
<td>Conferences (administrator-parent conferences, etc.)</td>
<td>13</td>
<td>13.9</td>
</tr>
<tr>
<td>Drugs</td>
<td>11</td>
<td>11.7</td>
</tr>
<tr>
<td>Interpersonal Relations</td>
<td>8</td>
<td>8.6</td>
</tr>
<tr>
<td>Behavioral Objectives</td>
<td>8</td>
<td>8.6</td>
</tr>
<tr>
<td>Curriculum and Instructional Innovations (nongrading, individualized instruction, etc.)</td>
<td>8</td>
<td>8.6</td>
</tr>
<tr>
<td>Supervision and Staff Development</td>
<td>7</td>
<td>7.5</td>
</tr>
<tr>
<td>Communication</td>
<td>7</td>
<td>7.5</td>
</tr>
<tr>
<td>Accountability</td>
<td>5</td>
<td>5.4</td>
</tr>
<tr>
<td>Test Construction and Evaluation</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>PPBS and accounting procedures</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>Developing Modular Packets</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Decision Making</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Negotiations</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Conflict Mediation</td>
<td>1</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>100.0</td>
</tr>
</tbody>
</table>

* Five participants did not respond to this question.
while the largest number of responses for possible topics is related to "discipline". There appears to be a substantial concern for presentations to be made on the topic of "drugs".

The results from these two tables appear to indicate that the participants perceived that the modular approach could be utilized in presenting a large number and variety of skills and topics to the administrator.

Summary

Two types of questions were used in an effort to determine the participants' attitude toward their experience with the audio modular instructional units. These were the "open-ended" question and the "closed" question. The results from these questions appear to indicate a very favorable attitude toward the modules. The ease and convenience with which the participant can utilize these materials seem to rank high among the participants' perception of their experience with the modules. Although a number of the participants felt that there should be a greater variety of audio visual materials used, the investigator questions whether the introduction of such materials might weaken the "ease and convenience" aspect of the modular approach.

The results did not provide any conclusive evidence as to whether the participant would take time off from his day-by-day duties to participate in the modules, although the majority of the participants felt that they would use the module if they were to receive one.
The investigator would caution against using these positive results as a predictor of future success of the modular approach as an alternative approach for in-servicing administrators. The tendency for respondents to rate such experiences high on interest inventories, negates placing too much reliance on such measures alone. A number of questions were included on the questionnaire in an attempt to determine how the modular experience compared with other forms of in-service training that the participants have experienced. The results of these responses are presented in the following section.
A Comparison of the Attitudes Toward the Audio Approach with Other Forms of In-service Training for School Administrators

An attempt was made to determine the participants' attitude toward the audio modular approach as this approach compared with other forms of in-service training which these respondents may have experienced. In order to do this, the participants were asked to rank order a list of six in-service approaches according to preference. Within this list the modular units were introduced as one of the entries. Three blank spaces were available for the respondent to add any other preference. The data presented in Table 21 provide the result of this rank ordering process.

As is illustrated from this data, 24 participants (40.7%) ranked the modules as highest preference over the other forms of in-service training which were listed. (None of the participants listed any additional choices to the list). Forty six of the respondents (78.0%) ranked the modules as either first or second choice of preference, while four of the participants (6.8%) ranked the modules as either last or second to the last choice.

The two forms of in-service which were ranked closest to the modular approach were 1) discussion groups with other administrators in the district and 2) attend a conference involving a seminar approach. In both of these latter forms, 15 respondents (25.4%) ranked the approach as their highest preference.

The approach which appears to be ranked the lowest is to attend
TABLE 21

RESULTS OF THE RESPONSE TO THE RANKING OF IN-SERVICE APPROACHES IN THE ORDER OF PREFERENCE.

<table>
<thead>
<tr>
<th>Pattern of Ranking and Number of Responses Made</th>
<th>&quot;Highest Preference&quot;</th>
<th>Pattern of Ranking</th>
<th>&quot;Lowest Preference&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>N=59</td>
<td>1 2 (1 &amp; 2 Combined)</td>
<td>3 4</td>
<td>5 6 (5 &amp; 6 Combined)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Responses Made</th>
<th>1</th>
<th>2</th>
<th>(1)</th>
<th>4</th>
<th>8</th>
<th>18</th>
<th>28</th>
<th>(46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend an administrative conference to listen to speakers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attend an administrative conference involving a number of seminars</td>
<td>15</td>
<td>9</td>
<td>(24)</td>
<td>10</td>
<td>16</td>
<td>8</td>
<td>1</td>
<td>(9)</td>
</tr>
<tr>
<td>Purchase a professional level book and read it</td>
<td>1</td>
<td>2</td>
<td>(3)</td>
<td>5</td>
<td>8</td>
<td>17</td>
<td>26</td>
<td>(43)</td>
</tr>
<tr>
<td>Visit a neighboring school district</td>
<td>4</td>
<td>7</td>
<td>(11)</td>
<td>23</td>
<td>14</td>
<td>9</td>
<td>2</td>
<td>(11)</td>
</tr>
<tr>
<td>Participate in an audio modular instructional unit</td>
<td>24</td>
<td>22</td>
<td>(46)</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>(4)</td>
</tr>
<tr>
<td>Have a discussion group with other administrators from my district</td>
<td>15</td>
<td>16</td>
<td>(31)</td>
<td>16</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>(7)</td>
</tr>
</tbody>
</table>
a conference to listen to speakers. None of the participants have the highest ranking for this item, while 46 respondents (78.0%) placed it as either the lowest or the second to the lowest choice of preference. This approach is closely followed by the approach of reading a professional book.

In order to gain a clearer perspective of these rankings the rank-order scores were weighted and the means of these weighted scores for each approach was determined. The graph presented in Figure 13 provides a visual comparison of the order of preference for the six in-service approaches listed on the questionnaire.

As is illustrated on this graph, the mean of the weighted score for the modular approach was 3.9. The means for the conference-seminar approach and the discussion group with other administrators was 3.1 and 3.0 respectively. Reading professional books and the conference-speaker approach were low at 1.0 and 1.3 respectfully.

A second technique was employed in attempting to determine the attitude toward the modules as compared with the participants' attitude toward other forms of in-service training. This method involved the use of semantic differential technique. The participants were asked to react to two concepts 1) "audio modular instruction as one alternative approach for in-service education for school administrators" and 2) "in-service educational programs for administrators in which you have participated (excluding the audio modular approach)". (The details of this procedure as used in the present study is described in Chapter IV of this report).
Attend an administrative conference to listen to speakers: 1.3
Attend an administrative conference involving a number of seminars: 3.1
Purchase a professional level book and read it: 1.0
Visit a neighboring school district: 2.6
Participate in an audio modular instructional unit: 3.9
Have a discussion group with other administrators from my district: 3.0

Fig. 13—The preferences to various forms of in-service training for school administrators as determined through calculating the means of weighted scores gained through a rank-ordering process.
The data illustrated in Table 22 show the results of the participants responses to the semantic differential as these responses relate to the factors of evaluation, potency, and activity.

As is illustrated here the mean polarity score for the concept of audio modules, in relation to the evaluative factor, was 5.0 (S.D.=2.32) as compared to 3.9 (S.D.=2.23) for the concept of in-service programs excluding the modular approach. The difference in these scores, 1.1, appears to be significant at the .01 level (t=3.35).

The mean polarity scores relating to the factor of potency for the modules as compared to other forms of in-service are 4.3 (S.D.=1.10) and 3.1 (S.D.=1.22) respectively. The difference between these scores is 1.2, which is significant at the .001 level (t=5.19). In relation to the activity factor, the difference between the mean score for the modules, 3.9 (S.D.=2.49), and other forms of in-service 3.0 (S.D.=2.16) was .9. This difference is significant at the .05 level (t=2.55).

For both concepts the evaluative factor has the highest mean polarity score while the activity factor had the lowest score. These results strongly suggest that the connative meaning of the concept of the audio modular approach, as opposed to the concept of in-service education excluding the modules, is stronger in relation to the factors of evaluation, potency, and activity. Any generalizations drawn from such a conclusion must be viewed with caution, due to the procedure for listing the polar traits on the semantic
THE RESULTS OF THE RESPONSES TOWARD THE AUDIO MODULAR APPROACH COMPARED WITH OTHER FORMS OF IN-SERVICE TRAINING FOR ADMINISTRATORS, AS RELATED TO EVALUATIVE, POTENCY, AND ACTIVITY FACTORS DETERMINED THROUGH THE USE OF THE SEMANTIC DIFFERENTIAL.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean Polarity Score (Sum of weighted responses)</th>
<th>Audio Modular Approach</th>
<th>Other forms of In-service</th>
<th>Difference in Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Score  (S.D.)</td>
<td>Score  (S.D.)</td>
<td></td>
</tr>
<tr>
<td>Evaluative</td>
<td>Mean Polarity Score (Sum of weighted responses)</td>
<td>5.0   (2.32)</td>
<td>3.9   (2.23)</td>
<td>1.1**</td>
</tr>
<tr>
<td>Potency</td>
<td>Mean Polarity Score (Sum of weighted responses)</td>
<td>4.3   (1.10)</td>
<td>3.1   (1.22)</td>
<td>1.2***</td>
</tr>
<tr>
<td>Activity</td>
<td>Mean Polarity Score (Sum of weighted responses)</td>
<td>3.9   (2.49)</td>
<td>3.0   (2.16)</td>
<td>.9*</td>
</tr>
</tbody>
</table>

**Significant at .001 level (t=5.19) analysis of variance

***Significant at .01 level (t=3.35) analysis of variance

*Significant at .05 level (t=2.55) analysis of variance
differential scale. On the scales for the two concepts all of the positive traits were listed on the left and all of the negative traits were on the right. Past studies have shown that respondents have a tendency to mark consistently on one side or the other of these scales, without paying too much attention to the specific item being marked. In light of this fact, the results presented on Table 22 probably indicate a general positive reaction toward the modules as compared to other forms of in-service training for administrators.

The mean polarity scores for some of the specific polar traits listed on the scale are presented in Table 23. As is illustrated here, the lowest mean polarity score for any one of these traits, as they relate to the modules, is 4.2 while the highest score for the other forms of in-service is 3.9. The biggest difference in scores between the two concepts appears to be for the polar trait of "promising-disappointing". The difference between the two concepts on this polar trait is 1.5.

The highest score for the concept of the modules was for the "relevant-irrelevant" polar trait. This score was 5.2 (S.D.=.98). The score for this trait, as it relates to other forms of in-service was 3.5 (S.D.=1.65) which was in the third score from the lowest. This indicated that there may be a tendency toward the attitude that the modular approach has promise of an in-service approach for administrators.
TABLE 23

RESULT OF THE RESPONSES TOWARD COMPARING THE AUDIO MODULAR APPROACH TO OTHER FORMS ON IN-SERVICE FOR ADMINISTRATORS AS THESE RESPONSES RELATE TO VARIOUS ATTITUDBINAL FACTORS, MEASURED THROUGH THE USE OF THE SEMANTIC DIFFERENTIAL.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Audio Modular Approach</th>
<th>Other forms of In-service</th>
<th>Difference in Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleasant-Unpleasant</td>
<td>4.7 (1.06)</td>
<td>3.9 (1.45)</td>
<td>.8</td>
</tr>
<tr>
<td>Promising-Disappointing</td>
<td>5.0 (.96)</td>
<td>3.5 (1.65)</td>
<td>1.5</td>
</tr>
<tr>
<td>Relevant-Irrelevant</td>
<td>5.2 (.98)</td>
<td>3.8 (1.67)</td>
<td>1.4</td>
</tr>
<tr>
<td>Strong-Weak</td>
<td>4.3 (1.11)</td>
<td>3.0 (1.38)</td>
<td>1.3</td>
</tr>
<tr>
<td>Deep-Shallow</td>
<td>4.2 (1.06)</td>
<td>3.3 (1.18)</td>
<td>.9</td>
</tr>
<tr>
<td>Superior-Inferior</td>
<td>4.5 (.94)</td>
<td>3.4 (1.49)</td>
<td>1.1</td>
</tr>
<tr>
<td>Broad-Narrow</td>
<td>4.2 (1.13)</td>
<td>3.8 (1.35)</td>
<td>.4</td>
</tr>
<tr>
<td>Active-Passive</td>
<td>4.2 (1.33)</td>
<td>3.1 (1.66)</td>
<td>1.1</td>
</tr>
</tbody>
</table>
Summary

Again, any conclusions reached from the results presented in Table 22 and Table 23 must be viewed with caution. This is especially the case when attempting to determine any differences between one specific polar trait and another. A general conclusion can be made, that is, the connotative meaning of the concept--"audio modular instruction as one alternative approach for in-service education for school administrators"--appeared to be in a more positive direction than the concept--"in-service educational programs for administrators in which you have participated (excluding the audio-modular approach)".

The Results from the Comparison of the Experimental Group with the Control Group as related to achievement, and attitudes toward various concepts

In the previous sections a description has been made of the results from the "subjective approach" used in the study; that is, those measures that were used to determine how the participants felt about their experience with the modules. In this section is presented the results from the "objective approach" used in the study; that is, the attempt to identify the amount and specific kind of change that occurred due to participating in the module experience.

For this latter approach, the posttest-only nonequivalent control group design was used. Although the original intentions for the study was to utilize the posttest-only control group experimental design, the task of obtaining a stratified control group became overbearing.
Therefore, this quasi-experimental design had to be employed. A full description of the experimental group and the control group is presented in Chapter IV of this report.

Two types of measures were used in an attempt to determine the changes that may have occurred in the participants due to their experience with the modules. The first was the measurement of the participants' achievement as it relates to the cognitive factors set forth in the objectives for the module. The second, was a measurement of the attitudinal changes which may have occurred due to this experience with the modules. These attitudes related to connotative meanings for several of the concepts on which the modules focused and the concept of "in-service training for administrators". A detailed description of the measurement instruments used, and the method of scoring is provided in Chapter IV of this report. In the following section the results from the achievement measures are presented.

**The Results from the Achievement Measurement**

On Table 24 are presented the results of the scores made on the achievement tests by the experimental group and the control group.

As is illustrated here, one of three different tests was given to the participant according to the topic of the module he experienced. The members in the control group were given one of the three tests at random.
A COMPARISON OF THE EXPERIMENTAL GROUP WITH THE CONTROL GROUP IN RELATION TO THE SCORES MADE ON
ACHIEVEMENT TESTS MEASURING COGNITIVE ASPECTS OF THE CONCEPTS PRESENTED IN THE MODULES.

<table>
<thead>
<tr>
<th>Title of module for which the test was constructed</th>
<th>Basic Elements of Communication</th>
<th>Use of Effective Feedback</th>
<th>Helper-Helpee Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Score (S.D.)</td>
<td>Mean Score (S.D.)</td>
<td>Mean Score (S.D.)</td>
<td>% N</td>
</tr>
<tr>
<td>Experimental Group</td>
<td>6.4 (1.74)</td>
<td>11.8 (1.70)</td>
<td>78.7</td>
</tr>
<tr>
<td>Control Group</td>
<td>5.7 (1.45)</td>
<td>7.1 (2.18)</td>
<td>47.4</td>
</tr>
<tr>
<td>Difference</td>
<td>.7</td>
<td>7.0</td>
<td>4.7</td>
</tr>
</tbody>
</table>
The mean score on the achievement test for the 19 participants who had experienced the two modules focused on the "Helper-Helpee Relationship" was 6.4 (S.D.=1.74) or 64 percent; while the mean score for the 17 control group members who took this test was 5.7 (S.D.=1.45) or 57 percent. These scores were subjected to an analysis of variance, and it was found that the difference of .7 could have been due to chance, as indicated by a P greater than .20 (t=1.23).

The mean score for the 18 participants who had experienced the module on feedback was 11.8 (S.D.=1.70) or 78.7 percent; while the score for the 18 control group members taking this test was 7.1 (S.D.=2.18). The difference in these scores in 4.7 or 31.3 percent. This difference, of course, could hardly be due to chance, assuming that the experimental group and the control group would have made similar scores before the experimental group had experienced the modules.

The mean score for the 19 participants who had experienced the module titled "Basic Elements of Communication" was 5.4 (S.D.=1.21) or 54 percent. This compares with a mean score of 3.0 (S.D.=1.31) or 30 percent made by the 15 members in the control group. Again, this difference of 24 percent could hardly be due to chance, if the assumption could be made that the two groups would have made similar scores prior to the time the modules were experienced.

According to these results, the change taking place in the participants as it relates to achievement on the objects appears to
be quite nominal. Due to the lack of stratification of the control group and the lack of certainty as to the validity and reliability of the test, these results must be viewed with caution.

The Results from the Attitude Measurement.

A second technique was employed in attempting to measure the changes that took place in the participants as a result of participating in the modules. For this technique the semantic differential was used in order to determine changes in attitude toward five different concepts; 1) "In-service education for school administrators", 2) "Principal's role in staff development", 3) "Listening", 4) "Administrator-Staff Communication", and 5) "Principal-teacher Conferences". Connotative meaning of these concepts for the respondent was determined as these meanings relate to the factors of evaluation, potency, and activity. (A detailed description of the procedures used to measure these factors is presented in Chapter IV of this report).

The data presented in Table 25 provide the mean polarity scores for these factors as they relate to two of the concepts. As is shown here, there is essentially no difference in the mean polarity scores between the experimental group and the control group. This appears to be the case as these scores relate to any of the three factors for either the concept--"In-service education for school administrators", or the concept--"Principal's role in staff development".
A COMPARISON OF THE EXPERIMENTAL GROUP WITH THE CONTROL GROUP IN RELATION TO THEIR ATTITUDES TOWARD THE CONCEPTS OF "PRINCIPALS' ROLE IN STAFF DEVELOPMENT" AND "IN-SERVICE EDUCATION FOR SCHOOL ADMINISTRATORS"; INDICATED BY THE FACTORS OF EVALUATION, POTENCY, AND ACTIVITY DETERMINED THROUGH THE USE OF THE SEMANTIC DIFFERENTIAL.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Mean Polarity Score</th>
<th>Experimental Group (N=59)</th>
<th>Control Group (N=49)</th>
<th>Difference in Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Score</td>
<td>Score</td>
<td></td>
</tr>
<tr>
<td>&quot;In-service Education for School Administrators&quot;</td>
<td></td>
<td>4.7</td>
<td>4.7</td>
<td>.0</td>
</tr>
<tr>
<td>Evaluative</td>
<td></td>
<td>4.7</td>
<td>4.7</td>
<td>.0</td>
</tr>
<tr>
<td>Potency</td>
<td></td>
<td>3.9</td>
<td>3.7</td>
<td>.2</td>
</tr>
<tr>
<td>Activity</td>
<td></td>
<td>3.9</td>
<td>3.8</td>
<td>.1</td>
</tr>
<tr>
<td>&quot;Principals', role in Staff Development&quot;</td>
<td></td>
<td>4.9</td>
<td>4.9</td>
<td>.0</td>
</tr>
<tr>
<td>Evaluative</td>
<td></td>
<td>4.9</td>
<td>4.9</td>
<td>.0</td>
</tr>
<tr>
<td>Potency</td>
<td></td>
<td>4.0</td>
<td>3.9</td>
<td>.1</td>
</tr>
<tr>
<td>Activity</td>
<td></td>
<td>3.9</td>
<td>4.0</td>
<td>.1</td>
</tr>
</tbody>
</table>
On Table 26 are presented the mean polarity scores for the three factors as they relate to the remaining three concepts. Again, as is indicated here, there is essentially no difference in these scores between the experimental group and the control group.

None of the differences in the scores between the experimental group and the control group presented in Table 25 and Table 26 approach a level of significant difference when subjected to an analysis of variance. These results appear to indicate that the participation in the modules does not effect a change in attitude toward these five concepts. Again, this conclusion must be viewed with caution due to the nonequivalent nature of the control group used in this study.

Summary

The results from the "objective approach" employed in this study appear to be inconclusive as to any attempt to determine the changes that took place in the participants as a result of their experience with the module. It appears that there may have been a slight change in relation to the cognitive aspects, as these aspects relate to the performance objectives. There appeared to be essentially no change in relation to the affective domain as this related to the connotative meanings of the five concepts presented in the semantic differential scale.

These results must be viewed with caution due to the fact that the control group was not equivalent to the experimental group as related to the factors of age, sex, position, years of experience, and type of school in which the respondent was employed. There
TABLE 26

A COMPARISON OF THE EXPERIMENTAL GROUP WITH THE CONTROL GROUP IN RELATION TO THEIR ATTITUDES TOWARD THE CONCEPTS OF "LISTENING", "ADMINISTRATIVE-STAFF COMMUNICATION", AND "PRINCIPAL-TEACHER CONFERENCE"; INDICATED BY THE FACTORS OF EVALUATION, POTENCY, AND ACTIVITY DETERMINED THROUGH THE USE OF THE SEMANTIC DIFFERENTIAL.

<table>
<thead>
<tr>
<th>Concept</th>
<th>Experimental Group (N=59)</th>
<th>Control Group (N=49)</th>
<th>Difference in Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Listening&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluative</td>
<td>4.6</td>
<td>4.8</td>
<td>.2</td>
</tr>
<tr>
<td>Potency</td>
<td>3.8</td>
<td>3.6</td>
<td>.2</td>
</tr>
<tr>
<td>Activity</td>
<td>3.6</td>
<td>3.8</td>
<td>.2</td>
</tr>
<tr>
<td>&quot;Administrator-Staff Communication&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluative</td>
<td>4.9</td>
<td>4.9</td>
<td>.0</td>
</tr>
<tr>
<td>Potency</td>
<td>3.5</td>
<td>3.7</td>
<td>.2</td>
</tr>
<tr>
<td>Activity</td>
<td>3.7</td>
<td>3.9</td>
<td>.2</td>
</tr>
<tr>
<td>&quot;Principal-teacher Conferences&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluative</td>
<td>4.8</td>
<td>5.1</td>
<td>.3</td>
</tr>
<tr>
<td>Potency</td>
<td>3.6</td>
<td>3.6</td>
<td>.0</td>
</tr>
<tr>
<td>Activity</td>
<td>3.7</td>
<td>3.7</td>
<td>.0</td>
</tr>
</tbody>
</table>
is also an uncertainty concerning the validity and reliability of
the three achievement tests which were used in the study.

General Perceptions of the Investigator Based
on his Observation of the Participants
as they Experienced the
Audio-modular Units

The perceptions presented in this section were formulated
by the investigator utilizing three distinct techniques. The
techniques employed were:

1. Direct observation of the participants as they progressed
   through the audio modular instruction experience.

2. A structured interview immediately after the participant
   completed the modular experience.

3. An informal interview with the participants several
days after the modular experience (This interview technique
   was utilized in Massachusetts only; it was held when the
   investigator returned to the test site to retrieve
   test materials.).

The field testing of audio modular instruction provided the
investigator numerous opportunities to observe reactions of the
participants, and to formulate certain perceptions concerning their
reactions to the technique. A majority of individuals participating
in the field testing expressed enthusiasm and positive interest
regarding audio modular instruction as one possible component
of an in-service program for school administrators. Participant
interest in, and acceptance of, audio modular instruction appeared
to be determined by three salient factors. The first factor was the uniqueness of the approach as a possible in-service technique—content and materials. The previous in-service experiences of the participants had been limited to traditional programs which focused on management techniques. In addition, an in-service program for school administrators which utilized a cassette tape supplemented by a programmed text was unique and stimulated the curiosity of the participants.

A second factor responsible for initial participant interest appeared to be concern regarding the future direction of school administration as a profession. Numerous administrators participating in the experiment were predicting or presently experiencing (particularly those participating in the Florida Field Test) a change in the school administrator's role. Participants who were practicing school administrators were anxious to find opportunities for improving present skills and acquiring additional skills particularly in the area of interpersonal relationships. Acquisition of these skills was necessitated by the increasing demands confronting school administrators to work in cooperation with students, teachers, and citizens in school program improvement. Related to the need for skill acquisition, and the third factor, was the inaccessibility of available programs providing necessary leadership skills. As mentioned previously, most programs experienced by the experimental group were traditional, and required a time commitment frequently beyond the point of feasibility for administrators. Audio instruc-
tional modules, on the other hand, provided participants an alternate learning experience adaptable to an administrator's work schedule.

The problems which arose during field testing were minimal and required few changes in audio modular instruction. One problem which occurred during the Florida and Washington, D. C. field tests was the inability of a few individuals to operate a cassette tape recorder. Although a simple procedure some participants had limited experience operating tape recorders, and it did create frustrations requiring the investigator's assistance. Another area requiring consideration concerned the value of a secluded environment for individuals experiencing audio modular instruction. On two separate occasions in the workshops more than one group began the modular experience in the same room; individual involvement among the group members in these instances lacked the intensity of groups utilizing a one-group-one-room approach. Distractions created by an additional tape recorder and the discussion of another group were detrimental, and when the groups were later separated, individual involvement appeared to increase. A final area demonstrating significant participant concern was the availability of additional opportunities to experience audio instructional modules. Upon completion of audio modular instruction most of the field test participants expressed a desire to participate in other modules. The time structure of the field tests and the study, however, restricted participation by individuals to a maximum of two modules.
Compounding the situation was the absence of a formal dissemination procedure which would have provided individuals opportunities to obtain audio instructional modules for personal and professional use.

In addition to the above general perceptions of the investigator, a specific perception was formulated pertaining to the effect different leadership styles had on participant interest in audio instructional modules. This was evident in the large group presentations and the workshop field tests. In these situations, participant interest and enthusiasm seemed directly related to the interest and enthusiasm demonstrated by the group's leadership. One example of the effect enthusiastic leadership had on the participants was demonstrated during the Florida field test. The group leader in this instance was the instructor of the graduate course in school administration, and the individuals enrolled in the class demonstrated high personal and professional respect for the instructor. The group leader had experienced audio modular instruction previously and appeared eager to provide the class an opportunity to experience the technique. The interest and enthusiasm expressed by this individual seemed to have a contagious effect which infected the participants and created strong interest within the group. Participant interest appeared to remain at a high level throughout the testing period, and upon reaching the normal time for class dismissal the participants elected to continue with the experiment and forgo the normal luncheon break. Concomittantly the participants expressed an interest in returning
the following week to participate in a feedback session concerning
the value of audio modular instruction although the class officially
terminated after that session.

Following the field test, the investigator conducted an inter-
view with members of the experimental group regarding their per-
ceptions of the experience. There was general agreement among the
participants that the audio modular instruction experience was
beneficial. One member of the experimental group had recently
completed a one week workshop focusing on the human relation skills
necessary for effective school administration. In response to the
investigator's query regarding duplication of conceptual content
and material, the participant avered that the materials presented
during the two experiences were similar, but rather than being
repetitious the experiences complemented each other effectively.

The field test in Washington, D. C. was similar to that con-
ducted in Florida in many respects. The educational climate per-
meating Washington, D. C. Schools was congruent with that being
experienced in Florida, and school administrators were encounter-
ing aspects of the position which they were unprepared to meet.

As a consequence, individuals participating in the workshop were
interested in, and eager to obtain, new or additional skills which
would assist in the solution of anticipated unfamiliar problems.

The individuals responsible for planning and coordinating the work-
shop were cognizant of these factors and had developed a number of
learning alternatives, one of which was audio modular instruction.
Two individuals responsible for planning and developing the workshop had previewed the modules previously, and they were convinced participants should have the opportunity to experience audio modular instruction. The workshop participants' interest in the technique appeared, to the investigator, to be at a high level. This perception was derived from various observations one of which was individual attendance at the initial oral presentation despite limited publicity, and inadequate knowledge by the participants of the concept. A second factor which received consideration in determining participant interest was the number of individuals electing to participate in, and completing, at least one audio instructional module when other learning experiences were available. A third contributing factor influencing the investigator's perceptions was the number of individuals returning the second day to either complete a module started previously, or to participate in a second audio instructional module. Finally, participant interest was determined positive in view of the fact that many participants not completing audio modular instruction within the allotted time returned to complete it during their unscheduled time.

Further evidence of the influence of group leadership on interest expressed toward audio modular instruction was demonstrated during large group field testing in Massachusetts. Discussions with the one superintendent of schools in Massachusetts revealed an awareness of the need for an in-service program designed for the administrative staff of the school he represented, and he perceived audio modular instruction as one possible vehicle for meeting this need.
The superintendent's concern with the need for additional in-service training of school administrators, however, was restricted to administrators other than those at the superintendency level. For example, during the field test conducted in the district he represented, the superintendent attended the introductory presentation and expressed interest for the administrative staff's participation; immediately thereafter he departed for an "important meeting". The sudden departure by the superintendent appeared to demonstrate passive interest in the experiment and the mood of the group changed. Leadership of the group was assumed by the assistant superintendent who attempted to recreate interest in the experiment, but the interest level demonstrated during other field tests failed to materialize. A majority of the administrative staff members appeared to select audio instructional modules according to time commitment required—the audio instructional module requiring the least commitment was the most sought after.

During another field test, however, when the group leader expressed positive interest toward the concept of audio modular instruction, the interest of some group members diminished. In this instance, the group leader actively participated in the presentation given by the investigator and also in the experiment, but only one-half of the total group became actively involved. One explanation for this situation was the obvious divisiveness within the group, precipitated by an earlier confrontation which had alienated certain members of the group. These individuals appeared reluctant to
participate in any activity supported by the group leader—particularly if options were presented.

Utilization of workshops and large group presentations for field testing audio modular instruction was supplemented with an individual-contact technique. This technique consisted of the investigator contacting selected school administrators individually and providing an explanation of the concept. Those who participated in field tests in these circumstances were enthusiastic and had a definite interest in the improvement of administration as a profession. They viewed their role, in the field tests, as that of a resource person and providing input for the development of in-service programs for school administrators. These participants were conscientious in completing the evaluation instruments. In addition, they provided supplemental feedback for the improvement of the present modules and development of future modules. The major concern expressed by the participants during taped post field test interviews was the absence of an established dissemination procedure for acquiring additional audio instructional modules.

Summary

From the results of observations and taped interviews with individuals participating in the field testing of audio modular instruction, it appears that the concept is perceived of as an effective technique for the in-serviceing of school administrators. Practicing school administrators at each test site expressed an awareness of the need for acquiring new skills and improving pre-
sent skills related to their assignments. Following participation in an audio instructional module, participants seemed to agree that it is an effective method for presenting selected concepts, skills, and information. The audio modular instruction technique appeared to be accepted by individuals who participated in large groups, workshop-type settings, and those who participated in individual situations. In the large group settings, however, the concept seemed most accepted when the group leadership actively supported and participated in the modular experience.

**Related Findings**

In an effort to discover the differential attitudes toward the audio modular approach; over 2,000 calculations were made to determine the weighted mean scores for the participants on the various factors measured in the study. The participants' mean scores were determined according to the following categories: 1) sex, 2) age, 3) location of school, 4) size of school, 5) socio economic background of the students, 6) present position of the participants, 7) number of years of administrative experience, and 8) the topic of the module in which the respondent participated.

The data resulting from a number of these calculations are presented in Table A-1 through Table A-5 in Appendix A of this report. Although no conclusions can be reached through an analysis of these data, the investigator does feel that tendencies toward some patterns may be indicated through these findings. The following
is a discussion of some of these possible patterns.

Setting of School

The data presented in Table A-1 appear to indicate that the attitudes toward the modules of the participants from the urban and suburban schools differ very little. The four participants from the rural schools had generally higher weighted mean scores, but this could have been due to the small number of participants in this category.

Sex of Participant

The data presented in Table A-2 appears to indicate that very little difference exists between the male and female participant as related to their attitudes toward the modules. The females do appear to have a somewhat more positive attitude toward other forms of in-service training than the males. On the other hand, the males appear to place the modules in a higher priority over other forms of in-service than do the females.

Years of Administrative Experience

The data presented in Table A-3 appears to indicate that, in general, no substantial differences exist in the attitudes toward the modules of the participants according to their years of administrative experience. On the other hand, the 19 administrators in the combined categories of 2-3 years and 4-9 years appear to have generally higher weighted mean scores (as these scores relate
to attitudes toward the module) than the participants in the other categories.

Age of Participants

The data presented in Table A-4 appear to indicate that the older participants have generally higher weighted mean scores for most of the factors listed in the table. A substantial difference in attitude toward other forms of in-service seems to exist between the four members in the 21-30 age group and the nine members in the 51-over age group. In this case the older members appear to have a more positive attitude toward the concept of other forms of in-service training. Again, this may be due to the small numbers involved in both age groups.

Participants' Present Position

The data presented on Table A-5 represent the scores of participants according to their present position. These scores appear to indicate that in this study the position of the participant was not a factor influencing the participant's perception of the audio modular approach. The lower weighted scores recorded by the assistant principal's group in the majority of the factors measured (particualrly those under the category of "other forms of in-service") could be attributed to their lack of opportunities for participating in in-service programs.
The purpose of this study was to determine the suitability of utilizing the audio modular instructional approach as one alternative training technique for presenting selected concepts and skills to school administrators. In the previous chapter the findings were presented and analyzed. In the present chapter the methodology used in the study will be reviewed briefly, and a summary of the findings will be presented. This will be followed by the conclusions reached from these findings. The recommendations based upon the findings and conclusions of this study will then be set forth.

The Method

In order to determine the suitability of the audio modular instructional approach as one alternative for in-servicing school administrators, sixty participants were asked to participate in one of the modular units or sets of units which had been developed. These participants included school administrators, teachers, school secretaries, and wives of administrators. Twenty participants participated in each unit. These units included (1) Helper-Helpee Relationship Parts I and II, (2) The Use of Effective Feedback, and (3) Basic Elements of Communication. Usable data from 59 of the participants was obtained and utilized.
The study incorporated five different types of assessment procedures to determine the suitability of the audio modular approach. These methods were (1) a determination of the participants' attitude toward their experience with the module through the use of closed questions on a questionnaire; (2) a determination of the participants' attitude toward their experience with module through the use of open-ended questions on a questionnaire; (3) a comparison of the participants' attitude toward the audio modular approach with their attitude toward other forms of in-service programs they have experienced; (4) a determination of the cognitive and attitudinal changes that occurred due to participating in the modular experience; and (5) the perceptions of the investigator based on his observation of the participants as they participated in the modular experience. These approaches as they were used in the study are briefly summarized below.

The participants attitude toward the module; the "closed" question technique: After each of the participants completed the modular unit they were asked to respond to a number of "closed" questions on a written questionnaire. These questions related to the participant's attitude toward this experience with the module. These questions focused on areas such as interest, value to his own learning, and attitudes toward the technical aspects of the module. The number and percent of responses made for each response categories was determined, and each question was analyzed separately.
The participant's attitude toward the module: the "open-ended" question technique: Upon completion of the modular experience each of the participants were asked to respond to a number of "open-ended" questions. These questions focused on the participant's attitude toward this experience with the module. The "open-ended" questions were dispersed throughout the questionnaire among the "closed" questions, and they were used to supplement the information gained from the "closed" questions. The responses to the "open-ended" questions were categorized, and the number and percent of responses in each of the categories were determined. In most cases the results from each of these questions were analyzed separately.

A comparison of the participant's attitude toward the audio modular approach and other in-service approaches: The participants were asked to rank-order a list of the six different in-service approaches. Within this list was included the audio modular approach. Blanks were provided for the respondent to add any approaches which were not included. The data were analyzed two different ways. The first was to determine the number of times each approach was assigned a certain rank value (from 1 through 6). The second approach was to weight the responses and determine the weighted mean for each in-service approach on the list.

A second technique was employed to determine the participant's attitude toward the modules as compared with their attitude toward other forms of in-service training.
Through the use of a semantic differential scale the participants were asked to react to two concepts (1) "audio modular instruction as one alternative approach for in-service education for school administrators" and (2) "in-service educational programs for administrators in which you have participated (excluding the audio modular approach)". The mean polarity scores were determined for the factors of evaluation, potency, and activity. These mean scores for the two concepts were subjected to a statistical analysis of variance to determine if the differences in the mean scores reached a statistical level of significance.

The cognitive and attitudinal changes that occurred. The posttest-only nonequivalent control group quasi-experimental design was used in an attempt to determine the cognitive and affective changes which may have occurred from participating in the modules. The control group consisted of 49 members which included administrators, teachers, and school secretaries. This group had never experienced the modular approach. The experimental group (the participants) and the control group were given two different types of measurements. For the first method three different achievement tests based on the objectives for each of the modular units were constructed. Each member from the two groups took one of the achievement tests. The difference in mean scores between the groups was analyzed separately for each of the three tests.
The second method incorporated the use of the semantic differential scale. The connotative meanings for five different concepts were determined for the members of the control group and the experimental group. These connotative meanings related to the traits of evaluation, potency, and activity. An analysis was made of the mean polarity scores for these traits as these traits related to the five separate concepts. The differences in these mean polarity scores between the control group and the experimental group was analyzed for each of the five concepts.

The perceptions of the investigator: The investigator made notes from his observations of the sessions in which the participants were participating in the modules. The data from these notes were analyzed and these findings were considered in making the final conclusions for the study.

The findings from the above-mentioned procedures were presented and analyzed. The summary and conclusions made for the study were developed through an effort to synthesize the findings from these separate approaches and to look for evidence of patterns that may exist which would offer support for some degree of generalizations to be made.

Summary

The following are the summaries of the findings as they relate to the assessment approaches used in the study.
The Participants' Attitude toward the Modules: Results Summarized

The data appear to indicate that the participants had a positive attitude toward their experiences with the modules. On the "closed" questions which had a general focus on the module, no less than 88 percent of the participants gave responses in the positive direction on any one item. At the same time, no more than 3.4 percent gave responses in the negative direction on any one of these same items. These results appear to indicate that the participants found their experience with the modules interesting and exciting, of value to their own learning, worthwhile as far as the time spent on them, and an experience that they would like to repeat.

The results from the "open-ended" and "closed" questions relating to the priority placed on participating in a modular unit during a "typical" work week were inconclusive. On the "closed" question 30.5 percent of the respondents ranked such an experience as either highest or second to the highest in priority, while 3.4 percent ranked it as either lowest or second to the lowest. The majority of the respondents ranked it at about the middle, from highest to lowest in priority. On the "open-ended" question, 88.2 percent of the participants indicated that they would use the module, if they were to receive one. One third of the participants indicated that they would complete the module within a week after receiving it. The majority of the respondents (56 percent) were not sure as to
when they would be able to complete the module if they were to receive one. These results indicate that, even though the participant may be interested in the module experience as an in-service training approach, there is an uncertainty as to whether such an experience would take precedence over the tasks that the participant performs during the typical week.

The results from the "open-ended" questions relating to the major weaknesses and major strengths of the audio modular approach indicated attitudes in the positive direction. Fifty two percent of the participants felt that no other approach would have been better to learn what he (the participant) perceived he had learned through his experience with the module. Eighteen percent would have preferred to view or listen to another form of audio visual presentation for this learning. The major weakness found in the audio modular approach was that the experience was too time consuming; 18.5 percent of the responses made, fell into this category. About ten percent (9.3 percent) of the responses made were related to the feeling that the modular approach does not provide a sufficient variety of audio visual materials such as movies, video tapes, and filmstrips. Other weaknesses mentioned were a high degree of self-discipline is needed, no consultant is available, too much equipment is required, and the approach is too impersonal.

The major strength that was found in the approach was the ease and convenience with which the materials can be used; 18.8 percent of the responses made fell into this category. Approximately ten
percent (11.8 percent) of the responses made, were related to the feeling that this approach allows for the active involvement of the participants. Some of the other strengths mentioned were the time involved was concise; experiences in the module can be repeated when necessary; the low cost of the materials; and provides a framework by which follow administrators can get together.

These results appear to indicate that the time factor for participating in the module, or the length of the module, is an area of concern for this approach. It also indicates that a greater variety of audio-visual materials should be included. On the other hand, this latter concern must be viewed with some caution, due to the fact that the major strength of the modules appears to be the ease and convenience with which the materials can be used. If too much additional equipment and materials were required, the ease with which the participants could use the modules would be reduced.

The respondents generated a number of additional skills and topics for which the modular approach could be adapted. The topics mentioned most were "discipline" (17.2 percent of the responses made), "conferences" (13.9 percent), and "drugs" (11.7 percent). Only two of the respondents felt that no other topics could be adapted for the modular approach. These results appear to indicate that the participant's experience with the modular approach was of such a nature as to cause them to generate a variety of learnings which could be gained through such an approach.
A Comparison of the Participants' Attitude toward the Audio Modular Approach and other In-service Approaches: Results Summarized

The data appear to indicate that the majority of the participants prefer the audio modular approach over other forms of in-service training which they have experienced. The results indicated that 40.7 percent of the participants ranked the modules as their highest preference, while 3.4 percent ranked it as their lowest preference. Approximately three forths of the participants (78.0 percent) ranked the modules as either their first or second choice of preference.

The two forms of in-service which were ranked closest to the module approach were (1) discussion groups with other administrators in the district, and (2) attend a conference involving a seminar approach. For both of these forms, 25.4 percent of the participants ranked the approach as their highest choice of preference. The results from comparing the weighted mean scores indicated that the modules were highest with a weighted mean score of 3.9, while the weighted mean scores for the conference-seminar approach and the discussion group with other administrators was 3.1 and 3.0 respectively. Reading professional books and the conference-speaker approach were low at 1.0 and 1.3 respectively.

The data from the semantic differential scale measuring the connotative meanings of the concept of the audio modular approach and the concept of in-service education, excluding the modules,
appear to indicate that the modular approach has a more positive meaning than other forms of in-service training. The mean polarity score for the concept of audio modules as this relates to the evaluative factor was 5.0, as compared to 3.9 for the concept of other forms of in-service training. The difference in these scores, 1.1, appears to be significant at the .01 level ($t=3.35$). The mean polarity scores relating to the factor of potency for the modules as compared to other forms of in-service were 4.3 and 3.1 respectively. The difference between these scores is 1.2, which is significant at the .001 level ($t=5.19$). In relation to the activity factor, the difference between the mean polarity score for the modules (3.9) and for other forms of in-service (3.0) was .9. This difference is significant at the .05 level ($t=2.55$).

These results appear to indicate a significant difference in attitudes toward the audio modular approach as compared with other forms of in-service as these attitudes relate to the factors of evaluation, potency, and activity. On the other hand, these results must be viewed with caution due to the format of the semantic differential scale that was used in the study. Due to the fact that all of the positive traits were on the left of the scale and the negative traits on the right, these results only appear to indicate that the participants have a more positive attitude toward the audio modular approach as compared with other forms of in-service training.
In general, the above-mentioned results appear to indicate that the participants prefer the audio modular approach over other forms of in-service education which they have experienced. These results also indicate that the participants have a more positive attitude toward the module approach as compared with other forms of in-service training.

The Cognitive and Attitudinal Changes that Occurred as a Result of Participating in the Modules; Results Summarized:

The results of the attempt to measure the cognitive and attitudinal changes effected as a result of participating in the modular experience are inconclusive. The mean scores for each of the three achievement tests for the experimental group were slightly higher than the scores for the control group. But due to the nonequivalent nature of the two groups, no determination could be made as to whether these differences in scores were due to participating in the modules or due to the nonequivalent nature of the two groups.

There was practically no difference in the mean polarity scores between the two groups as these scores related to the factors of evaluation, potency, and activity. These factors were related to the concepts of (1) "In-service education for school administrators", (2) "Principal's role in staff development", (3) "Listening", (4) "Administrator-Staff Communication", and (5) "Principal-teacher Conference".
The attempt to measure the changes affected by participating in the modules was the weakest part of the study. The original intention was to use the Posttest-only Control Group Experimental Design. But, the investigator encountered problems in his attempt, to obtain a control group which was equivalent to the experimental group. The two groups which were finally used in the study were substantially different in relation to age, sex, present position, geographic location, and the type of school in which the member was employed. In addition to the factor that the groups were not similar, another factor existed which weakened this aspect of the study; this factor being, there was no certainty as to the validity and reliability of the achievement tests used. Because of these factors, no conclusions can be reached concerning the degree and type of change that took place in the participants as a result of participating in the modules.

The Perceptions of the Investigator Based on his Observation of the Participants:

From the results of (1) the investigator's observations as he viewed the participants engaged in experiencing the modules and (2) taped interviews with the participants after their experience with the modules; it appears that the participants perceive that the modular approach is an effective technique for in-servicing school administrators. Following their participation in the module, the participants which were interviewed by the investigator relayed the perception that they remained interested throughout their
experience with the module. Different participants were introduced to the modules in several types of settings. In some cases ten to fifteen members were in the room, at other times the modules were given to individuals by the investigator. In still other cases the participants were introduced to the modules during workshop sessions. Of these various types of settings the investigator found very little difference in the participants' attitudes toward their experience with the module. One exception to this did appear in the situation where the chief school officer was present in the group. In this case, the participants' attitude toward wanting to participate in one of the modules appeared to be more positive when the chief school officer actively supported the idea and participated in one of the modules himself.

Conclusions

From an analysis and summary of the findings a general conclusion must be made; that is, no conclusion can be reached as to the suitability of utilizing the audio modular instructional approach as one alternative training technique for presenting selected concepts and skills to school administrators. The answers to two major questions could not be determined from an analysis of the findings of the study. Before a conclusion can be reached as to the suitability of the modular approach, these answers must be determined. These questions are:
1. What are the cognitive and attitudinal changes that take place as a result of participating in an audio modular unit?

2. Will the administrator take time out from his duties during a "typical week" to participate in an audio modular unit?

Some minor conclusions were reached from a summary of the findings. These conclusions are as follows:

1. The audio modular approach provides an experience for an individual which is perceived as interesting and exciting.

2. The audio modular approach is perceived as being as good as or better than other forms of in-service training for administrators, for learning certain concepts and skills.

3. A major strength of the audio modular approach is the ease and convenience with which the materials can be used.

4. The major weakness of the audio modular approach is the lack of a variety of audio visual materials used.

**Recommendations**

The recommendations based upon the findings and conclusions of this study will be presented in three sections, namely, 1) those that are pertinent to further development of audio modular instructional units, 2) those that are pertinent to further research on the audio
modular approach, and 3) those that are pertinent to assessment of training.

Recommendations for further Development and Use of Audio Modular Instructional Units

1. Further modules should be developed utilizing basically the same approach as that used in the present audio modular instructional units. The following criteria should be followed:
   a. the modules should not require over 1-1/2 hours to complete.
   b. the modules should be constructed so that they allow for active involvement and interaction of the participants experiencing the unit together.
   c. care should be exercised to produce audio tapes which are of high technical quality.

2. Modules should be developed utilizing a greater variety of audio visual materials. Care must be exercised so that the materials do not require too much equipment. The ease and convenience of using the materials in the module must be maintained.

3. The present modules should be revised in order to correct the poor quality of the sound, to shorten the experience, and to make some of the examples more appropriate for the school administrator.
4. The audio modular approach should be considered for use in some aspects of the preservice program for school administrators and teachers.

Recommendations for further Research on the Audio Modular Approach

1. Instruments should be constructed, validated, and made reliable; and an appropriate research design should be identified so that these could be incorporated to determine the cognitive and attitudinal changes that take place as a result of participating in a module.

2. An approach should be identified to determine whether the school administrator would take time off from his day-by-day duties to participate in the audio modular units. This approach should incorporate a means of dissemination of the modules other than that of "channeling through" the chief school officer for the district, or other central office administrators.

3. The modular approach should be compared with other in-service approaches in situations where two equivalent groups would be tested. One group would participate in the modular approach while the other group would participate in the second approach. Both approaches should be developed so as to focus on the same performance objectives.
4. Studies should be conducted to determine the following
   a) the most appropriate group size for participating in the
      module. b) the most appropriate length of time for a single
      modular experience; the topics which are the most
      appropriate for the modular approach; and the variety
      of audio visual materials which can be used and still
      maintain the ease and convenience of using the approach.

**Recommendations pertaining to**
**the Assessment of Training**

1. Due to the large amount and variety of data that is necessary
   to determine the suitability of the training technique, more
   convenient ways should be identified for the using the
   posttest-only equivalent control group experimental design.
   This type of design is also necessary due to the effect that
   the use of the pretest has on the training results. The
   Solomon four-group design does not appear to be feasible
   due to the fact that two or more hours are required to
   complete the assessment measures along.

2. Studies should be conducted to determine the differences that
   exist among a variety of nonequivalent groups, as measured
   by the cognitive and attitudinal instruments which are
   constructed for assessing certain training techniques. It
   appears very unlikely that equivalent groups can be found
   in future attempts to measure the changes caused by a
certain training technique. Therefore, the valid use of control groups is going to depend on some knowledge of what differences, if any, may exist between two nonequivalent groups as measured by these assessment instruments.

3. Various approaches for using the semantic differential scale should be tried. Introducing the polar traits throughout a questionnaire which includes a variety of other types of questions may be one appropriate technique.
APPENDIX A

TABLE A-1 THROUGH TABLE A-5
TABLE A-1

WEIGHTED MEAN SCORES ON VARIOUS MEASURES USED IN THE STUDY FOR THE ADMINISTRATORS ACCORDING TO THEIR SCHOOL SETTING.

<table>
<thead>
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<td>Activity</td>
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<tr>
<td>Pleasant-Unpleasant</td>
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<td>Active-Passive</td>
<td>4.3</td>
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<tr>
<td><strong>Other Forms of In-service</strong></td>
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<td>3.6</td>
</tr>
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<td>Value to own learning</td>
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<td>Worth as far as time spent on module</td>
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<td>Degree of excitement about recommending it to another Administrator</td>
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<td>Other Forms of In-service</td>
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<tr>
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</tr>
<tr>
<td>Potency</td>
<td>2.8</td>
</tr>
<tr>
<td>Activity</td>
<td>2.9</td>
</tr>
<tr>
<td>Pleasant-Unpleasant</td>
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</tr>
<tr>
<td>Promising-Disappointing</td>
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</tr>
<tr>
<td>Active-Passive</td>
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</tr>
<tr>
<td>Interest in Module</td>
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<tr>
<td>Value to own learning</td>
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<td>Worth as far as time spent on module</td>
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<td>Degree of excitement about recommending it to another Administrator</td>
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<td></td>
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TABLE A-3

WEIGHTED MEAN SCORES ON VARIOUS MEASURES USED IN THE STUDY FOR THE PARTICIPANTS ACCORDING TO THEIR YEARS OF EXPERIENCE IN ADMINISTRATION

<table>
<thead>
<tr>
<th>Factor Measured</th>
<th>1</th>
<th>2-3</th>
<th>4-9</th>
<th>10-15</th>
<th>16-over</th>
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<tr>
<td><strong>Audio Modular Approach</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluative</td>
<td>4.0</td>
<td>4.9</td>
<td>5.2</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Potency</td>
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<td>4.6</td>
<td>4.5</td>
<td>3.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Activity</td>
<td>3.7</td>
<td>4.3</td>
<td>4.2</td>
<td>3.7</td>
<td>3.9</td>
</tr>
<tr>
<td>Pleasant-Unpleasant</td>
<td>4.9</td>
<td>5.0</td>
<td>4.9</td>
<td>4.0</td>
<td>5.4</td>
</tr>
<tr>
<td>Promising-Desapointing</td>
<td>4.8</td>
<td>5.3</td>
<td>5.3</td>
<td>4.6</td>
<td>5.1</td>
</tr>
<tr>
<td>Active-Passive</td>
<td>3.9</td>
<td>4.3</td>
<td>4.8</td>
<td>3.7</td>
<td>4.7</td>
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<tr>
<td><strong>Other Forms of In-service</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluative</td>
<td>3.8</td>
<td>4.6</td>
<td>4.0</td>
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<tr>
<td>Potency</td>
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<td>3.2</td>
<td>3.4</td>
<td>3.1</td>
</tr>
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<td>3.0</td>
<td>2.9</td>
<td>4.0</td>
<td>2.4</td>
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<tr>
<td>Pleasant-Unpleasant</td>
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<td>4.3</td>
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<td>3.7</td>
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<tr>
<td>Promising-Disapointing</td>
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<td>3.5</td>
<td>3.7</td>
<td>4.2</td>
<td>3.3</td>
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<td>2.8</td>
<td>3.7</td>
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</tr>
<tr>
<td><strong>Interest in Module</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value to own learning</td>
<td>3.3</td>
<td>3.6</td>
<td>4.0</td>
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<td>Worth as far as time spent on Module</td>
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<td>3.6</td>
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<tr>
<td>Degree of excitement about recommending it to another Administrator</td>
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<td>3.3</td>
<td>3.3</td>
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<td>2.9</td>
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<td><strong>Priority of Module as compared to Other Forms of In-service</strong></td>
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<td>4.5</td>
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TABLE A-4

WEIGHTED MEAN SCORES ON VARIOUS MEASURES USED IN THE STUDY FOR THE PARTICIPANTS ACCORDING TO THEIR AGE.

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<thead>
<tr>
<th>Factor Measured</th>
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<tr>
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<td>Potency</td>
<td>3.8</td>
</tr>
<tr>
<td>Activity</td>
<td>3.6</td>
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<tr>
<td>Pleasant-Unpleasant</td>
<td>5.0</td>
</tr>
<tr>
<td>Promising-Disappointing</td>
<td>5.5</td>
</tr>
<tr>
<td>Active-Passive</td>
<td>4.5</td>
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<tr>
<td>Other Forms of In-Service</td>
<td></td>
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<tr>
<td>Evaluative</td>
<td>2.6</td>
</tr>
<tr>
<td>Potency</td>
<td>2.8</td>
</tr>
<tr>
<td>Activity</td>
<td>1.1</td>
</tr>
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<td>Pleasant-Unpleasant</td>
<td>1.8</td>
</tr>
<tr>
<td>Promising-Disappointing</td>
<td>2.0</td>
</tr>
<tr>
<td>Active-Passive</td>
<td>2.5</td>
</tr>
<tr>
<td>Interest in module</td>
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<tr>
<td>Value to own learning</td>
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<tr>
<td>Worth as far as time spent on module</td>
<td>3.6</td>
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<tr>
<td>Degree of excitement about recommending it to another administrator</td>
<td>3.4</td>
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<tr>
<td>Priority of Modules as compared to Other Forms of In-Service</td>
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</tr>
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<td>Factor Measured</td>
<td>Present Position</td>
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<td>-----------------</td>
<td>-----------------</td>
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<td>Audio Modular Approach</td>
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<td>Evaluative</td>
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<tr>
<td>Potency</td>
<td>3.9</td>
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<tr>
<td>Activity</td>
<td>3.9</td>
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<tr>
<td>Pleasant-Unpleasant</td>
<td>4.4</td>
</tr>
<tr>
<td>Promising-Disappointing</td>
<td>4.1</td>
</tr>
<tr>
<td>Active-Passive</td>
<td>4.2</td>
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<tr>
<td>Other Forms of In-Service</td>
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<td>Evaluative</td>
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<tr>
<td>Potency</td>
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<tr>
<td>Activity</td>
<td>2.6</td>
</tr>
<tr>
<td>Pleasant-Unpleasant</td>
<td>4.1</td>
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<tr>
<td>Interest in module</td>
<td>3.4</td>
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<td>Value to own learning</td>
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<tr>
<td>Worth as far as time spent on module</td>
<td>3.7</td>
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<tr>
<td>Degree of excitement about recommending it to another administrator</td>
<td>3.2</td>
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<tr>
<td>Priority of Modules as compared to Other Forms of In-Service</td>
<td>4.1</td>
</tr>
</tbody>
</table>
APPENDIX B

INSTRUMENTS USED IN THE STUDY
### Audio Modular Instruction Questionnaire

**Name:**

**Address:**

**Street**

**City**

**State**

**Date of Birth:**

**Month**

**Year**

**Sex:**

**Female**

**Male**

**Marital Status:**

**Married**

**Single**

**Other**

**Present Employer:**

**Present Address:**

**Present Position:**

**Position Held Prior to Present Position:**

**Highest Degree Held:**

<table>
<thead>
<tr>
<th>Position Held Prior to Present Position</th>
<th>Highest Degree Held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary Teacher</td>
<td>Bachelors</td>
</tr>
<tr>
<td>Secondary Teacher</td>
<td>Bachelors +</td>
</tr>
<tr>
<td>Elementary Asst. Principal</td>
<td>Masters</td>
</tr>
<tr>
<td>Secondary Asst. Principal</td>
<td>Masters +</td>
</tr>
<tr>
<td>Elementary Principal</td>
<td>Specialist</td>
</tr>
<tr>
<td>Secondary Principal</td>
<td>Doctorate</td>
</tr>
<tr>
<td>Graduate Student</td>
<td></td>
</tr>
<tr>
<td>Undergraduate Student</td>
<td></td>
</tr>
<tr>
<td>Other (Explain)</td>
<td></td>
</tr>
</tbody>
</table>

**If you are presently in an administrative position, how long have you held this position?**

**Number of Years in Educational Administration:**

**Type of School**

<table>
<thead>
<tr>
<th>Type of School</th>
<th>School Enrollment</th>
<th>Setting</th>
<th>Student Socioeconomic Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>0-200</td>
<td>Urban</td>
<td>Upper</td>
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<tr>
<td>Jr. High</td>
<td>201-400</td>
<td>Suburban</td>
<td>Middle</td>
</tr>
<tr>
<td>Sr. High</td>
<td>401-600</td>
<td>Rural</td>
<td>Lower</td>
</tr>
</tbody>
</table>

**Number of Years You Have Had as a Classroom Teacher:**

**Grade Level**

**Have you ever taken a graduate course in counseling?**

**Subject(s)**

**Have you ever been a guidance counselor?**

**If yes, how many years?**
1. I found participating in the audio instructional module, "Staff Development: The Use of Supportive Feedback",
   a) very interesting.
   b) somewhat interesting.
   c) neither interesting nor boring.
   d) somewhat boring.
   e) very boring.

2. I found participating in the audio instructional module, "Staff Development: The Use of Supportive Feedback",
   a) a very valuable learning experience.
   b) a learning experience of some value.
   c) an experience which is neither valuable nor worthless as far as my own learning.
   d) an experience somewhat worthless.
   e) an experience which was completely worthless.

3. If you had the opportunity to make changes in this module, what changes would you make?

   What aspects of the module would you definitely want to remain the same?

4. If it was discovered that this module was too time consuming, and you were involved in revising it, what portion would you definitely keep in the module?

   What portion would you remove?
5. Which of the following responses represents the total time you spent participating in the module?

- a) 30 - 45 minutes
- b) 45 - 60 minutes
- c) 60 - 75 minutes
- d) 75 - 90 minutes
- e) 90 - 105 minutes.

6. I feel that the experience I gained from participating in this module

- a) was definitely worth this amount of time.
- b) was probably worth this amount of time.
- c) may or may not have been worth this amount of time.
- d) was probably not worth this amount of time.
- e) was definitely not worth this amount of time.

7. Now that I know what the modules are like, if I had had the choice I would

- a) have definitely participated in the modules.
- b) have probably participated in the modules.
- c) not know whether I would or would not have participated in the modules.
- d) have probably not participated in the modules.
- e) have definitely not participated in the modules.

If you marked items (d) or (e) above, state below what you would rather have been doing during this amount of time.

8. Briefly state what you feel you have learned from these modules.
continued

What other existing instructional method would you have preferred to participate in in order to learn this?

If you were given the time and the money, what would you have developed to provide another person the opportunity to learn what you have learned?

What was the major strength of this module?

What was the major weakness of this module?

How excited would you be in recommending to a fellow administrator that he/she participate in this module?

____ a) very excited
____ b) somewhat excited
____ c) no feeling either way
____ d) would be reluctant to recommend it
____ e) definitely would not recommend it
12. Complete the following statements:
   a) The discussion questions in the modules____________________________________
   b) The Exercises in the modules______________________________________________
   c) The diagrams in the modules______________________________________________
   d) The variety of voices in the modules_______________________________________

13. If you had the opportunity would you participate in additional modules?
    ______ a) yes, definitely
    ______ b) yes, probably
    ______ c) I don't know
    ______ d) probably not
    ______ e) definitely not

14. What kinds of skills and knowledge do you think could be learned through the
    use of audio modular instruction?

15. Suppose you were given the time and the money to develop an audio modular
    instructional unit. Below briefly describe what the unit would include.
16. The major strengths of the audio modular instructional approach as an in-service technique are:

17. The major weaknesses of the audio modular instructional approach as an in-service technique are:

18. Suppose you were given the time and the money to participate in the following in-service educational programs. Assuming they would be equal in cost and the amount of time required, rank the following approaches in the order of your preference. Start with the numeral one for your highest preference; numeral two as second, and so on.

   a) attend an administrative conference to listen to speakers.
   b) attend an administrative conference involving a number of seminars.
   c) purchase a professional level book and read it.
   d) visit a neighboring school district.
   e) participate in an audio modular instructional unit.
   f) have a discussion group session with other administrators from my district.

   (Below add any more in-service educational program approaches you might choose as an alternative.)

   g) 
   h) 
   i) 
   j) 

   (Below add any more in-service educational program approaches you might choose as an alternative.)
Please complete the following statements:

19. I would spend time participating in an audio modular instructional unit only if

20. I would definitely not spend time participating in an audio modular instructional unit if

21. For anyone to develop any more audio modular instructional units would

22. If I were to receive an audio modular instructional unit on a Monday of a "typical" work-week I would

For the following two concepts, place an X between the : : near the word which most nearly represents your feeling about the concept. The closer you place the X to the word, the more the word represents your feeling.

23. AUDIO MODULAR INSTRUCTION AS ONE ALTERNATIVE APPROACH FOR IN-SERVICE EDUCATION FOR SCHOOL ADMINISTRATORS (CONCEPT)

<table>
<thead>
<tr>
<th>GOOD</th>
<th>BAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLEASANT</td>
<td>UNPLEASANT</td>
</tr>
<tr>
<td>PROMISING</td>
<td>DISAPPOINTING</td>
</tr>
<tr>
<td>RELEVANT</td>
<td>IRRELEVANT</td>
</tr>
<tr>
<td>STRONG</td>
<td>WEAK</td>
</tr>
<tr>
<td>DEEP</td>
<td>SHALLOW</td>
</tr>
<tr>
<td>SUPERIOR</td>
<td>INFERIOR</td>
</tr>
<tr>
<td>BROAD</td>
<td>NARROW</td>
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<tr>
<td>HOT</td>
<td>COLD</td>
</tr>
<tr>
<td>ACTIVE</td>
<td>PASSIVE</td>
</tr>
</tbody>
</table>
24. IN-SERVICE EDUCATIONAL PROGRAMS FOR ADMINISTRATORS IN WHICH YOU HAVE PARTICIPATED (EXCLUDING THE AUDIO MODULAR INSTRUCTIONAL APPROACH) (CONCEPT)

GOOD: __: __: __: __: __: __: __: __: BAD
PLEASANT: __: __: __: __: __: __: __: __: UNPLEASANT
PROMISING: __: __: __: __: __: __: __: __: DISAPPOINTED
RELEVANT: __: __: __: __: __: __: __: __: IRRELEVANT
STRONG: __: __: __: __: __: __: __: __: WEAK
DEEP: __: __: __: __: __: __: __: __: SHALLOW
SUPERIOR: __: __: __: __: __: __: __: __: INFERIOR
BROAD: __: __: __: __: __: __: __: __: NARROW
HOT: __: __: __: __: __: __: __: __: COLD
ACTIVE: __: __: __: __: __: __: __: __: PASSIVE

25. For the following question place an X between the __: __ which best represents your feeling.

During your "typical" workweek how much priority would you give to taking time out to participate in an audio modular instructional unit:

High Priority: __: __: __: __: __: __: __: Low Priority

26. The following items focus on the technical aspects of the audio instructional modules, and the effect these aspects have on the modules. Please circle the numeral at the right of the statement which best represents your evaluation of the particular aspect mentioned in the statement. Use the following scale:

1
1. Outstanding
2. Good
3. Average
4. Needs improving
5. Very poor

a) The general appearance of the module.................................................. 1 2 3 4 5
b) The clarity of the module instructions .................................................. 1 2 3 4 5
c) The statement of objectives ................................................................. 1 2 3 4 5
d) The appearance of the pages in the text portion ................................. 1 2 3 4 5
e) The quality of the cassette tape .......................................................... 1 2 3 4 5
27. continued

f) The use of the cassette tape in the presentation........................... 1 2 3 4 5

g) The synchronization between the text and the audio portion .... 1 2 3 4 5

h) The usefulness of the selected references .............................. 1 2 3 4 5

i) The ease with which the materials (exercises, cassette tape,
extra guidebooks, etc.) can be utilized ................................. 1 2 3 4 5

28. What additional topics might be adapted to audio modular instruction?

29. How might the present modules be modified to meet specific situations with
which you are concerned?

30. How might certain individuals or groups use the modules differently?
Feedback can be defined as any information given to another person which helps him to know how he makes you feel and how he appears to you.

1. In group meetings when feedback is not heard and acted upon by the group members:
   
   ____ a. the meeting will be more successful and much shorter.
   ____ b. resentment may be created and the meeting's probability of success damaged.
   ____ c. it merely demonstrates that feedback is unimportant in group settings.
   ____ d. they will blame themselves and try to improve their problem solving skills.
   ____ e. the meeting will have no possible chance for success.

2. In too many individual and group meetings feedback given by the participants discourages the creative thinker and destroys many creative ideas because:
   
   ____ a. it is used to generate other ideas.
   ____ b. it overemphasizes the weak aspects of the ideas.
   ____ c. it suggests that too many creative ideas cannot be handled.
   ____ d. most feedback coming from groups is negative.
   ____ e. feedback, to be effective, has to be given in private one-to-one situations.

3. During unstructured meetings, when there is a struggle for leadership of the group, this position is most often awarded to:
   
   ____ a. the person who consistently understands and acts upon the feedback pertaining to the position he is supporting.
   ____ b. the female members participating in the meeting.
   ____ c. none of the participants because unstructured meetings have no leaders.
   ____ d. the individual most effective at ignoring feedback.
   ____ e. the individual demonstrating the least interest in the meeting.
4. The most important factor, which contributes to the production of creative ideas during school staff meetings, is:
   _____ a. the amount of negative feedback generated.
   _____ b. the number of participants at the meeting.
   _____ c. the behavior of the participants.
   _____ d. that staff members have previously participated in sensitivity groups.
   _____ e. our analytical training and competiveness.

5. The most important reason meetings, and especially school staff meetings, are devoid of creative ideas is:
   _____ a. that all the participants are overly concerned with feedback and are reluctant to participate prior to receiving it.
   _____ b. the diversified background and experience of the teachers discourages creativity.
   _____ c. that our society has over-emphasized the potential of the group process, leading us to expect too much from group meetings.
   _____ d. that staff meetings structured to encourage creativity usually produce negative reactions.
   _____ e. our analytical training and competiveness encourages us to seek the weaknesses of most new ideas.

6. One of the most valuable techniques an individual can utilize to communicate honest supportive feedback to another is to:
   _____ a. address the receiver of feedback by name.
   _____ b. provide an individual only negative feedback.
   _____ c. offer feedback as unemotionally as possible.
   _____ d. present positive and negative feedback only upon request.
   _____ e. use non-negotiable terms as frequently as possible.
7. Many times during staff meetings an idea is presented in embryonic form and many questions are directed toward its weaknesses which:

   a. has little affect on a creative idea.
   b. encourages other members of the meeting to present their creative ideas.
   c. reduces the possibility of it being accepted or developed further.
   d. demonstrates the staffs' interest in the idea.
   e. encourages the person responsible for the idea to develop it further.

8. Feedback is expressed in various ways, is obtained from various sources, and can be an effective tool for the school administrator if he/she:

   a. hears both the positive and negative feedback.
   b. receives the feedback and returns to more pressing concerns.
   c. accepts the positive aspects and ignores the negative aspects of the feedback.
   d. can learn to hear and utilize feedback.
   e. assumes the responsibility for providing and evaluating all feedback.

9. A principal has many opportunities to provide feedback to teachers regarding their personal and professional performance. Frequently this feedback is negative, and it is crucial that it be presented to reflect:

   a. an unemotional but professional concern.
   b. no concern about the positive aspects the feedback may provide.
   c. the principal's doubts about the value of the feedback.
   d. the principal's position of authority and responsibility requires that he present the negative feedback.
   e. the principal's concern and personal support.
10. One simple but **important** technique an individual can develop to demonstrate supportive feedback is to:

   a. continually give an individual negative feedback so he/she can work on their deficiencies.
   b. express responses to the ideas and behaviors of others honestly and emotionally.
   c. respond with feedback only upon request.
   d. provide feedback with no personal involvement.
   e. provide supportive feedback only on a one-to-one basis.

The remainder of this evaluation will be based on the following dialogue from the book *The Power of Positive Thinking* written by Norman Vincent Peale.

**AN EXTRA COPY OF THIS EXCERPT HAS BEEN PROVIDED AT THE END OF THE EVALUATION BOOKLET FOR YOUR CONVENIENCE IN ANSWERING THE QUESTIONS. PLEASE FEEL FREE TO DETACH IT FROM THE REST OF THE BOOKLET.**

Dr. Peale enters his office and discovers Mrs. Brown awaiting his arrival. Mrs. Brown opens the conversations with:

1. "It's five minutes after two, and we had an appointment at 2 P.M., and I always admire promptness."
2. "I have an important problem to present to you, and I want an answer, and I expect an answer."
3. "I might as well put it to you bluntly."
4. "I want to get married."

Dr. Peale's responses are as follows:

5. "Well, now, let's analyze the situation."
6. "Obviously you have a good mind and a fine personality, and if I may say so, you are a very handsome lady."
7. "I think that I see your difficulty and it is this."
8. "You took me to task because I was five minutes late for our appointment."
9. "You were really quite severe with me."
10. "Has it ever occurred to you that your attitude represents a pretty serious fault?"
11. "I think a husband would have a very difficult time if you checked him up that closely all the time."
11. Mrs. Brown could have made the feedback more supportive and still expressed her frustrations with Dr. Peale:

   ____ a. by addressing Dr. Peale by name early in the conversation.
   ____ b. if she would have eliminated the word "expect" in her second statement.
   ____ c. if she would have eliminated the statement "I want to get married."
   ____ d. if she would have eliminated the word "bluntly" in her third statement.
   ____ e. if she would have eliminated "It's five minutes after two." in her first statement.

12. The response made by Dr. Peale as represented by statement number ten (10) demonstrates an important factor of supportive feedback which is:

   ____ a. to avoid addressing the other person by name when providing negative feedback.
   ____ b. to inform others how the feedback affects the receiver.
   ____ c. to use non-negotiable terms as often as possible.
   ____ d. to offer personal support to the other person.
   ____ e. to express responses to the ideas of others honestly and emotionally.

13. One technique for demonstrating honest supportive feedback is to offer assistance in working out the problem. In Dr. Peale's response this was demonstrated in:

   ____ a. Statement number five.
   ____ b. Statement number six.
   ____ c. Statement number seven.
   ____ d. Statement number nine.
   ____ e. none of the statements in the example.
14. The feedback offered to Mrs. Brown by Dr. Peale was somewhat supportive. This feedback could have been made more supportive by:

   a. offering some positive feedback.
   b. telling Mrs. Brown how the feedback affected him.
   c. including Mrs. Brown's name in the reply.
   d. offering to assist in solving her problem.
   e. expressing honest and emotional responses to her behavior.

15. Frequently feedback like that given by Mrs. Brown has the effect of putting the receiver on the defensive. Dr. Peale, however, demonstrated support for Mrs. Brown in his first response; his responses in statements six (6) and seven (7) demonstrate:

   a. sarcasm and the implication that revenge would be sought for her caustic remarks made earlier.
   b. that by omitting her name his offer of help was sincere.
   c. an appreciation of Mrs. Brown's worth as a person while establishing an intent to discuss the problem.
   d. a paternal attitude in an attempt to ease Mrs. Brown's concerns and explore the problem further.
   e. an appreciation for women generally while establishing an intent to explore the problem further.
1. A helping relationship can be defined as any situation in which one individual is seeking help from another. The most important function of the helping person in a helping relationship should be to:

_____a. provide a solution to the problem to the best of his ability.

_____b. assist the individual seeking help discover the necessity for probing and solving his own problems.

_____c. advise the individual seeking help how to handle the situation.

_____d. remain aloof and not become involved.

_____e. express a willingness to meet with the individual seeking help at an appropriate time.

2. Helping situations may be used to change behavior, improve skills, motivate, stimulate, or bolster self-confidence, but the primary function of any helping relationship should be to:

_____a. provide and receive expert advice.

_____b. provide the helper an opportunity to demonstrate his knowledge.

_____c. enable the receiver of help to eventually become self-directing.

_____d. provide the receiver of help an opportunity to understand and accept the goals of the organization.

_____e. to offer the receiver of help suggestions on how to improve his self-image.

Eric Berne, in his book, Games People Play, illustrates one type of helping relationship and calls it the "Why don't you-yes but" game. The following is an example of this type of game in which White is seeking help from a number of individuals:

White: "My husband always insists on doing our own repairs, and he never builds anything right."

Black: "Why doesn't he take a course in carpentry?"

White: "Yes, but he doesn't have the time."

Blue: "Why don't you buy him some good tools?"

White: "Yes, but he doesn't know how to use them."
Red: "Why don't you have your building done by a carpenter?"

White: "Yes, but that would cost too much."

Brown: "Why don't you just accept what he does the way he does it?"

White: "Yes, but the whole thing might fall down."

Questions number 3 through 5 will be based on the above conversation.

3. What is the most significant factor preventing the conference in the above example from becoming a helping relationship?

   ____ a. There are too many individuals involved to arrive at an effective solution.
   ____ b. White has already tried all the possible solutions.
   ____ c. There is no solution to a problem of this magnitude.
   ____ d. No one really understands what the problem is, or that there is a problem.
   ____ e. The environment is not conducive to a helping relationship.

4. One of the most important barriers to giving help is demonstrated in the statements made by Blue, Red, and Brown, which start with "Why don't you" and diminish the possibility for a helping relationship because:

   ____ a. questioning is an ineffective technique for assisting individuals to solve problems.
   ____ b. receivers of help have usually thought of the possible solutions and considered them ineffective.
   ____ c. statements of this nature demonstrate that effective advice will not be provided for the receiver of help.
   ____ d. it challenges the receiver to seek his own solutions to problems.
   ____ e. the game has already been initiated and cannot be terminated.
5. One of the most important obstacles preventing individuals from receiving help is:

   a. that there is no solutions to their problems.
   b. their reluctance to accept advice from other individuals.
   c. the receiver of help's misconception that his problems are unique.
   d. the helping person's inability to offer a workable solution to the problem.
   e. denying the helping individual the right to protection from prosecution under "privileged communication" laws.

6. The helping individual offering a solution to a particular problem should be aware that:

   a. there may be no satisfactory answer to the problem in question.
   b. the receiver of help is an intelligent individual who has possibly considered the solution earlier.
   c. it's his responsibility to ensure that the receiver of help implements the solution.
   d. alternate solutions should be suggested to allow the receiver of help some options.
   e. the receiver of help is seeking recognition rather than help.

7. Frequently the effectiveness of the helping relationship is threatened because the receiver disparages, disavows, or breaks an accepted moral standard. It is critical in situations such as these that the helping person:

   a. terminate the conference immediately and suspend further conference sessions until the receiver of help apologizes.
   b. accept the statement or act in its perspective and explore it further.
   c. change the receiver of help's attitude by reminding him that perhaps this is the reason for his problem.
   d. reject the act on statement by pointing out that social standards are necessary to prevent chaos.
   e. remind the receiver of help that statements of this nature retard the progress that has been made.
8. The need for practicing administrators to acquire and improve their helping skills has been created by:

   a. The increasing amount of time spent working with people individually and in group situations.
   b. The increasing requirements of many state and professional accrediting agencies.
   c. The reduced amount of paper work in most schools allowing the administrator more time to be of assistance.
   d. Citizen demands for improved public relations programs in the schools.
   e. A continual influx of unqualified teachers who need special assistance in adjusting to the school environment.

9. Often in helping situations, the helping individual has the tendency to offer advice which if accepted, implemented, and proven successful usually has the effect of:

   a. Improving the self-confidence of the receiver of help because he experiences a measure of success.
   b. Enabling the receiver of help become more independent.
   c. Making the receiver of help more dependent on the helping individual.
   d. Effectively demonstrating the leadership abilities of the helping individual.

10. Assume you are Mr. Greer, the Principal of Prairie Junior High School. One of the English teachers enters your office and in a harried tone exclaims:

    "Mr. Green, the students in my second period class are driving me wild. What should I do?"

    Which of the following best describes how you would respond?

    a. "Why don't you try showing them some movies?"
    b. "Would you like me to observe your class and offer some suggestions? I can't very well call all the students in my office and discipline them."
    c. "You say you're having trouble with the second period class, have you talked with the students about the reasons of their behavior?"
    d. "Why don't you try talking to the students about the problem?"
    e. "A couple of the other teachers have had trouble with that class. I suggested they try doing more small group work in the class and it seemed to help."
The term "communication", as it is derived from its Latin origin, conveys which of the following ideas:

___a. to share information through speaking
___b. to share information through written correspondence
___c. to come to a common agreement
___d. to make common
___e. to provide information to another person

One-way communication, as opposed to two-way communication, is

___a. more efficient
___b. usually faster.
___c. very seldom appropriate in the school setting
___d. very seldom used by school administrators
___e. very appropriate in the classroom setting

The use of feedback in communication

___a. assures accuracy
___b. makes the receiver more frustrated
___c. increases the receiver's confidence
___d. speeds up the communication process
___e. usually has no detectable effect on the communication process.
4. Suppose you were the principal of an elementary school and you realized that the communication process between you and the teaching staff had broken down. You wanted to define the problem and develop a plan of action to correct this communication breakdown. Which of the following statements best represents a statement of your problem in a manner that would guide you to a plan of action for successfully solving the problem?

___ a. I would like to correct the defects in the administrative-staff communication.
___ b. Increasing my ability to communicate with staff members.
___ c. Finding a consultant to assist us in improving the administrative-staff communication process.
___ d. Administrative-staff communication is a problem in this school.
___ e. Teacher's don't appear to be reading the memos that I send them.

5. Most problem situations can be understood in terms of the forces which push toward improvement (driving forces) and the forces which resist improvement and keep the problem a problem (restraining forces.) Broadly speaking, which of the following would be possible restraining forces affecting the administrative-staff communication problem situation described above?

___ a. personality factors
___ b. physical restraints
___ c. social pressures
___ d. all of the above
___ e. none of the above

6. Sally is sitting in class looking out the window and day dreaming. The teacher says to the class, "Students, take out a sheet of notebook paper." Sally sits there without moving a muscle while the rest of the class takes out a sheet of paper. Which of the following general hazards would be the cause of this communication breakdown?

___ a. The information which is to be transmitted is vague, or inaccurate.
___ b. The message is poorly encoded.
___ c. There is a failure to transmit a well-encoded message.
___ d. The receivers decode a message other than the source had intended.
___ e. Any of the above-mentioned general hazards could have been the cause of this communication breakdown.
7. The science teacher says to the class, "Tomorrow, everyone bring your textbooks to class as we will use them during our lab period." The next day all of the students brought only their lab books. Which of the following general hazards would be the cause of this communication breakdown?

   a. The information which is to be transmitted is vague, or inaccurate.
   b. There is a failure to transmit a well-encoded message.
   c. The receivers decode a message other than the source had intended.
   d. More than one of the above-mentioned hazards could have caused this communication breakdown, but not just any of them.
   e. Any of the above-mentioned hazards could have caused this communication breakdown.

8. During a staff meeting a principal explains in detail how he wants the student progress reports filled out. The next week the teachers hand in the student progress report forms. Half of the teachers filled them out correctly, while the other half of the staff filled them out incorrectly in one way or another. Which of the following general hazards would be the cause of this communication breakdown?

   a. The information which is to be transmitted is vague, or inaccurate.
   b. The message is poorly encoded.
   c. The receivers decode the message other than the source had intended.
   d. More than one of the above-mentioned hazards could have caused this communication breakdown, but not just any of them.
   e. Any of the above-mentioned hazards could have caused this communication breakdown.

9. A teacher pulls out a memo from her mailbox at school. She tears it up and throws it in the waste basket before reading it. Which of the following general hazards would be the cause of this communication breakdown?

   a. The message is poorly encoded.
   b. There is a failure to transmit a well-encoded message.
   c. The receivers decode a message other than the source had intended.
   d. More than one of the above-mentioned hazards could have caused this communication breakdown, but not just any of them.
   e. Any of the above-mentioned hazards could have caused this communication breakdown.
10. The following statements describe the nature of the teacher-administration communication process which is generally found in schools. Which one of these statements is NOT true?

   a. Messages flow primarily from administrators to teachers in written rather than in oral form.

   b. The communication relationship between teachers and administrators is a tenuous one.

   c. The messages that flow from the administration to teachers tend to be informational or motivational rather than directive in nature.

   d. The memo is the accepted way to communicate from the administration to the operational level below.

   e. Insecurity keeps teachers from discussing problems of the classroom with those higher in rank.
SEMIANTIC DIFFERENTIAL
Experimental Booklet
INSTRUCTIONS
The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In completing this scale, please make your judgment on the basis of what these things mean to you. On each page of this booklet you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.
Here is how you are to use these scales:
If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

fair X:____:____:____:____:____: unfair
or
fair:____:____:____:____:____: X unfair

If you feel that the concept is quite closely related to one end of the scale or the other (but not extremely), you should place your check-mark as follows:

strong:____:____:____:____:____:____ weak
or
strong:____:____:____:____: X:____ weak

If the concept seems only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active:____:____:____:____:____:____ passive
or
active:____:____:____:____: X:____ passive

(Instructions Continued)
The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the thing which you are judging. If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space:
Space:____:____:____:____:____ dangerous

IMPORTANT:
(1) Be sure that you place your check-mark in the middle of the spaces, not on the boundaries.
This: Not this
   ______:____:____:____:____:____:________

(2) Be sure to check every scale for every concept--do not omit any.

Work at fairly high speed through the booklet. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that are important. On the other hand, please do not be careless, because we want your true impressions.
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<td>good</td>
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<td>slow</td>
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<td>cold</td>
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IN-SERVICE EDUCATION
FOR SCHOOL ADMINISTRATORS

good __:__:__:__:__:__ bad
relaxed __:__:__:__:__:__ tense
near __:__:__:__:__:__ far
healthy __:__:__:__:__:__ sick
deep __:__:__:__:__:__ shallow
active __:__:__:__:__:__ passive
strong __:__:__:__:__:__ weak
rugged __:__:__:__:__:__ delicate
loud __:__:__:__:__:__ soft
sharp __:__:__:__:__:__ dull
fast __:__:__:__:__:__ slow
hot __:__:__:__:__:__ cold

TEACHER DECISION-MAKING

good __:__:__:__:__:__ bad
relaxed __:__:__:__:__:__ tense
near __:__:__:__:__:__ far
healthy __:__:__:__:__:__ sick
deep __:__:__:__:__:__ shallow
active __:__:__:__:__:__ passive
strong __:__:__:__:__:__ weak
rugged __:__:__:__:__:__ delicate
loud __:__:__:__:__:__ soft
sharp __:__:__:__:__:__ dull
fast __:__:__:__:__:__ slow
hot __:__:__:__:__:__ cold
APPENDIX C

PAGES FROM THE INTRODUCTION TO THE
THREE AUDIO MODULAR UNITS
These Audio Modular Instructional Materials have been developed under the joint direction of:

Roger H. Peck
and
Arthur W. Eve
Center for Leadership and Administration
School of Education
University of Massachusetts

and

James A. Moore
Associate, Program Development
Florida State Department of Education
Tallahassee, Florida
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### INTRODUCTION

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INTRODUCTION

PURPOSE OF AUDIO MODULAR INSTRUCTION

This instruction is directed toward school principals, assistant principals, and other school personnel involved in the general area of staff development. It is designed to stimulate these staff leaders to carefully scrutinize the communication behavior which they have established with the staff; and to initiate actions which focus on reducing the possible barriers to administrator - staff understanding which may presently exist in their schools.

DESCRIPTION OF THE MODULE

This module deals with the basic elements of the communication process. It focuses on the process of communication as it is defined from its Latin derivation, communis. Through becoming personally involved in the exercise included in the module, the participants have the opportunity to develop their own conclusions as to the differences between a situation in which two-way communication exists, and one in which communication goes one way.
Upon completion of this module the participant should be able to:

1. Define "communication" as it relates to its Latin derivation, communis.

2. Describe the two basic elements of the one-way communication process.

3. Describe the origin and nature of four hazards to successful communication. ["Successful communication," in this case, relates to the definition of communication given in #1 (above). The reference points for the identification of the hazards to successful communication are the basic elements described in #2 (above).]

4. Describe two advantages and two disadvantages of the one-way communication process, as opposed to the two-way process. (This description is to be based on an analysis of a personal experience in being involved in the two forms of the communication process.)

5. Distinguish between the feelings or attitudes generated as a result of being involved in a one-way communication process, as compared to the two-way process. (This distinction is to be based on an analysis of a personal experience in being involved in the two forms of the communication process, both as a source and as a receiver of information.)

6. Identify two existing personal administrative behaviors which reflect a reliance upon the one-way communication process, and describe two effects that these behaviors might have upon the members of the school staff.
Upon completion of this module the participant should be able to:

7. Describe two personal administrative actions which could be initiated, the purpose of which would be to reduce the possible barriers to administrator–staff understanding which may presently exist in the school. (These actions should focus on reducing the barriers resulting from practices which reflect or encourage a reliance upon the one-way communication process.)

8. Conduct a problem-solving analysis for defining a goal and planning action. The goal is to be focused on improving administrative–staff communication. In this analysis the following criteria are to be followed:

   a. The change goal should be defined precisely enough that action could be planned.

   b. An identification should be made of the forces, presently existing in the school, which hinder the movement toward achievement of the goal.

   c. An identification should be made of the forces, presently existing in the school, which help the movement toward achievement of the goal.

   d. An identification should be made of the forces (listed in b and c above which are

      1) most important
      2) most difficult to deal with
      3) most amendable to change

   e. A description should be made of the action required to

      1) weaken the hindering forces
      2) strengthen the helping forces
      3) add new helping forces

   f. A description should be made of the method to be used to determine if progress is being made toward the achievement of the stated goal.
A communication exercise has been included as an integral component of this audio instructional module. In this exercise the participants have the opportunity to distinguish between a situation in which two-way communication exists, as compared to one in which communication goes one way. Participation in this exercise is important for a complete understanding of the modular experiences.

PREREQUISITE
None.

TIME REQUIRED
Approximately two hours.

MATERIALS AND RESOURCES REQUIRED

1. Audio Instruction two-track magnetic cassette tape, recorded at a speed of 1-7/8 inches per second. The tape for "Staff Development: The Basic Elements of the Communication Process" is enclosed.
2. A cassette tape recorder.
3. This Audio-Instruction Module Guidebook.
4. A pencil and several sheets of scratch paper.
5. A clock or watch with a second hand attached.
6. The Problem-Solving Program. (The blue booklet included in the plastic pocket in the front of the guidebook.)

(Continued on next page.)
MATERIALS AND RESOURCES REQUIRED (continued)

7. Both individuals participating in the module. The second individual could include any of the following: other administrators, your spouse, an older student, a teacher, a secretary, or another friend).

INSTRUCTIONS TO THE PARTICIPANT

You will derive the greatest benefit from this instructional module by observing the following suggestions:

1. Take the module where you will not be interrupted, and give it your complete attention.

2. Set aside sufficient time (approximately two hours) so that you can follow the instruction through to its conclusion.

3. Do both Sections of the communication exercise, and fill in all of the necessary data in the data tables.

4. Work through the Problem-Solving Program, and begin initiating the actions which you describe in this Program.

THE INSTRUCTION STARTS ON THE TAPE. The instructor will refer to and explain the information given in the Guidebook. This information appears in the form of Charts - diagrams, text, etc.
This module is reusable, since it is not necessary for you to mark on the Charts or otherwise enter information in the Guidebook. Review questions should be answered on a separate sheet of paper. Several sheets with blank data tables are enclosed for you to enter the information from the Exercise. These sheets can be reproduced should additional copies be needed.

Any comments, criticisms, or suggestions as to how this instruction could be improved will be welcomed. Address:

Roger H. Peck  
Center for Leadership and Administration  
School of Education  
University of Massachusetts  
Amherst, Massachusetts 01002

or

James A. Moore  
Associate, Program Development  
Room 374, Knott Building  
Department of Education, State of Florida  
Tallahassee, Florida 32304
These Audio Modular Instructional Materials have been developed under the joint direction of

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Tallahassee, Florida
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INTRODUCTION

THE PURPOSE OF THIS MODULE is to help leaders involved in staff development look at an aspect of their communication behaviors. This aspect includes both the giving and receiving of feedback. The primary intent of the module is to help staff leaders understand and improve the ways they give and receive feedback.

THE MATERIALS NEEDED to use this module are

(1) the module booklet with enclosed tape cassette
(2) a cassette player
(3) a pencil or pen
(4) and possibly some scratch paper if you would like to write stuff down.

THE EXPERIENCE NEEDED to use this module is enough time spent working with people to be concerned about how we can work together better.

THE TIME NEEDED to use the module will be 45-55 minutes.
SUGGESTIONS FOR USING THE MODULE

(1) Take the booklet and tape player somewhere you won't be interrupted and you won't be disturbing anyone else.

(2) Set aside enough time so you can follow the module all the way through without feeling rushed to get somewhere else. Given the busy quality of our lives, this can be hard to do.

(3) Remember at all times that learning is a painful, laborious experience and should never be approached with other than teeth-grinding determination and shoulder-to-the-wheel seriousness.

"Hold your chin up, keep your eyes fixed on your goal, put your nose to the grindstone, your ear to ground, your shoulder to the wheel, and try to work on this module in that position."
BEGINNING INSTRUCTIONS

All the directions you need to use in the module are given on the tape.

To start the module, put the cassette in the player, turn it on, and follow the directions given you.

Any comments, criticisms, or suggestions as to how we can make this module better will be welcomed. Send these to:

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Roger H. Peck
Center for Leadership and Administration
School of Education
University of Massachusetts
Amherst, Massachusetts 01002

or

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Room 374, Knott Building
Department of Education, State of Florida
Tallahassee, Florida 32304
After you complete the FEEDBACK module, you should be able to:

(1) Increasingly notice the effects that your use of small behavioral changes has on meetings and other group projects in which you have a part.

(2) Recognize that the crucial component of feedback has to do with the quality of personal support conveyed with the feedback.

(3) Increasingly distinguish between feedback given with personal support and feedback given with little or no personal support.

(4) Increasingly take the time to make conscious the distinction in (3).

(5) Pay more attention to word choice, word arrangement, and word context to make your giving and receiving of verbal feedback more effective.

(6) Increasingly develop your ability to analyze what your feedback is or is not personally supportive.
FOLLOW-UP READING SUGGESTIONS

If you would like to go further with the ideas contained in this module, you might find one or more of the following books a helpful way to start:


BODY LANGUAGE, Fast, Julius, New York, M. Evans, 1970.


STAFF DEVELOPMENT: THE HELPER - HELPEE RELATIONSHIP  (PART I)

These Audio Modular Instructional Materials have been developed under the joint direction of

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Roger H. Peck

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and

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Associate, Program Development
Florida State Department of Education
Tallahassee, Florida
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INTRODUCTION

THE PURPOSE OF THIS MODULE is to explore the techniques utilized in the Helper - Helpsee Relationship, emphasizing the principals role as that of the helping person and the teachers role as the receiver of help.

THE MATERIALS NEEDED to use this module are:
1. the module booklet with enclosed tape cassette
2. a casette tape player
3. pencil and paper if note taking is your forte.

THE EXPERIENCE NEEDED to participate in this module is a simple desire to be of assistance to individuals.

THE TIME NEEDED to complete the module is approximately 45-50 minutes.
SUGGESTIONS FOR USING THE MODULE

1. Select a quiet area where you will not be interrupted for approximately forty-five to sixty minutes.

2. Schedule enough time to allow you to proceed through the module completely during one session.

3. Feel free to turn off the recorder at any time to reflect on what has been stated. At other times you may want to replay certain portions of the tape to consider statements presented earlier.

4. The illustrated pages in the booklet are designed to focus on and reinforce the main ideas presented in the text.
BEGINNING INSTRUCTIONS

1. Remove the cassette tape from the plastic packet and place it in a cassette tape recorder.

2. Turn the tape recorder on play, sit back, and relax.

Any comments, criticisms, or suggestions as to how we can improve this module will be welcomed. Send these to:

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INTRODUCTION

PURPOSE OF AUDIO MODULAR INSTRUCTION

This instruction is directed toward school principals, assistant principals, and other school personnel involved in the general area of staff development. It is designed to stimulate those staff leaders to carefully scrutinize the communication behavior which they have established with the staff; and to initiate actions and leadership behaviors which will assist staff members in becoming less dependent upon the staff leaders in solving their (the staff members) own problems.

DESCRIPTION OF THE MODULE

This module reviews the major desired outcomes which should result from the Helper-Helpee relationship, and then focuses upon some of the behaviors which the staff leader must display in the Help-Helpee relationship in order to produce these desired outcomes. The participant will have an opportunity to become involved in five exercises within this module which will allow for an assessment and refinement of his/her leadership skills in the helping relationship.

Upon completion of this module, the participant should be able to:

1. Describe three major desired outcomes of the Helper-Helpee relationship.

2. Describe six behaviors the Helper must display in order to produce these major desired outcomes of the Helper-Helpee relationship.

3. From observing a teacher-administrator conference in which the teacher is seeking help to a problem, identify and describe the behaviors displayed by the administrator which will help, and those that will hinder in the production of the desired outcomes of the Helper-Helpee relationship.
Upon completion of this module, the participant should be able to:

4. In the role of a staff leader, participate in a conference with a teacher the result of which produces movement toward the desired outcomes of the Helper-Helpee relationship.

PREREQUISITE

The participant should have completed the Audio Modular Instruction unit titled Staff Development: The Helper-Helpee Relationship (Part I) before completing the present module.

TIME REQUIRED

Approximately 90 minutes

MATERIALS AND RESOURCES REQUIRED

1. Audio Instruction two track magnetic cassette tape, recorded at a speed of 1-7/8 inches per second. The tape for "Staff Development: The Helper-Helpee Relationship (Part II)" is enclosed in the plastic pocket in front of the Guidebook.

2. An Audio Cassette tape recorder, and the microphone for the recorder.

3. A blank audio cassette tape. (One is included in the plastic pocket in the front of this guidebook.

4. This Audio-Instruction Module Guidebook, plus two extra copies in the front and back pockets of the notebook binder cover.

5. A pencil for each participant and several sheets of paper.

6. Three persons to participate in the module. In addition to the administrator these persons could include other administrators, secretaries, teachers, spouses, students and/or other friends.
INSTRUCTIONS TO THE PARTICIPANT

You will derive the greatest benefit from this instructional module by observing the following suggestions:

1. Take the module where you will not be interrupted, and give it your complete attention.

2. Set aside sufficient time (approximately 90 minutes) so that you can follow the instruction through to its conclusion.

THE INSTRUCTION STARTS ON THE TAPE. The instructor will refer to and explain the information given in the Guidebook. This information appears in the form of Charts - diagrams, text, etc. This module is reusable, since it is not necessary for you to mark on the Charts or otherwise enter information in the Guidebook. Review questions should be answered on a separate sheet of paper.

Any comments, criticisms, or suggestions as to how this instruction could be improved will be welcomed. Address:

Roger H. Peck  
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FOOTNOTES
Footnotes for Chapter I


10. *Toward Improved School Administration, op. cit.*, p. 11.

11. Ibid., p. 9.

12. Ibid., p. 29.


Footnotes for Chapter II


3. Ibid., pp. 1-18

4. Ibid., pp. 7-8.


6. Callahan, op. cit., p. 188.

7. Ibid., p. 240.


10. Callahan, op. cit., p. 179.


13. Ibid., p. 249.


15. Ibid., pp. 10-11.

16. Ibid., p. 12.

17. Ibid.

18. Ibid.

Footnotes for Chapter II (continued)


24. Ibid., pp. 67-76.
25. Ibid., p. 80.
26. Ibid., p. 83.
27. Ibid., pp. 90-91.
28. Ibid., p. 94.
29. Ibid., p. 99.
31. Ibid., pp. 101-103.
32. Ibid., pp. 104-105.
34. Ibid. p. 17.
36. Ibid., p. 114.
Footnotes for Chapter II (continued)


39. Ibid.

40. Becker, *op. cit.*, 1970


43. Ibid., p. 7.


45. Ibid., pp. 147-148.

46. Ibid., p. 7.

47. Moore, *op. cit.*, 1957.


51. Ibid., p. 6.
Footnotes for Chapter II (continued)

52. Ibid., p. 7.


54. Ibid., p. 939.


58. Ibid.


61. Ibid., p. v.

62. Ibid., pp. 8-9.

63. Ibid., p. 9.

64. Ibid., p. 10.

65. Ibid., p. 11.

66. Ibid., p. 9.
Footnotes for Chapter II (continued)

67. Ibid., pp. 15-16.
68. Ibid., p. 15.
69. Ibid., p. 16.


71. Edwin Fleishman, Edwin Harris, and Harold Burt, Leadership and Supervision in Industry, The Ohio State University, Bureau of Educational Research, Columbus, Ohio, 1955, pp. 29-54.

72. Ibid., p. 21.
73. Ibid., p. 22.


Footnotes for Chapter II (continued)


84. Ibid., p. 159.

85. Ibid.

86. Ibid.


88. Ibid., p. 80.

89. Ibid., p. 119.

90. Ibid., p. 156-157.
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