A study to determine the suitability of utilizing the audio-modular instructional approach for training school administrators in skills pertaining to staff development.

George Bryniawsky

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A STUDY TO DETERMINE
THE SUITABILITY OF UTILIZING THE AUDIO MODULAR
INSTRUCTIONAL APPROACH FOR TRAINING SCHOOL
ADMINISTRATORS IN SKILLS PERTAINING TO STAFF DEVELOPMENT

By

GEORGE BRYNIAWSKY

A Dissertation Submitted to the Graduate School
of the University of Massachusetts in partial
fulfillment of the requirements for the degree of

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Amherst, Massachusetts

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A Dissertation

By

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April, 1973
A Study to Determine
the Suitability of Utilizing the Audio Modular
Instructional Approach for Training School
Administrators in Skills Pertaining to Staff Development

(April 1973)

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DESIGN OF THE STUDY

The study was exploratory in nature, in that it was an initial attempt to determine how effective the audio modular instructional approach would be for training practicing school administrators to conduct staff development training exercises with members of their instructional staff. The study also reflected a higher level of exploration, in that it was the third study in a series of studies attempting to determine the suitability of using the audio modular instructional approach as an alternative in-service training technique for presenting selected concepts and skills to school administrators. In reference to the latter, the present study attempted to determine the suitability of using the audio modular instructional approach for providing school administrators with selected interpersonal skills and knowledge relating to staff development, pertaining more specifically to the helper/helpee relationship between the administrator and his/her instructional staff.

The purposes of the Study were:

1. Develop two audio modular instructional units to be used by practicing school administrators. The performance objectives for the
units focused on 1) the achievement of selected interpersonal skills relating to staff development, and pertaining more specifically to the helper/helpee relationship between the administrator and his/her staff; and 2) the gaining of facilitative skills necessary to conduct staff development training exercises with members of the administrator's instructional staff. In order to assist the administrator with the latter, the two audio modular instructional units included additional training exercises as an appendix in the audio modular instruction guidebook. These exercises were to be used by the administrator with members of his/her instructional staff, and required the presence of the administrator as a facilitator. These exercises were such that the skills and knowledge gained by the administrator, as a result of participating in the initial phase of the audio modular instructional units, assisted him/her in the facilitation of the exercises with members of his/her instructional staff.

2. A format for the field testing of the audio modular instructional units was designed. This applied specifically to the school administrator's participation in the units.

3. A format for the field testing of the additional training exercises, included in the audio modular instructional units, was designed. This applied specifically to the facilitation of the training exercises by the administrators who had participated in the audio instructional units. These administrators conducted the training exercises with members of their instructional staff.

4. Assessment procedures for determining the suitability of the
audio modular instructional units for providing school administrators with selected interpersonal skills and knowledge in staff development, pertaining specifically to the helper/helpee relationship, were developed and implemented. The criteria used were those set forth in the definition for "suitability".

5. Assessment procedures for determining the usefulness of the audio modular instructional units for training school administrators to function as facilitators in the training of staff members, were developed and implemented. This related specifically to the training of administrators for conducting staff development training exercises with their teaching staff members.

6. Conclusions were formulated, focused on 1) the suitability of using the two audio modular instructional units for providing practicing school administrators with selected interpersonal skills and knowledge in staff development, pertaining specifically to the helper/helpee relationship between the administrator and his/her teaching staff; 2) the relative degree of effectiveness of using the two audio modular instructional units for the training of school administrators for conducting selected staff development exercises with members of their instructional staff; and 3) the suitability of using the audio modular instructional approach as an alternative in-service instructional approach for the training of school administrators.

7. Recommendations were formulated, focusing on 1) the changes which should be made in the two audio modular instructional units; 2) further development and use of audio modular instructional units;
and 3) further studies on the audio modular instructional approach.

Field Testing

The first phase of the field testing involved twenty practicing school administrators from the New England states. Several workshop sessions were conducted in which the twenty administrators participated in the two audio modular instructional units. The workshop sessions were conducted in such a manner so that the administrators participated in the units the same way they would have, if the units had been sent to them in their own school district.

The second phase of the field testing involved eighty-four members of the instructional staffs being supervised by the twenty administrators. After the twenty administrators completed their participation in the two units, they were asked to conduct a staff development training session involving between three to six of their teachers. For these training sessions the administrators functioned in the role of facilitators, using the two training exercises included in the appendix of the Guidebook for the audio modular units used during the first phase. Since it was assumed that the experience gained from participating in the audio modular units provided them with the necessary skills to conduct these staff development training exercises, the twenty administrators received no additional training.
Dedication

To my wife, Marian and our three children, Peter, Michael and Christina. Special thanks to my children who endured the process with tolerance and good cheer. The one to whom I am most indebted is my wife, Marian. It was her understanding and support that carried me through the completion of every one of my degrees and through the most trying professional challenges.
Acknowledgment

This study was of a nature which required the cooperation and participation of many people. A special thanks is extended to this author's committee members, Dr. Raymond Budde and Dr. Arthur Eve, whose assistance throughout this author's studies and during the writing of the dissertation was invaluable. To Dr. Mark Rossman, a most sincere gratitude for his counseling and advice during the field study and writing of the dissertation.

It is with deep professional respect and admiration that this author thanks the dissertation chairman, Dr. Roger Peck for being much more than an effective chairman.

A most sincere thanks goes to my wife, Marian, who typed the dissertation with little cooperation from the author.
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CHAPTER I

Introduction

Obsolescence is, and has been, one of the prime concerns in industry as seen in studies carried out by Schein¹, Bond², and McAdoo³. In an attempt to counteract obsolescence, industry is spending more and more money every year in providing as great a variety of retraining and in-service opportunities to their employees as the individual companies can organize. The in-service programs are not geared simply at retraining workers, since a large amount of the time is being spent on providing the manager and the executive with the skills necessary to work with people in this changing environment.

Educational organizations, although basically better equipped with the necessary tools for instruction, appear to be slower in their reaction to the pressing need for providing greater in-service opportunities for their executives. In fact, it is this slowness of


educational organizations in providing help to their executives that prompts Goldhammer to say,

An analogy might be made between the dinosaurs of the Mesozoic age and the educational institutions of today. Like dinosaurs, educational institutions are behemoth organizations, not too well adapted to their environments and lacking the internal self-adaptive mechanisms necessary for survival in a rapidly changing environment.4

The preparatory programs of study in our colleges and universities are altering their curriculum in an attempt to better equip future school administrators with skills necessary to cope with the social and technological changes affecting school organizations. However, we are nevertheless faced with the problem of the already employed school administrator who cannot or will not take advantage of the full-time academic programs provided by the higher institutions of learning. The school administrator now engaged in a school system is looking to the in-service programs which could help him/her in his/her work. Although efforts have been made to provide in-service opportunities to the on-the-job school administrator, Becker claims that the development of these programs has not changed too greatly since 1962.5


Because educational organizations, for the most part, are publicly owned and government supported institutions, does not necessarily mean that the leaders working in that field are immune to the threat of obsolescence. In fact, this author believes that because these institutions are publicly owned, the school administrators must be constantly assisted with the development of new skills and approaches in order to ward off obsolescence. Engleman, on this very point, claims that nothing grows obsolete more rapidly than public education under the leadership of an administrator grown stale or unaware of the critical issues and changing demands on the schools. 6

How then could this apparent dilemma be resolved when many school administrators will not or cannot take a sabbatical to engage in a re-training course and, the in-service opportunities are limited to meetings, professional magazines and professional conferences? It seems apparent, to this writer, that alternative procedures in the area of in-service training must be explored and developed. One of these alternate approaches could be referred to as "Audio Modular Instructional Approach".

The Development of Audio Instructional Modules

The Florida State department of education, having been instrumental in obtaining legislation favourable to in-service programs for teachers

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and pre-service programs for potential administrators, recognized the need for in-service programs for practicing school administrators. The Center for Leadership in Administration at the School of Education, University of Massachusetts, was contracted to design an alternate approach to the in-service training for school administrators. Following a study of various programmed learning techniques a design, similar to those used in industry, emphasizing a single concept through written material, simulation exercises, and audio tape recordings, was chosen. This technique was chosen because it could provide educational leaders an opportunity to obtain leadership skills at their choice of time and place. In designing the units, consideration was given to the fact that presently employed administrators cannot always afford to absent themselves from their job responsibilities at a prescribed time and, are not always willing to travel in order to participate in a brief in-service program.

During the initial planning stage of the in-service program, it was anticipated that five training modules would be developed and tested: one module on the decision-making process and four on communication skills. The first two modules were pilot tested at the Florida School Staffing Conference held at Crystal River, Florida in 1970. The two modules tested were: 1) Barriers to Effective Two-Way Communication; and 2) Feedback and Group Self Evaluation. After supportive feedback was received, the completed modules were returned
to the University of Massachusetts for revision based on the feedback. After the modules were revised, the other three were developed and initially field tested by Herriman\(^7\) on fifty school administrators, secretaries, and teachers in 1971. The three modules, 1) Basic Elements of the Communication Process, 2) The Use of Supportive Feedback, and 3) the Helper/Helpee Relationship, after receiving supportive feedback had to be revised as were the first two, based on the feedback.

A subsequent study by Levine\(^8\), was based on testing the suitability of using the audio modular instructional approach in comparison to the audio-visual instructional approach. Levine's study, as did Herriman's, and certainly this investigator's projected study, all view the audio modular approach as an alternative in-service training approach for presenting selected concepts and specific skills to school administrators.

The studies which preceded this one dealt with attempting to test the suitability of using the modular approach as a possible technique

\(^7\)Ernest Donald Herriman, "A Pilot Study of the Suitability of the Audio Modular Instructional Approach for the Continuing Education of School Administrators", (Dissertation, University of Massachusetts, 1971).

which would be part of a comprehensive in-service program for school administrators. This study, in addition to attempting to determine the suitability of using the audio modular instructional approach as a technique in an in-service training for school administrators, attempted to determine the extent to which the administrator, after having participated in the modular units, can then act as facilitator in conducting selected staff development training exercises, based on the concepts presented in the units, with his/her subordinates.

**Statement of Purpose**

The major objectives of the study were 1) to determine the suitability of using the audio modular instructional approach for providing practicing school administrators with selected interpersonal skills and knowledge relating to the area of staff development; and, 2) to determine the relative degree of effectiveness in using the audio modular instructional approach for training school administrators to conduct selected staff development training exercises with members of their instructional staff.

The purposes of the study were to:

1. Develop two audio modular instructional units to be used by practicing school administrators. The performance objectives for the units focused on 1) the achievement of selected interpersonal skills relating to staff development, and pertaining more specifically to the
helper/helpee relationship between the administrator and his/her staff; and 2) the gaining of facilitative skills necessary for conducting staff development training exercises with members of the administrator's instructional staff. In order to assist the administrator with the latter, the two audio modular instructional units included additional training exercises as an appendix in the audio modular instruction guidebook. These exercises were to be used by the administrator with members of his/her instructional staff, and required the presence of the administrator as a facilitator. These additional exercises were such that the skills and knowledge gained by the administrator, as a result of participating in the initial phase of the audio modular instructional units, assisted him/her in the facilitation of the exercises with members of his/her instructional staff.

2. A format for the field testing of the audio modular instructional units was designed. This applied specifically to the school administrators' participation in the units.

3. A format for the field testing of the additional training exercises, included in the audio modular instructional units, was designed. This applied specifically to the facilitation of the training exercises by the administrators who had participated in the audio instructional units. These administrators conducted the training exercises with members of their instructional staff.

4. Assessment procedures for determining the suitability of the audio modular instructional units for providing school administrators
with selected interpersonal skills and knowledge in staff development, pertaining specifically to the helper/helpee relationship, were developed and implemented. The criteria used were those set forth in the definition for "suitability" in the succeeding section.

5. Assessment procedures for determining the usefulness of the audio modular instructional units for training school administrators to function as facilitators in the training of staff members, were developed and implemented. This related specifically to the training of administrators for conducting staff development training exercises with members of their instructional staff.

6. Conclusions were formulated, focused on 1) the suitability of using the two audio modular instructional units for providing practicing school administrators with selected interpersonal skills and knowledge in staff development, pertaining specifically to the helper/helpee relationship between the administrator and his/her instructional staff; 2) the relative degree of effectiveness of using the two audio modular instructional units for the training of school administrators for conducting selected staff development training exercises with members of their instructional staff; and 3) the suitability of utilizing the audio modular instructional approach as an alternative in-service instructional approach for the training of school administrators.

7. Recommendations were formulated, focused on 1) the changes which should be made in the two audio modular instructional units; 2) further development and use of audio modular instructional units;
and 3) further studies on the audio modular instructional approach.

Definitions of Terms

The following terms are defined operationally as they were used in this study:

Administrator: According to the Webster Dictionary, an administrator is an officer who directs or superintends affairs (as of a business, school, or government agency). The term is used most commonly to refer to an individual charged with administrative responsibilities such as planning and coordinating activities within an organization.

Attitude: The degree of positive or negative feeling associated with some psychological object.

Audio Modular Instructional Unit: A learning activity package including an audio tape and a guidebook. The unit emphasizes the learning of a single concept, through a series of logical and sequential experiences. The modular packet is comprised of the following: 1) performance objectives; 2) an audio cassette tape; 3) a guidebook and 4) selected staff development training exercises. For the purpose of this study two audio modular
units were developed:

Units in the Study: The terminal objective was to develop the two audio modular units so as to be presented in a sequential fashion focusing on providing practicing school administrators with selected interpersonal skills and knowledge relating to the area of staff development, and more specifically relating to the helper/helpee relationship between the administrator and his/her staff. So as to assist the administrator in gaining facilitative skills necessary for conducting staff development training exercises, additional training exercises were included as an appendix in the audio modular instruction guidebook. The additional exercises were used by the administrator with his/her instructional staff, and it was required of the administrator to act as facilitator.

Audio Modular Instructional Approach: An alternative approach to the in-service training process which is comprised of a series of modular units arranged in a sequential order. The first unit might focus on the introduction and highlighting of the necessity for the development of certain skills, while subsequent units might deal with the actual performance objectives being pronounced and exercised.

In-Service Programs: Any programs of study undertaken after the
completion of requirements for certification and during the tenure of service in the field of education.

In-Service Training: Educational activities, organized to impart information and/or to develop new skills and techniques, aimed at the improvement of professional staff members.

School Administrator: Refers to a professional, employed by a school system, who is charged with administrative and/or supervisory responsibilities. For the purpose of this study the term was limited to a professional who is super-ordinate of classroom teachers.

Suitability: The usefulness of the audio modular instructional approach as determined by the data obtained through the use of a variety of data gathering procedures utilizing both subjective and objective assessment approaches. The criteria utilized was:

Participants' interest in the experience, and their motivation as a result of the experience: the degree to which the experience with the audio modular instructional unit was interesting and of value to the participants; the degree to which the participants were stimulated to elect to participate in additional audio modular instructional units; and the degree to which the participants were
likely to recommend to other persons that they participate in the audio modular instructional units.

The worth of the experience as compared to alternative experiences as perceived by the participants: The order of ranking for preference of the audio modular instructional units as compared to other specific forms of in-service instructional programs for school administrators. The connotative meaning of the experience, as compared to the connotative meaning of a concept which signified any other type of experience by which the participant could have achieved the learning objectives: The degree to which the connotative meaning of the concept, "Audio Modular Instruction as One Alternative Approach for In-Service Education for School Administrators" elicited from the participant a positive rating for a) the factors of potency, evaluation, receptivity and activity; and b) the polar traits signifying the degree to which the concept was meaningful, useful, promising, relevant, and interesting. In addition to the degree to which the ratings on these previously mentioned factors and traits compared with the ratings on the same factors and traits as they related to the connotative meaning of the concept, "In-Service Educational Programs for Administrators in which you have Participated (Excluding the audio modular instructional approach, but including Course Work and other learning Experiences)."
The cognitive change that took place in the individual as a result of participating in the experience: The degree to which the participants, after completing the units, achieved the performance objectives which were stated at the beginning of the audio modular instructional units.

The potential for further development of learning experiences utilizing the same instrucional approach: The perceptions of the individuals who participated in the audio modular instructional units, concerning a) their desire to participate in any additional audio modular instructional units; b) the conditions under which they would participate in additional units; c) the value of developing any more audio modular instructional units; d) the topics which could be adapted for presentation through the use of the audio modular instructional approach; and e) the types of skills which could be learned through the use of the audio modular instructional approach.

The expenditure of time and money used in the development and production of the learning experience: The amount of time involved in developing the audio modular instructional units, and the monetary cost of producing the units.
Assumptions in the Study

1. The respondents would answer candidly and honestly the questions concerning the strengths, weaknesses, and the general value of the two units of the instructional module, developed for the study.

2. The participants would truly reflect their own attitudes when asked to react to the attitudinal questions in the instruments.

Limitations of the Study

The following limitations were placed on the study:

1. The purpose of this study was to determine the suitability of utilizing the two audio modular units as instructional approaches for the in-service training of school administrators in selected skills pertaining to interpersonal relationship and staff development. The criteria upon which the term "suitability" was established were limited to the operational definition for suitability as it was used in this study.

2. The one-group pretest-posttest pre-experimental design was used in an attempt to determine the cognitive changes which took place in the individuals as a result of their participation in the training exercises. The data gained from the use of this design bears the limitation(s) associated with the one-group pretest-posttest
pre-experimental design as ascertained by Campbell.\textsuperscript{9}

**Design of the Study**

The study was exploratory in nature, in that it was an initial attempt to determine how effective the audio modular instructional approach would be for training practicing school administrators to conduct staff development training exercises with members of their instructional staff. The study also reflected a higher level of exploration, in that it was the third study in a series of studies attempting to determine the suitability of using the audio modular instructional approach as an alternative in-service training technique for presenting selected concepts and skills to school administrators. In reference to the latter, the present study attempted to determine the suitability of using the audio modular instructional approach for providing school administrators with selected interpersonal skills and knowledge relating to staff development, pertaining more specifically to the helper-helpee relationship between the administrator and his/her instructional staff. In the following sections the assessment design used in Phase I and Phase II of the study is summarized.

Procedures Used During Phase One of the Field Testing

The first phase of the field testing involved twenty practicing school administrators from the New England states. Several workshop sessions were conducted in which the twenty administrators participated in the two audio modular instructional units. The workshop sessions were conducted in such a manner so that the administrators participated in the units the same way they would have, if the units had been sent to them in their own school district.

A number of assessment procedures were implemented during this phase of the field testing. This assessment focused on the determination of the suitability of using the audio modular instructional units for providing the school administrators with selected interpersonal skills and knowledge in staff development, pertaining more specifically to the helper/helpee relationship between the administrator and his/her instructional staff. The assessment procedures are briefly described in the following section.

Assessment procedures used for determining the suitability of the units

The assessment procedures used in this phase of the study were based on the criteria established in the definition for "suitability", as this term was used operationally in the study. These criteria, and the assessment procedures used for each criterion, are summarized in the following sections.

The assessment procedures used to determine the participant's interest in the experience, and their motivation as a result of the
experience. Each of the participants was asked to react to a series of "closed" questions focused on his attitude toward the audio modular instructional units, in which he had participated. These questions were presented on a written questionnaire, and were administered to the participant immediately upon completion of the units. In addition to the "closed" questions, the participants were asked to react to a number of "open-ended" questions focused on their attitudes toward their experience with the units. The purpose for the "open-ended" questions was to supplement the data provided through the use of the "closed" questions. The data from the "closed" questions is presented in the form of number and percentage of responses made for each level of the Likert-type response pattern. The "open-ended" questions were categorized, and presented in the form of the number and percentage of responses made for each category.

The assessment procedures used to determine the worth of the experience as compared to alternative experiences, as perceived by the participants. The participants were asked to rank-order a list of several in-service instructional approaches. This rank-ordering process was in relation to the participant's preference as to which instructional approach he/she would choose to experience. Within this list, a reference to the audio modular instructional approach was included. The data produced was analyzed in 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 weigh the responses, and determine the weighted mean score for each in-service approach listed.
The assessment procedures used to determine the connotative meaning of the experience, as compared to the connotative meaning of a concept which signified any other type of experience by which the participant could achieve the same learning objective. -- The participants were asked to react to two Semantic Differential Scales. On the first Scale, the participants reacted to the concept, "Audio Modular Instruction as One Alternative Approach to In-Service Education for School Administrators". On the second Scale, the participant reacted to the concept, "In-Service Educational Programs for School Administrators in which You Have Participated (excluding the audio modular instructional approach)". The mean scores, for each of the two concepts, were determined for the factors of evaluation, potency, activity, and receptivity. The mean scores for a number of individual polar traits were also calculated. The difference in the mean scores for the two concepts was subjected to a t Test to determine if the differences in these scores reach a statistical level of significance. This value was calculated for each of the four factors, and for each of the individual polar traits for which mean scores were determined.

The assessment procedures used to determine the cognitive changes that took place in the individuals as a result of participating in the experience. -- The pretest-posttest pre-experimental design was used in an attempt to determine the cognitive changes which may have occurred as a result of participating in the audio modular instructional units. An achievement test, based on the performance objectives for the two units, was constructed, validated, and tested for reliability during the
study. The validation process consisted of the following procedures:

a) Twenty-four graduate students in the School of Education at the University of Massachusetts participated in the validation process. These study members were divided into two equal groups; an experimental and a control group. All the study members were given the achievement test (Test 1) designed for the two units. A retest (Test 2) was given one week later to all the study members. The Pearson Product-Moment Correlation Formula was used to determine the relationship of the two sets of scores. The correlation coefficient indicated whether the achievement test possessed the factor of reliability.

b) The twelve members of the experimental group participated in the two audio modular instructional units after they had taken the retest. They were asked to participate in the units within one week. They were then given Test 3. Test 3 was identical to Test 1 and Test 2. The Pearson Product-Moment Correlation Formula was used to determine the relationship between Test 2 and Test 3 of the experimental group. The correlation coefficient to some degree indicates whether the achievement test possesses the factor of validity. The difference between the mean scores for Test 2 and Test 3 was then subjected to a t Test to determine if this difference in scores is significant.

During the first phase of the field testing the achievement test was administered twice to the practicing school administrators who participated in the two units. This experimental group was administered the test before and after they participated in the two units. The difference between the mean scores for the Pretest and the Posttest were subjected to the t Test to determine if this difference in scores is significant.

The assessment procedures to determine the potential for further development of learning experiences utilizing the same instructional
approach. -- The participants of the units were asked to react to a number of "open-ended" questions presented on a written questionnaire. These questions focused on 1) the participant's desire to participate in any additional audio modular instructional units; 2) the conditions under which they would participate in additional units; 3) the value of developing any more audio modular instructional units; 4) the types of skills which could be learned through the use of the audio modular instructional approach; and 5) the topics which could be adapted for presentation through the use of the audio modular instructional approach. The data from these questions was categorized, and presented in the form of the number and percentage of responses made for each category.

The procedures used for determining the expenditure of time and money used in the development and production of the learning experience. -- In an attempt to determine the monetary cost of the units which were produced for the study, the investigator maintained a record of the expenditures made in the development and production of the two audio modular instructional units. A similar record was maintained in order to determine the number of "man-hours" spent on the development and production of the two units.

Other assessment procedures used:

In addition to the assessment procedures used in the study relating directly to the criteria established for the term "suitability", other procedures were used to obtain information about the audio modular instructional units. These procedures included 1) "open-ended"
questions on a written questionnaire administered to the participants, the purpose of which was to determine the major strengths and weaknesses of the two audio modular instructional units; 2) personal interviews conducted by the investigator with the participants to determine their perceptions of the experience during the first phase of the field testing. The investigator also made notes from his observations of the workshop sessions. The data from these procedures was analyzed, and these findings were considered in the final conclusions and recommendation for the study.

Procedures Used During Phase Two of the Field Testing

The second phase of the field testing involved the twenty administrators who participated in the audio modular instructional units during the first phase. In addition, the second phase involved eighty-four members of the instructional staffs being supervised by the twenty school administrators. After the twenty school administrators completed their participation in the two audio modular instructional units during the first phase of the field testing, they were asked to conduct a staff development training session involving between three to six members of their instructional staff. For these training sessions the administrator functioned in the role of a facilitator, utilizing two of the staff development training exercises which were included in the appendix of the Guidebook for the audio modular instructional units used during the first phase.
It was assumed that the experience which the administrators gained from participating in the audio modular instructional units during Phase One provided them with the necessary skills to conduct these staff development training exercises. Consequently, the twenty administrators received no additional training, other than that which was provided in the two units, to assist them in conducting these staff development training exercises with members of their instructional staff. For this second phase, the administrators were provided with assessment instruments to be administered to the participants of the staff development training exercises. In the following section is provided a brief description of the assessment procedures used during this second phase of the field testing.

Assessment procedures used during Phase Two

Three assessment approaches were used in an attempt to determine the relative degree of effectiveness of using the audio modular instructional units for training the school administrators to conduct the selected staff development training exercises with members of their instructional staff. These assessment approaches included 1) a subjective assessment approach soliciting reactions from the participants of the training exercises; 2) an objective assessment approach for attempting to determine the cognitive and connotative changes in the individuals as a result of participating in the training exercise; and 3) a subjective assessment approach soliciting reactions from the administrators (facilitators) who conducted the staff development training exercises. These assessment approaches are briefly described in the following
sections.

The subjective assessment approach used for soliciting the reactions from the participants of the training exercises. -- In an attempt to determine the participants' attitude toward their experience with the training exercises, the participants were asked to react to a questionnaire containing both "open-ended" and "closed" questions. These questions focused on such concerns as 1) the major strengths and weaknesses of the training exercises; 2) the knowledge and skills they felt they had learned from the training exercises; 3) the value of the exercises to their own learning; 4) their feelings toward the quality of the performance of the facilitator as he had conducted the exercises; 5) how well trained they felt the facilitator was for conducting the training exercises; and 6) any changes which they felt should be made in the exercises. For the "closed" questions, the number and percentage of responses made for each response category was determined. For the "open-Ended" questions the responses were categorized, and the number and percentage of responses for each category was determined. For both types of questions, the data for each question was presented and analyzed separately.

The objective assessment approach used for determining the cognitive and connotative changes which resulted from participating in the training exercises. -- The one-group pretest-posttest pre-experimental design was used in an attempt to determine the cognitive and connotative changes which took place in the individuals as a result of participation in the training exercises. To determine these changes, achievement tests and
Semantic Differential Scales were administered to the participants. Each individual was administered a test and scale before participating in the training exercises; and the same test and scale were administered to the participant after experiencing the exercises. The differences in the pre and post test/scale scores were examined to determine if any changes reached a level of statistical significance.

The subjective assessment approach used for soliciting the reactions from the facilitators of the training exercises. -- An attempt was made to determine the school administrators' (the facilitators of the exercises used during Phase Two) attitude toward their experience in conducting the staff development training exercises, and their attitude toward how effective the audio modular instructional units were in training them to conduct these exercises. This was accomplished through the use of 1) a questionnaire incorporating both "open-ended" and "closed" questions administered to the facilitators after the training exercises have been conducted; and 2) in-depth structured interviews conducted with a selected number of the administrators after they had facilitated the exercises. The questions for the questionnaire and the structured interviews focused on such concerns as 1) the value of the audio modular instructional units in providing them with the skills and knowledge necessary for conducting the staff development training exercises; 2) the major strengths and weaknesses of the two units in providing them with the skills and knowledge necessary for conducting the staff development training exercises; 3) alternative instructional approaches which they felt would be better for providing practicing school administrators with
the necessary skill and knowledge to conduct staff development training exercises; 4) the changes which should be made in the two units, and in the audio modular instructional approach to better provide the administrators with expertise in conducting staff development training exercises; and 5) suggestions of topics for the further development of audio modular instructional units for the purpose of training practicing school administrators to conduct training exercises with their instructional staff. The questions posed by the measurement instruments used in this approach provided the framework for the analysis and treatment of the data collected.

Treatment of the Data, and the Development of Conclusions:
A Summary

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

Whenever quantitative analysis of the data was made the investigator utilized mathematical means, standard deviations, percentages, and t Tests. Subjective statements made by the participants were categorized and utilized extensively. The conclusions were drawn heavily on these open-ended responses as well as on the analysis of the quantified data.
For Phase One the conclusions were based, to a great extent, on the criteria established in the definition for "suitability", as this term was used operationally in the study. Nevertheless, the data resulting from the assessment procedures implemented during both Phases of the field testing was analyzed and synthesized, and the conclusions were drawn on the basis of emergent patterns rather than specific isolated instances. The final conclusions focused on 1) the suitability of using the two audio modular instructional units for providing practicing school administrators with selected interpersonal skills and knowledge in staff development, pertaining more specifically to the helper/helpee relationship between the administrator and his/her instructional staff; 2) the relative degree of effectiveness of using the two audio modular instructional units for the training of school administrators for conducting selected staff development training exercises with members of their instructional staff; and 3) the suitability of utilizing the audio modular instructional approach as an alternative in-service instructional approach for the training of school administrators.

Significance of the Study

Practicing school administrators must, in one way or another, protect themselves from the threat of obsolescence. They must, not only stay in contact with the technological and societal changes that are taking place around them but, develop new skills and techniques in coping with these changes. However, the increasing amount of time a practicing school administrator is almost compelled to commit to
his/her work prevents him/her from participating in prolonged studies or in-service projects. The audio instructional modular approach, although designed as one component of a comprehensive in-service program, does provide an alternative approach for the busy administrator.

Alternate approaches to most traditionally accepted procedures are being sought today, especially in the field of education.

Much has been written in the recent past about the need for a new approach to schooling. It is not just the radicals who are concerned; even conservative observers -- scholars who have followed the evolution of the schools for two and three decades -- are aware of the alterations made necessary by the age that is dawning.10

Industry has recognized the need for providing continuous training for its personnel. The current emphases appears to be on short and to-the-point, informative and meaningful ways of providing in-service programs. The audio modular approach is and has been used in industry and business. Although we can refer to the practices and techniques utilized by industry we must remember that there is a significant difference between the modular in-service training approaches used by businessmen and this one developed for school administrators. The difference lies in the fact that the school administrator is primarily concerned with staff development and his/her position as a leader in an organization.

The audio modular approach to in-service has proven to be an

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effective means to disseminating information and developing new skills both in education and industry. This study, in its second phase, however, concerned itself with the transfer of newly acquired skills and knowledge. The school administrator must be able to implement the skills and knowledge gained through the module when he/she, in fact, acts as a substitute for the tape and instruction booklet in administering the exercises to his/her subordinates.

This investigator feels that this study answers four needs:

1. the need for providing alternate approaches to in-service training of school administrators;
2. the need for providing an in-service approach designed with the busy time-table of the school administrator in mind;
3. the need for providing an assessment as to the suitability of the modular unit in assisting the school administrator to act as facilitator and leader; and
4. the need for higher educational institutions to continue their work in providing in-service programs for presently employed administrators.

Organization of the Dissertation

Chapter I consists of the problem, the significance of the study, the general design and the suitability factor which is the justification for the entire study. Chapter II is a review of the research and
literature relating to the in-service training of school administrators and the approaches to the training of already employed school administrators. Since this author feels that the world of business has a definite effect on education a section on that effect and a section on in-service practices in industry is included in this chapter. Chapter III is a description of the background, development, composition and field testing of the modular units. In Chapter IV a detailed description of the methodology used in the study will be presented. In Chapter V the findings of the study are presented and analyzed. Chapter VI includes the summary of the dissertation, its conclusions and recommendations.
CHAPTER II

REVIEW OF RELATED RESEARCH
AND RELATED LITERATURE

This study essentially concerned itself with determining the suitability of using the audio modular instructional approach in the field of in-service training of school administrators. In the review of related literature it has been found that in-service training of administrators in business and education has been an ever growing and rapidly developing area. The research has also shown that many terms and practices used by industry have been adopted as educational terms and instructional approaches. The converse has also appeared to be true as exemplified by Harry Levinson\(^1\) who entitles chapter 7 of his book as, "The Business as an Educational Institution" and chapter 9 as, "The Executive as a Teacher". The expectations placed on the School Administrator bear a close relation to the current management theories. With these reasons in mind, this chapter deals with in-service programs as they are applied in the field of education as well as business. The following sections include 1) a brief overview of the effect of the Scientific and Humanistic Era of management on the training of Educational Administrators; 2) In-Service Education for School Administrators (1960 - present); 3) research studies focusing on in-service training for School Administrators; 4) a study of the managerial

in-service training in the field of business; 5) training for the change agent; and 6) an assessment of the training approaches.

The Effect of the Scientific and the Humanistic Era of Management on the Training of Educational Administrators

(A Brief Overview)

During the twentieth century we see an emphasis in administration moving from the task-oriented to the person-oriented stage. Prior to the human relations approach to management we had the era of scientific management which concerned itself with efficiency and accountability. Frederick Winslow Taylor (1856-1915), called "Father of Scientific Management", believed that there are two classes of employees, the managers and the workers. It was up to the manager to analyze what had to be done, break it up into individual tasks and assign the jobs to his subordinates. Through the use of reward and punishment the manager was responsible for obtaining perfection from his workers. Taylor believed that by proceeding in this fashion management would, in fact, stimulate the workers into performing much better than before.2

Under the new system every single workingman is raised up, is developed, is taught, so that he can do a higher, better and a more interesting class of work than he could do before.3


3 Ibid., p. 53.
This philosophical approach toward management became so popular that it spread into almost every aspect of American life including public education. Taylor's scientific approach to management was altered and added upon when associates such as Henry Lawrence Gantt (1861-1919) became interested in the concepts of interest and motivation. "It is a well known fact that work in which we are interested and which holds our attention without any effort on our part, tires us much less than that we have to force ourselves to do." An attempt to answer this concern with motivation was made by focusing on a reward and punishment scheme based on salaries. This was a kind of "piece-work" approach to remuneration for work done. An experiment based on this scheme appeared to be successful at Bethlehem Steel when, after three and a half years of rewarding, with higher pays, those workers who met their quota, it was reported that 150 men were doing the work of 400 men. Under the sponsorship of Russell Robb (1846-1927) the scientific management theory was oriented to look at, not only the manager and the workers, but also at the overall organizational

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structure and to consider its objectives.\(^7\)

The era of scientific management carried on by people like Emerson\(^8\), Fayol\(^9\), Gilbreth\(^10\), and Follet\(^11\) was changing as they began to realize that motivation was not necessarily gained and maintained through monetary reward and punishment systems alone. They discovered that workers could be motivated by such things as encouragement, acknowledgment, feeling of participation, and feeling of accomplishment. In connection with this, Mary Follet listed three requirements for leadership:

1. Leader's knowledge of the job,
2. Leader's ability to grasp an entire situation, and
3. Leader's ability to organize the experience of the group in order to obtain the full power of the group.\(^12\)

According to Cremin\(^13\), before 1900 the leading School Administrators saw themselves as scholars and educational statesmen, but the Scientific

\(^7\)Russell Robb, Lectures on Organization (Private Release, 1910), p. 3.
\(^12\)Ibid., p. 50.
Management Era was to demand that they become educational managers.

For more than two decades training programs for administrators focused on the management and technical aspects of the work. Since the scientific approach to management dealt with the development of skills and techniques, a pattern was established for programs to train and prepare School Administrators. There was however, no in-service opportunity for administrators once they acquired an administrative position. The in-service programs for School Administrators were in fact 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."\(^{14}\) The offering of courses which were aimed primarily at producing future administrators became a self perpetuating method, in that:

Between 1915 and 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 for the doctor's degrees.\(^{15}\)


\(^{15}\) Callahan, op. cit., p. 249.
The Scientific Management Era had begun by looking at management as a science and by trying to focus its studies on the specific qualities an administrator must either have or develop in order to be effective. Accordingly, the training of administrators was involved in the mechanics of administration both in the field of industry and education. Callahan claims that at the university level administrators were being trained to concentrate on the technical aspects of their work. He says:

> 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.\(^{16}\)

The emphasis now began to shift from production to motivation of the worker. It was with the 1924 research program at the Hawthorne, Illinois, plant of the Western Electric Company that the Human Relations Movement began to gather momentum, and one of its early advocates, Elton Mayo of the Harvard Graduate School of Business Administration, gained recognition.\(^{17}\)

Barnard\(^{18}\) and Druker\(^{19}\) and their contemporaries appear to agree

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\(^{16}\)Ibid., p. 240.


that one of the functions of management is the motivation of subordinates. The Human Relations approach to management was further carried by Maslow's theory based on the assumption that man has a hierarchy of needs and that the needs at one level are not motivated until the needs at the preceding level have been satisfied. According to McGregor traditional organizations with their centralized decision-making, superior-subordinate pyramid, and external control of work were based upon erroneous assumptions about human nature and human motivation. According to Maslow and McGregor man performs best when he is self-actualizing, when his personal objectives are somewhere close to the goals of the organization. Chris Argyris claims that giving people the opportunity to grow and mature on the job helps them satisfy more than just physiological and safety needs. This, in turn, motivates them and allows them to use more of their potential in accomplishing organizational goals.

Frederick Herzberg, in developing his motivation-hygiene theory, realized that knowledge about the nature of man, his motives and needs, could be invaluable to organizations and individuals.

To industry, the payoff for a study of job attitudes would be increased productivity, decreased absenteeism,

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and smoother working relations. To the individual, an understanding of the forces that lead to improved morale would bring greater happiness and greater self-realization.

Rensis Likert and his colleagues at the University of Michigan emphasized the need to consider both human resources and capital resources as assets requiring proper management.

The function of the leader under the scientific management was quite obviously to set up and enforce performance criteria to meet organizational goals. His most important aim was to satisfy the needs of the organization and not those of the worker. The function of the leader under the human relations management was to facilitate cooperative goal attainment among his followers while providing opportunities for their personal growth and development.

Based on the importance attached to the human relations approach by industrial organizations and, largely due to the post-war increased enrollment in schools, a renewed interest was expressed in the improvement of school administrators. We can see the influence of the human relations approach toward management in a demand, by the public, for a redefinition of roles played by educational administrators. In the Kellogg Foundation Report this point is clearly brought out

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26 Mayo, op. cit.
when it states, "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".27

Prior to 1950 the training of educational administrators was based largely on pre-service activities, however there appeared a great need for in-service programs since the role of the administrator was changing rapidly. 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 were instrumental in helping the educational administrators confront their challenges.28

Educational conferences were organized 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".29 As a result of these exploratory conferences, eight regional university training centers were established in order to promote in-service and pre-service activities for school administrators and to disseminate ideas to them.30

The need for in-service programs for educational administrators was being realized by administrators and their professional


28 Ibid., pp. 10-11.

29 Ibid., p. 12.

30 Ibid.,
organizations but in 1962, as Wynn states, "there is evidence that present in-service programs are spotty and uncoordinated".  

Summary

This section attempted to show how the practices in business affect the area of the administrative world in education. More specifically, this section shows how the trends in organizational management, in force in the world of industry, directly affect the expectations placed on the educational administrator. Both the Scientific and the Human Relations Era of management caused the educational administrators to change the approach in their work to suit the developments in organizational management. This section has also attempted to show how these theories affected the training of the School Administrator.

In the next section we will deal with the actual in-service programs offered School Administrators from the year 1960 to the present.

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31 \textsuperscript{R. Wynn, "Organization and Administration fo the Professional Program, "Administrative Behavior in Education, p. 483.}
In 1962 in-service education for School Administrators saw a new upsurge with the establishment of a commission, by the American Association of School Administrators, charged with the responsibility of reporting on the continuing education of school administrators. This commission was to help the educational administrators who were faced with the many demands placed on them and the constant changes affecting their work. After deciding that in-service education was absolutely necessary, the commission drew up a guide consisting of twenty five crucial points which dealt with considerations for the organization of in-service training for school administrators. The commission had decided that in-service programs for school administrators had to be planned by those who were involved and, initiated only in school systems ready to accept these programs. It recommended that the in-service programs be simply organized, that they draw on a wide variety of resources, and that they be tailored to fit specific situations. The commission also emphasized the fact that personnel involved in programs be capable and knowledgeable in working with people.  

The Commission then conducted a survey in an attempt to determine the number and types of in-service programs being conducted throughout the United States at that time. Some two hundred and fifty educational leaders were contacted. The report on the survey listed a number of institutions which were either already engaged in offering in-service programs geared at the educational administrators, or were in the process of developing such programs. The Commission found that although many of the Universities and State Colleges were offering in-service opportunities to administrators it was falling well below the actual need for such training. As a result of the survey carried out by the commission, it was concluded 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 grouping 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 best served.\textsuperscript{33}

After identifying twenty-nine typical school districts, the Educational Research Association conducted a survey to find out which of the school districts offered "a formal internship program for potential administrators among their own employees".\textsuperscript{34} Of the twenty-nine districts contacted it was found that fourteen offered an administrative training program organized entirely within the school system while the other fifteen were organized in conjunction with a university. In most cases, however, the program was designed as a training period for some specific administrative position with little or no program content directed at a scientific study of administration.\textsuperscript{35}

The University Council for Education Administration (UCEA) at Ohio State University and the Center for the Advanced Study of Educational Administration (CASEA) at the University of Oregon are two major organizations conducting continuous research in educational administration. These organizations act as resource centers for many other universities and colleges offering programs in educational administration. Regarding the thinking, influencing program content, at the universities which are members of UCEA, Jack Culbertson states:

\textsuperscript{33}Ibid., pp. 104-105


\textsuperscript{35}Ibid.
... of the various issues that can be raised about the content of preparatory programs, perhaps the most critical of all is that of relevance. The issue is critical because of a growing gap between program content offered in university programs and the changing social, educational and leadership needs of society.  

Reporting on a UCEA survey of existing educational administration programs, John Nagle claims that they fail to meet today's needs. He states that, in order to better prepare administrators for their role, the programs should consider broadening the potential experiences by changing their courses; that there be greater flexibility in the programs; and that the shift take on an interdisciplinary approach.  

Housan saw the university in-service programs as not having experimented with new and different formats of training school administrators and that they didn't appear overly eager to learn about new developments. He stated that "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".  

In a survey, with specific references to practicing superintendents, carried out a year later, Goldhammer claimed that although in most other professions the preparatory institutions cater to the needs of practitioners through in-service programs, very little was being done for the practicing superintendent.  

The Teachers College at Columbia University had attempted to respond to the need for change when in 1968 it introduced a revised educational administration program, "based on an assumption that the role of the school administrator is dynamic and changing rapidly".  

In 1969, the American Association of School Administrators (AASA) had established a semi-autonomous organization called the National Academy for School Executives. This organization's program was based on the premise that "the past decade has witnessed increased emphasis upon in-service education. Societal change and the rapidly increasing fund of knowledge have forced the admission that the initial preparation is inadequate, however extensive, without subsequent in-service education experiences". The Academy attempted to provide an opportunity for the school administrators to attend

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seminars, which were designed with specific objectives, without lengthy interference with their duties. The meetings were held at different locations throughout the country and the in-service programs appeared to be paralleled to those offered by the American Management Association. Kinser describes the travelling in-service program:

Laboratory sessions incorporating simulation, role-playing, strategy planning, and the development of more effective skills, techniques, or instruments provide opportunities for the immediate application of new understandings. An attempt is made to assist the participants in the development of both immediate short-term strategies and long-term planning.

While the AASA program of in-service training offered through its National Academy for School Executives contains many ideas of value it must be remembered that it was essentially designed to meet the needs of the superintendents and not the principals. In a 1970 survey of the participants in these in-service training sessions, Becker found that the vast majority were either superintendents or assistant superintendents. That same year Becker surveyed 86


43 Kinser, op. cit., p.38.

colleges and universities only to find that a mere 23% offered some formalized in-service training for principals.\(^ {45} \)

In discussing the responsibilities of a modern day principal and his preparation for the work involved, Lloyd Trump identifies two areas requiring preparation, "competent academic preparation and provisions for the practice of administration."\(^ {46} \) Referring to the administrative skills Trump suggests that "he learns his management duties through simulation and automated instruction techniques. He participates frequently in both planned and informal small group activities."\(^ {47} \)

It would appear that although there are efforts made to offer in-service programs for school principals, the development of these programs has not progressed too greatly since ten years when the Commission on In-Service Education for School Administrators reported:

> 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.\(^ {48} \)

\(^ {45} \) Ibid., p. 6


\(^ {47} \) Ibid., p. 6.

\(^ {48} \) Becker, op. cit., p. 7.
Summary

In this section we dealt with the in-service opportunities made available to the School Administrator from 1960 until the present time. As the review of literature has shown, even though in 1962 interest in in-service education was exhibited and many attempts were made to provide such programs, the administrator today is still faced with much the same dilemma as was experienced in the early 60's. He is basically left alone to deal with the ever increasing demands placed on him with little free time to take regular courses and not enough in-service opportunities available to him.

The next section is a review of the research studies specifically oriented at the present in-service programs and looking at alternate approaches to in-service education for the School Administrator.
Research Studies Focusing on
In-Service Training for
School Administrators

Research studies on in-service education for school administrators, although rapidly increasing in number, for the most part deal with the need for continuing education for school administrators already employed as administrators, the new and current practices in in-service training, and the forecast of the need for alternative approaches in the field of in-service education.

According to the studies done by Culbertson, Nagle, Housan, Kinser, Wynn, and the AASA on the status of continuing education for school administrators we have seen that although many institutions of higher learning attempted to offer programs for administrators, most of their programs comprised of full academic preparatory courses aimed at training future administrators. The literature on in-service programs shows interest in this field, but very little has been found on the effects of these programs.

49 Culbertson, op. cit.
50 Nagle, op. cit.
51 Housan, op. cit.
52 Kinser, op. cit.
53 Wynn, op. cit.
54 American Association of School Administrators, op. cit.
In depth studies on in-service training for School Administrators is a concern in some of the studies conducted for doctoral dissertations and those conducted by Ogletree\(^{55}\) at the University of Kentucky. The initial series of investigation performed by Ogletree and his associates on the effects of using college personnel to assist local school administrators in the performance of their daily tasks reported that:

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 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.\textsuperscript{56}

The studies showed that where there are district-wide problems to be solved it is much more advantageous to involve all the district administrators, instead of a select few, in the in-service education program. It was also concluded that when the team of consultants works with the local administrators on problems that are pertinent to the district both the consultants and the local school officials tend to develop new skills and techniques in problem-solving.\textsuperscript{57}

The second extensive and intensive study, sponsored by the Cooperative Research Program of the Office of Education, was conducted by Ogletree\textsuperscript{58} and his associates with the intent to develop procedures for extending the educational horizons and improve performance of school administrators in rural, culturally deprived and economically depressed areas. Although the study showed some

\textsuperscript{56}Ogletree, \textit{et al.}, \textit{op. cit.}


limiting factors such as cost of in-service programs, possibilities of conflict of interests, the time it takes for the college team to orient itself to the problem and, conflict in time schedules for both the college team and the administrators, it was concluded that these in-service sessions were necessary and beneficial to all concerned.\footnote{Ibid., p. 7.}

Most of the other studies done on in-service training for School Administrators have been done by doctoral candidates as dissertations. These studies deal, for the most part, with the effects in-service approaches have on the attitudes and behavior patterns of the administrators. Luckenback\footnote{Leon R. Luckenback, "The Effect of a Principal's In-Service Leadership Training Course Upon His Operational Behavior Pattern and Upon Attitudes of Teachers, Pupils, and Parents" (Dissertation, University of Florida, 1959) Dissertation Abstract.}, in 1959 conducted a study to determine whether a principal's operational behavior pattern was affected by an in-service training course. He found that although the principal did seem to have been affected by the in-service program it didn't alter the attitudes of the teachers, students and parents toward him, since the change was not significant enough.\footnote{Ibid., p. 939.}

Further studies showed that school administrators did, in fact,
benefit from in-service programs offered them. Both Thomas\textsuperscript{62} and Green\textsuperscript{63} based their studies on in-service programs which were clinical in nature and short in duration. The in-service training offered by Thomas was a five-day-long training, while Green's experiment, supervised by Carl Rogers, took one weekend. Both however, showed that the changes brought about through these short in-service sessions affected the administrators and through surveys done more than one year later it was apparent that the changes in the administrators did not disappear.

A study which is relevant at this point is one done by Renfro\textsuperscript{64} in 1969 in which he attempted to study the participation of elementary school principals in maintenance, improvement and change oriented in-service activities. His study found that administrators attended in-service workshops based on what the goals of the in-service sessions are and on who is offering these activities.

Goldhammer\textsuperscript{65} poignantly laments the fact that principals

\textsuperscript{62}Terrance A. Thomas, "The Effects of Laboratory Training on the Interpersonal Relations of the Elementary School Principals with their Teaching Staff" (unpublished Ph.D Dissertation) Dissertation Abstracts.


lack leadership skills and that not much help is being offered them, when he states:

It is doubtful that any other profession would take so little interest in maintaining currency of knowledge about research and professional developments in the field as education does. A large number of principals fail to seek out opportunities for maintaining current knowledge; there is not a single agency in our society that attempts to provide means or incentives for elementary school principals to maintain their professional credentials.\textsuperscript{66}

There have been several studies conducted recently which appear to be closely related to this present study dealing with a modular approach to in-service training of administrators. The Sparks\textsuperscript{67} study was designed to determine the suitability of disseminating information to the practicing administrators through a communication system utilizing an individualized, programmed, audio-visual medium.

The findings of the study showed that: 1) through the use of the audio-visual medium, learning did take place; 2) over 75% of the school administrators, who participated, found the information important and useful; 3) the information presented was understandable; 4) more than seventy five per cent of the participants said that the

\textsuperscript{66}Ibid., p. 13.

program kept their attention; 5) generally the program, as a source, was rated higher than other sources; 6) suggestions were made to the effect that rejection or acceptance of the communication system depended largely on the functioning of the equipment; 7) a majority of the participants favored the audio-visual programs over other types of approaches; 8) comments concerning cost of production seemed to generally indicate that unless mass produced, this approach would prove to be too expensive.

Another study related to this study was done by Herriman where he tested the audio modular approach for its suitability as an in-service technique in the training of school administrators. As a result of his study, he put forth several conclusions.

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

2. The audio modular approach is perceived of 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. 69

An even more recent study performed by Levine 70 attempted to comparatively analyze the suitability of the audio modular and the audio-visual modular instructional approaches as useful components of in-service programs for school administrators. In determining the suitability of these materials, the following criteria were utilized:

1. Future potential of the modules - The perception of the participants regarding the usefulness of the audio modular and audio-visual modular instructional methods;

2. Motivation and interest of the participants - Are skills and concepts presented in a manner that will stimulate participants into electing to participate in other modules;

3. Changes of attitude - The extent that participants' attitudes are changed from experiencing the modules;

4. Accomplishment of the stated objectives - The general extent that participants achieve the behavior of the performance objectives in the modules;

5. Cost of the modules - The cost of producing the audio module and the audio-visual module. 71

69 Ibid., p. 198.
71 Ibid., pp. 8-9.
The audio and audio-visual communication modules were field tested in over twenty communities, including rural, suburban and urban communities and, ranging in socio-economic settings, throughout the Commonwealth of Massachusetts. Forty participants were involved with the audio module and forty others with the audio-visual module. The participants included school administrators, teachers, secretaries and spouses of administrators. The instructional modules were so designed that participants could either take time from their work or could take the module home in order to participate in the modules.

Some of the conclusions reached, were: 1) there appeared to be no significant difference between the audio modular as opposed to the audio-visual modular approach; 2) the modular approach was perceived as an interesting, valuable experience well worth repeating; 3) the modular approach was perceived as being more valuable than several traditional approaches; 4) the modular approach was viewed as being of equal value to holding a professional discussion; 5) this approach was deemed higher than other in-service approaches in potency, evaluation, activity and receptivity; 6) a major strength of this approach is the ease and convenience with regard to its application; 7) a major weakness of this modular unit was the length of time required to complete it; 8) cognitive changes did, in fact, occur as a result of participation in this module.72

72 Ibid., pp. 168-169.
One other study, which bears relation to this study, was carried out in 1969 with the specific objective of finding out whether educators' cognitive state could be influenced through the use of short training sessions. These sessions were organized as short-term summer training programs where information about educational innovations was discussed. It was found that, not only did the educators prefer this format to the traditional courses, but that the educators were influenced both cognitively and attitudinally by the use of this short-term approach to in-service training. 73

Summary

This section points out that although there have been studies conducted on the training of School Administrators, few have focused on the in-service programs offered to practicing administrators. Most of the studies found in literature have dealt with programs oriented toward the future administrator rather than research done on programs aimed at the on-the-job administrator. This section also dealt with the several studies focused on providing alternative forms of in-service education for the School Administrator. We have seen how short-term

73 Paul A. Leary, "An Analysis of the Effectiveness of Selected Short Term Summer Training Programs as sources of Information About Educational Innovations" (Dissertation, University of Massachusetts, 1969).
approaches and modular approaches to in-service education have proven to be both effective as instructional techniques and, welcomed by the administrators because of their design and organization.

The next section deals with the training, retraining and in-service programs offered in industry. We will also discuss the in-service approaches aimed specifically at the business manager.
A Study of the Managerial In-Service Training in the Field of Business

In discussing the potential, style of management, obligations, values and philosophy of a successful manager in today's field of business, Flory says, "It is not enough that business leaders are honest, considerate, purposeful, and dedicated. These virtues must be extended to the men whom the manager teaches and for whom he is responsible."

In recent years, the problems of displacement and unemployment were not limited to the blue-collar or hourly paid workers. The world of business has to deal with the pressing issue of obsolescence of technicians and managers. "An engineering student of a decade ago would barely understand today's courses. Schools of engineering are urging the conservation and development of engineering manpower." Foecke, a dean, is now calling for a national attack on the problem

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75 Ibid., p. xiii.


of obsolescence by means of broad and versatile programs for continuing education as a long-term investment and responsibility.

To counteract obsolescence among managers and other business executives, American companies in 1965 put an estimated 500,000 executives through in-service education courses, management seminars, and formal academic programs. This represented double the number engaged in similar activities in 1960.\(^{78}\)

Many of the leading schools of business in the colleges and universities are engaged in a concerted effort to provide in-service training to business personnel. According to Bond, Leabo, and Swinyard\(^{79}\) there is evidence of increased activity in business school alumni groups.

Schein\(^{80}\) discusses the trend in business regarding in-service training programs by saying,

> Training programs for new members of organizations are the rule rather than an exception.... Most organizations have departments which are responsible for training new members and providing continuing training or educational opportunities for regular members.

\(^{78}\)"Many Officials Find They Cannot Adjust to Business Changes", Wall Street Journal (January 24, 1966).


Because our society is changing so rapidly, there is a constant problem of obsolescence. The knowledge and skills which are valuable today may not be valuable in five years. Rather than firing people who are obsolete, more and more organizations are attempting to retrain them to provide the new skills necessary to keep up with technology and new organizational demands.

In 1964 the Ford Motor Company had about 23,000 men enrolled in various retraining programs. It is becoming more and more apparent that industry is concerned with the fact of intellectual obsolescence as a threat to both man and the organization. Some companies already require every manager to be involved in at least one period of instruction each year. It has, as a result, become appropriate to suggest that businessmen take sabbaticals.

In addition to training the unemployed, re-training the already employed, Levinson maintains that every business organization must carry on a continuous process of advanced education. He says, "For its own survival, the company must use education as preventive

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81 Ibid., p. 35.

82 Technological Change and Employment in the Automotive Industry (Detroit: Automobile Manufacturers Association, 1965)


84 Levinson, op. cit., p. 135.
maintenance against social corrosion of occupational obsolescence."  

The Bechtel Corporation is already providing an opportunity for all its employees, with bachelor's degrees, to obtain credit, through the University of California, by taking courses at whatever university is closest to the location of their employment. Bell Laboratories has, already in force, a program leading to advanced degrees.  

It is evident that management cannot rely on business schools or universities for more than generalized background training for business leadership. Business schools are involved in the same difficulties as the large universities who are struggling with departmentalization producing specialists and, with "the mechanical system of lecture courses, departments and examinations." However, colleges and universities are involved in designing special activities for management development programs as seen in the review published by the National Industrial Conference Board.

More and more we see corporations planning and operating their own in-service programs. Industry is using games, group activities,  

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85 Ibid.  
86 "Bringing the Campus to the Office", Business Week (December 25, 1965), pp. 72-73.  
simulation and other techniques in their managerial in-service programs. One of the more successful techniques now being utilized by corporations is the management game. The management game uses as a setting a conflict situation in which the participants actively engage in attempting to resolve the conflict. They try to arrive at a consensus within the group regarding the resolution of the problem. Gerstemfield and Maynard\(^89\) report that Eastern Airlines uses the "Podco System Exercises" in demonstrating the planning, organization, direction, and control aspects of a corporation.

The managers at IBM have, for some time now, been offered an extensive in-service program in which they could participate either during the day or in the evening. Serbein\(^90\) discusses courses ranging from such topics as Product Control to Interviewing Techniques.

In reference to the executive training, McClelland\(^91\) maintains that if executive development is to mean increased capacity to effectively discharge responsibilities, then,

Formal courses, whether inside or outside the firm,


can play only a minor—though vital—part in such a process, and their contribution must be seen in the context of the overall needs of the organization. Men become fitted for senior posts in a company mainly by exercising responsibility in less senior posts. 92

This evolves to organizations now using in-service practices to assess the degree to which an individual would perform at a higher level position. To facilitate promotional decisions, companies such as the American Telephone and Telegraph, IBM, General Electric, J.C. Penney, Standard Oil (Ohio), Sears and Roebuck and Ford have been making use of the assessment center approach. In discussing how an assessment center operates Bray says,

Typically, an assessment involves six candidates and two assessors. In carefully tailored games or exercises, the candidates for promotion get to try their hand at solving a production snafu, disciplining a subordinate, and selling a certain viewpoint to fellow candidates. One exercise, called the in-basket, gives a candidate a sampling of a supervisor's paperwork sprinkled with booby traps. He must turn down a loyal worker's request for promotion, appease an irrate customer, and answer criticism of his staff from another department head. 93

The assessors, after carefully observing the candidates, discuss each candidate's performance separately and then generate a comprehensive report on each candidate. In reference to the validity of the

92 Ibid., p. 85.

93 Douglas Bray, "Where They Make Believe They're the Boss", Business Week, (August, 1971), p. 34.
assessment centers, studies made on thousands of employees assessed over the last few years, indicate that this assessment technique has proven to be more accurate than the traditional methods.94

The American Management Association, a professional organization involved in management education for more than forty years, has been offering a Management Course which consists of four one-week units designed to help managers in their work. This course is based on practical experience where, during a simulation, the participants can use the principles and methods taught them.95

In management a current focus is on communication and interpersonal relationship. In fact, the more psychologists and sociologists actually study the behavior of people in organizations, the clearer it becomes that their performance is critically related with their supervisors. According to Saline96, management practices, techniques and attitudes must blend with the new personal and societal values.


Management training must be designed to assist managers in their development of an understanding of human relations.

A greater number of organizations are setting up their own training centers and in-service programs. Kastens\(^97\) claims that many of the programs now in existence are not yielding the desired changes in management and that, although the managers go through these programs, a majority of them are managing "very much the way they would have 25 or even 30 years ago".\(^98\)

Organizations which realized the necessity for training their managers in the area of interpersonal relationship, are discovering that it is much simpler to teach someone new motor skills or to instruct someone on new developments. In trying to develop new leadership styles which are more appropriate to the values of society and least directive in nature, are involved new attitudes, new perceptions and even new motives.

The International Harvester Company decided to train foremen in leadership principles and techniques in a two-week course run at

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\(^98\) Ibid.
their cultural training facility. A psychologist, after developing several tests to determine what effects the training program could have had on attitudes and behavior, tested the foremen immediately before and after training, as well as, at intervals ranging from two to thirty nine months later. The tests were also administered to the participating foremen's supervisors and subordinates. The tests were scored on two qualities: 1) Consideration and 2) initiating structure. The findings are summarized below:

1) The foremen's scores did not correlate with age, background, or other personal factors, but did correlate with the kind of behavior exhibited by their own bosses. The correlation appeared on both qualities tested.

2) Compared to a control group, the foremen, after some time, not only reverted to their original behavior and attitudes but showed less consideration and more structure than did the control group. In fact, the only foremen who were more considerate following the training period were those who worked for bosses who themselves were highly considerate. So that, the effects of the training were intimately related to the culture, or climate of the departments from which the men came. 99

The problem of organizational reality and the need for executive leadership still exists and in much greater capacity.

Specifically, the executive must concern himself with developing the capacity for leadership of those who report to him. He does this not solely because the business needs continuing sources of leadership for its own survival, although that fact is significant. More important, a democratic society needs leaders and there is never enough of them.

It would appear that there is an imminent need to develop leaders who can define and act on social problems according to democratic values. For that specific purpose a number of programs have been created in the last five years under major foundation grants.

Summary

This section dealt with the in-service practices utilized in business. As the review of literature has shown, companies have become much more involved in providing in-service training for their employees and especially their executives than have educational organizations. We have seen that the more successful a company becomes, the greater its interest appears to be in the area of in-service training of its employees. We have also seen that industry has been developing alternative approaches to training programs, most of which are geared specifically at a definite purpose. Management seems to be experimenting with different formats of training, in an

100 Levinson, op. cit., p. 139.

attempt to prevent obsolescence and in order to survive in the world of business.

In the next section we will deal with training oriented at providing the school administrator with the necessary skills and techniques so that he can better function in this ever changing society. We will attempt to review the training approaches which are now being offered or should be offered in the area of training for the change agent.
Training for the Change Agent

Educational research in the area of educational change is so lacking and the training of professional personnel to facilitate change so sporadic that it has led Miles to generalize by saying that the whole area of educational innovation is unsophisticated because of lack of valid research findings, the absence of change agents and the lack of economic incentive to adopt change.\(^{102}\)

The concept of the "change agent" was first stated in Lippitt,\(^{103}\) in his study of small group dynamics. Rogers defined the term as meaning a professional who tries to influence decisions to be adopted in a direction which he considers most desirable.\(^{104}\) The change agent has also been referred to as a "local influential", an "adoption leader", "opinion leader", or simply as "leader" in studies done by Rogers\(^{105}\) and Wilkening\(^{106}\). The change agent may

\(^{102}\)N.B. Miles, "Educational Innovation: Some Generalizations", Media and Educational Innovation (Lincoln, Nebraska: The University of Nebraska, 1964).

\(^{103}\)Ronald Lippitt, Jeanee Watson, and Bruce Preston, The Dynamics of Planned Change (New York: Harcourt, Brace and World Co., 1958).

\(^{104}\)E.M. Rogers, and G.M. Beal, "The Importance of Personal Influence in the Adoption of Technological Change", Social Forces, xxxvi, 1958, pp. 329-335.

\(^{105}\)Ibid.

be either an "outsider", not an accepted in-group member, or an "insider", one who is part of the target system to be changed. Both roles have been effectively in facilitating change.

In a study of the effect of personal contact and influence by "insiders", Coleman found a relationship between physicians' adoption of new drugs and the influence of professional friends. Studies made by Hawkins support the importance of "outsiders" as change agents in the dissemination of information about new drugs to physicians. Data from a study by Stone indicates that to a certain point, the work of an outside change agent is positively related to innovation and, after a point, change agents in the form of local adopters seem to become highly effective in bringing about change through personal contacts.

Some studies have been done with regard to educational change agents and change strategies. They are, however, only faint beginnings of

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of what has to be known so that educational change can become rational, planned and properly evaluated.

It has been found that the school superintendent influences the rate of adoption of change, and thus must be considered in efforts aimed at increasing school systems adoption rates. Since new types of instructional programs are introduced by administrators, it is necessary to first convince the administrators of their value. In fact, Ross claims that studies of Berthold, Collins, Ebey, Mark and Skogsberg all conclude that the administrator, by virtue of the nature of his position and the legal setting in which he functions, is most significant in influencing modifications, adaptations and innovations in school programs.

Innovations and modifications also seem to be influenced by the career routes of administrators. Carlson's study of "insiders" and "outsiders" indicates that change or innovations seldom occur, or are less likely to occur, in those districts where two consecutive

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superintendents are appointed from within that district.

When we speak of the "outsider", the role of a change agent, of Third Party, we find that, as referred to in organizational development, that role is analogous to that of arbitrators, judges, umpires, referees, and mediators, with two important differences. The first major difference is that the Third Party is often introduced to the scene without a recognized set of rules to be invoked and before there is a recognized dispute. In short, the "outsider" is often called by a group to help explore its everyday conduct and to assist in defining how it wishes to change and how it will go about making the change. The second major difference in roles, is that the "outsider" must guide the parties toward more self-sufficient behavior in solving their problems. Since the change agent actively involves himself in the change process, his skills, and indeed his manner and style are particularly important. He must understand change strategies and be inventive in adapting them to the situation he is in. He must be a highly sensitive listener and observer; he must understand and respond to the organization and his people and not simply to apply a standard cookbook cure. His language, personal qualities and way of working must be acceptable to the organization he is seeking to help. He needs courage and independence to remain impartial, to hold an honest position and to avoid making them dependent on him for decisions.\textsuperscript{113}

In discussing the "insider" and the "outsider" as change agent, Haynes says,

Perhaps one of the most important jobs of the change agent is to "Know Himself", for he sometimes may be carried away with the opportunity to exert influence whether the influence is required or not. The change agent must examine his own motives for involvement, must think carefully about the practical and ethical limits of his influence, and must think objectively about the scope of his activities. The temptation to "play God" is a strong one. \(^{114}\)

Under the heading of "What Change Agents Must Learn", Lippitt lists five major categories which are summarized below:

1) Conceptual-Diagnostic training: The change agent must be trained in the ability to analyze the meaning of the facts which are presented to him and to view each case as a complex of recognizable agenda which may be comprehended in terms of previously established concepts. This training should not be limited to conceptual orientation only, but coupled with certain specific skills of interpretation and fact finding. The change agent must be trained in techniques for asking the right questions, for using reliable methods to collect, process and interpret data.

2) Orientation to theories and methods of change: In order that he be able to translate diagnostic interpretations into change goals

and plans, the change agent must know what the whole process of change is and how it can be applied. This ability to formulate systematically the process of change should be coupled with technical skills in applying the theory.

3) Orientation to the ethical and evaluative functions of the change agent: By virtue of his being a change agent he is required to make judgements. So that the training should include a general study of social values as well as a specific study of professional ethics and an analysis of personal motivation.

4) Knowledge of sources of help: The change agent needs to know about different kinds of professional help which are available. He must possess a realistic understanding of his own resources, and know what helping skills are available and how to utilize them.

5) Operational and relational skills: The change agent's education must furnish him with experience in the emotional mechanisms of a close working relationship as well as with a good deal of supervised practice in the actual procedures of giving help.\textsuperscript{115}

Most of the approaches to the change process recommended in the literature necessitate the performance of new skills in such areas as comprehensive planning, program management, program development and selection, evaluation, needs assessment, large scale consultation, community interface, decentralization, knowledge utilization, problem

\textsuperscript{115} Lippitt, \textit{op. cit.}, pp. 277-279.
solving, diffusion, change agentry, educational engineering, conflict resolution, intervention, and leader behavior from the superintendent to the teacher to the pupil. These approaches call for a retraining on a massive scale.

Findings in a number of studies suggest that the subjects of change must be approached in a consultative manner and be invited to participate in the change decision as equal partners, for change to be implemented most effectively. Argyris claims that there are two general areas where a change agent must have attained a level of competence before he is able to effect organizational change.

The administrative competence of an organization is composed of two interrelated but analytically separable components. They are intellective, rational, technical competence and interpersonal competence. The former deals with things and ideas, the latter with people.

In order to better conceptualize the type and kind of training that would be required to adequately suit the needs of educational organizations, Fordyce and Weil suggest two ways in which a change agent should be trained. They are summarized as follows,


1) The change agent should be trained in the technical aspects of problem solving and should be helped in developing competence in planning, controlling, designing, and production. So that he realizes what he can do and when he needs help and, most important of all, where to look for help.

2) The change agent should be trained in interpersonal and group membership skills. An individual is constantly interacting with many people above, below and along side of him in order to carry out his responsibilities. He must therefore realize and be aware of his impact upon others, and their impact on him.

With the exception of the few cases reported in the literature, most of the training which is being undertaken in school systems or in educational organizations, deals almost entirely with training in specific skills. For many organizations undergoing major realignments in their organizational mission, process or structures, it becomes imperative, therefore, that people understand and are prepared to deal with interpersonal and group interactions. Although, for some organizations this may seem initially to be a waste of time and energy, the likelihood of fostering change with minor disruption and disfunction-alism is great.

Although Lippitt\textsuperscript{119} provides a number of useful suggestions on

\textsuperscript{119}Lippitt, \textit{op. cit.}, pp. 287-298.
the possible content of "curriculum for training change agents," at present, training programs for change agents are limited. With the exception of the post-doctoral program conducted by the National Training Laboratory in Applied Behavioral Sciences, the change agent's major source of training is other change agents. The development of other programs to train change agents and the recognition of these personnel by the consuming public is handicapped by the absence of any general ethic or accepted standards. Training programs have attempted to avoid this confusing state of affairs by simply stating that they will not certify or recognize individuals. Staff members of the Esalen Institute have informally stated several times that, "they will not go down the credentializing route."¹²⁰

Then where does this leave the student, educator, or psychologist (or for that matter, the public) who has discovered the real benefits of the laboratory method and who seeks to use it in a competent rather than prefunctory manner? Quite often he has been left to his own devices of attending a lab, some of dubious merit, and then because of other credentials (masters or doctorate degree in education, psychology or sociology) he is "recognized" by his agency or institution as a trainer. (And, he may be that in the best sense of the word or, he may be practicing alchemy in the name of chemistry.) In a paper

presented by Jacke C. Harris\textsuperscript{121} a trend which he sees developing "is that perhaps in order to get on the sensitivity training bandwagon, a number of colleges and universities are referring to members of their psychology departments as trainers, whether they have participated in training laboratories or not. They seem to have developed the attitude that Carl Rogers has heartily embraced the T-group and, therefore, every other person who calls himself a Rogerian must now be, ipso facto, a trainer."

What have others done with this confusion? We find that several colleges and universities are reacting by running their own training programs, each independently mounted with varying goals, and in no way related to any kind of network or association that might suggest minimum standards.

Bennis\textsuperscript{122} agrees that much more needs to be said about the training of the competent organization development practitioners or change agents. He claims that usually the first group is the most gifted and erratic. He is concerned with the fact that the training of future change agents might be based on the experiments of the first group and that their blunders and mistakes might be perpetuated if solid training programs are not developed. In this same context,

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Havelock argues for the need to develop a new curriculum in our schools of education. Specifically, to design and develop training programs for change agents. Havelock sees at least four elements that would go into such a curriculum: "(a) an understanding of the knowledge dissemination and utilization process as a whole including some awareness of various models of planned change, empirical stress which have been done, and research methods for studying it; (b) an understanding of how to work with client systems including strategies for collaboration, help in self-evaluation of effort; (c) an understanding of the resource system including the depreciation of research values, concerns and methods, and a review of knowledge storage and retrieval methods of tools; and (d) an appreciation of the need of role complimentarity and coordination in the fulfillment of dissemination objectives."\(^{123}\)

Regarding professional in-service training for change agents Lippitt says:

In-service training institutes and workshops for professional change agents are another very important part of the total curriculum for effective social change. Most universities are now providing a fairly wide variety of 'refresher' courses in their institutes, conferences, clinics, and summer workshops. Obviously, this kind of training is needed. The acceleration of basic research into individual and social dynamics produces an ever-changing array of theories and methods which the professional worker is hard pressed to keep up with.\(^{124}\)

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\(^{124}\) Lippitt, op. cit., p. 297.
Although the authors have been very explicit in defining and refining between the terms change agent, facilitator, inhibitor, change catalyst, pace-maker, gate-keeper, and linker, they all basically, at least to the practitioner, mean about the same. While the Third Party role is still very necessary, "ultimately a growing number of managers (principals) could function as consultants or Third Parties to one another.  

Perhaps the main observation is that in its present state and form, the literature contains little that is readily and dependably usable by the practicing school administrator in the task of administrating for change. Most of the approaches recommended in literature necessitate the performance of new skills and so demand extensive training. However, few formal training programs for the skills exist. But, if training remains on an ad hoc basis, potential for improvement might remain just that, namely potential. As Oliver puts it, "it may be premature to construct a curriculum for these skills because few of these skills have been operationally defined, but it is not premature to consider the nature and source of the training."  

Summary

This section dealt with a review of the literature on the training practices aimed at the change agent. There seems to be little being

\[125\] Oliver, op. cit., Chapter 3, p. 13

\[126\] Ibid., Chapter 4, p. 12.
done in relation to helping equip the school administrator with the proper skills in order that he may better cope with change. There appears to be still less being done to actually train the school administrator to be an effective change agent. It is possible that although there is little evidence of a formal curriculum or program geared at the development and training for change agents, there might, however, be many attempts made to provide such assistance to the school administrator in one form or another. This might explain the lack of research found in this area. The need for this kind of training has, nevertheless, been an important area of concern with many educators.

In the next section we will attempt to look at the process of evaluating different training approaches. We will deal with the problems involved in assessment and experimentation and the possible designs which could be used in studies dealing with training approaches.
An Assessment of the Training Approaches

In relation to assessment of the various training approaches, Belasco and Trice contend that, "even those rare evaluation efforts, like the efforts of the old time rainmaker, often are undertaken with tools inadequate for the task." 127

If we were to look at Schein's formula for the evaluation of training it would seem as though it was one of the simpler tasks to perform. He says:

Evaluate the outcomes of training with a scientifically designed evaluation scheme. For example, the evaluation design should involve observation of the trainees back on the job at some period of time after training and should, if possible, involve a control group to determine whether changes observed are, in fact, attributable to the training effort. 128

However, it would appear that evaluation of training is not quite as simple but is, in fact, beset with difficulties or as Belasco and Trice put it, "evaluation is like Pandora's box -- utterly fascinating from the outside, but frightening because of what it might contain." 129

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128 Schein, op. cit., p. 34.
129 Belasco and Trice, op. cit., p. 8.
The first obstacle to the process of evaluation stems from the fact that inherent in the role of the evaluator is the concept of a corrective agent who will supposedly help the administrator improve his work. This could cause strain between the evaluator and the administrator because the administrator might be threatened by the evaluator. Certain administrators will resist evaluation on the basis that there could be no proper measure to evaluate their work. There is also the recent objection to evaluation on the basis that the various testing and screening devices are, in fact, invasions of privacy.\textsuperscript{130}

There are two major obstacles, to assessment, which have their origin in the person conducting the assessment. The first could appear as a result of the strong feelings the assessor might have concerning his hypothesis. He may become so enthralled by his own beliefs that he "refuses to accept evidence contrary to his personal interests."\textsuperscript{131} The second obstacle comes from the case of a researcher who, while searching for one thing, comes across another discovery and could become trapped in the serendipity effect.\textsuperscript{132} As Sidman has said:

\textsuperscript{130} Ibid., pp. 10-11.


When a hypothesis-bound investigator, after carefully designing his apparatus and experimental procedure to answer a specific question, finds that his equipment has broken down in the midst of the investigation, he is likely to consider the experiment a failure.

On the other hand, the simpleminded curiosity tester is likely to look closely at the data produced by the apparatus breakdown. Since he has little personal investment in his own guesswork, he may find the accidental experiment more interesting than the one he started to do -- and without tears he is off on a new track.\textsuperscript{133}

The inherent difficulties in studying change, using either the subjective, which attempts to find out how the trainee feels about the training through the use of questions, or the objective, which attempts to identify the amount of change through the use of testing devices, fall into four general areas. The problems are of criterion, control, contamination and detective work.\textsuperscript{134}

\textbf{The Problem of Criterion}

One of the most difficult problems in determining the validity of any assessment of measurement lies in the selection of an adequate criterion. A statement of objectives in measureable terms and an instrument to measure whether objectives have been accomplished, constitute the two essential elements necessary to produce a good criterion. However, there appear to be several difficulties encountered in developing a good criterion.


\textsuperscript{134}Belasco and Trice, \textit{op. cit.}, p. 16.
Difficulty No. 1: It is often very difficult to ascertain exactly the expected results of the program. This is especially true in a pilot study such as the one planned by this writer. Referring to a pilot study Henderson says:

The pilot study will reveal unexpected problems and help to correct faults before the main experiment begins. Thanks to the pilot study you should be able to improve the apparatus will be cut at this stage. It will be seen that the pilot study can have an important part in the success of the experiment as a whole. 135

Difficulty No. 2: Since it is difficult to measure organizational effectiveness, the objectives are usually defined in relation to the individual. However, the one conducting the study must clearly specify whether the objective of training is individual or organizational change, when he is developing criterion.

Difficulty No. 3: The confusion concerning the length of time in which training objectives may be accomplished. Kirkpatrick claims that cognitive change could be measured immediately after, while behavioral change could be an ultimate objective. 136

The question has been raised as to whether a training course can affect the individual and cause any change at all. Belasco and Trice


answer by maintaining that even if the training doesn't cause a substantial change in the individual, it could and probably does help crystalize some of his own ideas.  

The Problem of Control and Contamination

In order to prevent the measurement of some aspect that has bearing on the participant but little or no relation to the change experience, a control group appears to be a necessity in evaluation. Sax says "unless an experiment can provide for a comparison of treatment effects, it can serve no essential purpose." The control group may be contaminated, in comparability, through three major sources.

Source #1: The contamination may arise from obtaining a measure of the criterion prior to the onset of the change experience and this may sensitize the participants. Solomon claims that a pre-test may, in fact, alter the manner in which the participants react to the training. Studies by Cantor tend to dispute Solomon's stand,

137 Belasco and Trice, op. cit., p. 21.
while Lana\textsuperscript{141} attests that, although there may be evidence of contamination, it is not severe.

\textbf{Source \#2:} The effect of the passage of time and occurrence of uncontrolled events is also a source of contamination. With testing done long after the experience there is a possibility that the participants' reactions may have changed due to other experiences they have undergone during that time.

\textbf{Source \#3:} The collectors of data and the manner in which the data is collected, constitute the third source of contamination.

Campbell and Stanley\textsuperscript{142} when discussing the factors which can contaminate and consequently jeopardize the validity of a study list eight factors which related to internal validity and four which related to external validity. The internal validity may be defined as the basic minimum without which any experiment would be uninterpretable while external validity could be understood as one asking the question relating to the generalizability or general applicability of the study. Below is a summary of the twelve factors as discussed by Campbell and Stanley:

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1) **History**: The specific events occurring between the first and second measurement; 2) **maturation**: the process of time in relation to the participants; 3) **testing**: the effects of taking a test upon the scores of a second testing; 4) **instrumentation**: the actual difference in the instrument especially if it refers to human beings who are part of the measuring apparatus; 5) **statistical regression**: occurring especially when groups have been selected on the basis of their extreme scores; 6) **differential selection of respondents**: biases resulting in this kind of selection; 7) **experimental mortality**: throughout the process individuals might have dropped out and caused differences between the groups; 8) **selection-maturation interaction**: this in certain designs, might be mistaken for the effect of the experimental variable; 9) the **reactive or interaction effect of testing** in which a pretest might increase or decrease the respondent's sensitivity; 10) the **interaction effects of selection biases and the experimental variable**; 11) **reactive effects of experimental arrangements**; 12) **multiple treatment interference** which is likely to occur when several treatments are applied to one individual, because the effects of prior treatments are not usually erasable.

Campbell and Stanley also classify experimental designs, some sixteen different approaches, under three general headings: 1) **Pre-Experimental Designs**; 2) **True Experimental Designs**; and 3) **Quasi-Experimental Designs**. The authors profess to endorsing the three designs included under the second heading referred to as "true."
Figure 1 shows their application of the twelve sources of invalidity to the three designs.

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Note: In the tables, a minus indicates a definite weakness, a plus indicates that the factor is controlled, a question mark indicates a possible source of concern, and a blank indicates that the factor is not relevant.

It is with extreme reluctance that these summary tables are presented because they are apt to be "too helpful," and to be depended upon in place of the more complex and qualified presentation in the text. No + or - indicator should be respected unless the reader comprehends why it is placed there. In particular, it is against the spirit of this presentation to create uncomprehended fears of, or confidence in, specific designs.

The Solomon Four-Group Design is frequently preferred by methodologists since this design involves adding to the traditional

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143 Ibid., p. 8.

two-group experiment two groups that are not pretested. So that a total of four independent groups participate differently in three experiences consisting of the training experience, the pretest, and the post-test. Good\textsuperscript{145} claims that this design is the first design to consider the external validity factors.

Belasco and Trice proposed a more practical design in the following:

> In reviewing the problem there is at least one alternative to the present. With large numbers of 200 or more, through random division into 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 pre-test.\textsuperscript{146}

Sax agrees that randomization might possibly produce better results than would be achieved through the pretest and post-test comparison, when he discusses the comparability of the control group to the experimental group.\textsuperscript{147}


\textsuperscript{146} Belasco and Trice, op. cit., pp. 154-155.

\textsuperscript{147} Sax, op. cit., p. 35.
The Problem of Detective Work

The problem of detective work relates to getting the participants to complete the instruments, collecting those instruments, locating a valid control group and maintaining the original design of the study.

Evaluation information may be handled subjectively, through interviews, or objectively, through questionnaires. The subjective approach depends on the interviewer at the time of the interview and changes in tone, pitch, attitudes, and use of words can detract from the empirical nature of the study. Although the interview process is an asset when used in counseling, personnel placement, or clinical psychotherapy, Barr claims that in a study where quantitative data is required, "the interview so planned is essentially an oral questionnaire."148

With the use of questionnaires one must decide on the use of open or closed questions.

Open questions ask the respondent to answer in an unrestricted way, in his own words, but within broad parameters. The greatest advantage in using this type of questioning is that the participant is able to expound and consequently more information may be collected. Among the disadvantages lies the burden of trying to classify or

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categorize these responses. Another may be that the participant may not be motivated enough to want to respond in prose, or he may not wish to respond fully because of fear of criticism.

Closed questions force the participant to choose from several alternatives provided him. The obvious advantage in using the closed question is the elimination of diversity in responses and so facilitate the collection and categorization of data process. Closed questions must, however, be much more carefully worded than the open questions. If the question is not well prepared and causes confusion, the participant may respond with lack of interest or may feel forced to choose one of the alternatives where none suit him. He may, of course, pick any answer simply to complete the exercise.149

In discussing the use of questionnaires in research Cook discusses the questions when he says, "Unless we know something about the art of asking questions, we cannot produce fruitful research."150

Resume

In this section we dealt with assessment techniques as they could be applied to training approaches and educational experiments in

149 Belasco and Trice, op. cit., p. 159.

general. We also discussed several of the problems which could affect the validity and reliability of an assessment or study.

The review of literature has shown that controlled experimentation has been definitely lacking in education. Good claims that obstacles to controlled experimentation in the field of education are: 1) the limited training for experimentation offered in the field of education, 2) the small amount of experimentation done by professors of education, and 3) the neutral and even negative attitude, on the part of many administrators, toward experimentation.


CHAPTER III
A DESCRIPTION OF THE BACKGROUND, DEVELOPMENT, COMPOSITION, AND FIELD TESTING OF THE AUDIO MODULAR INSTRUCTIONAL UNITS

The previous chapter dealt with an examination of the types of in-service programs available to school administrators and a study of the re-training programs available in the field of business. Research findings from various in-service training approaches and assessments of training in general were also presented in the last chapter. This chapter presents the process of development of the two audio instructional units as well as the description of these two units.

The Initial Development of Audio Modular Instructional Units

The Department of Education at Florida initiated the development of instructional modules for the Florida teachers in 1969. These instructional packages were originally designed by teachers in Florida State through funds provided by the "Education Professions Development Act (Title V of the Higher Education Act of 1965)". The major objective of this program was to develop individualized teacher training materials. These materials were designed to be utilized in either pre-service or in-service teacher education. They were prepared in the form of self-contained modules aimed at the development of specific teaching skills. Each module was to include all of the necessary information and explanations needed to accomplish a set of observable objectives. As a result of the positive feedback concerning the effectiveness of the
instructional packages received from the teachers, some department officials decided to explore the possibility of using that format as an approach to in-service training of school administrators.

Consideration was given to the developmental process used in the teacher training program. The most salient feature of that process seemed to be in the area of teacher involvement. In attempting to develop similar instructional units for administrators it appeared evident that school districts would be reluctant to release administrative personnel for the time required to produce the modules. At this point, the Center for Leadership and Administration at the School of Education, University of Massachusetts, expressed interest in the instructional packages.

Personnel in the Center for Leadership and Administration at the University of Massachusetts compared the Florida State format to that utilized by IBM in their units and decided to adopt the IBM model. The IBM units were based on a modified form of the programmed instructional technique. They used two components: 1) an audio tape, which carried the heaviest load for the instruction, and 2) a Guidebook including pages in a notebook binder designed to complement the audio instruction.

The decision to develop an in-service program using the IBM Instructional Unit approach rather than the Florida State model was determined by several factors. These factors included: 1) the assumption that school administrators would be more receptive to a program where the learning materials had been synthesized for them; 2) the realization that such an approach should not require a great amount of reading; 3) the
need for an approach with greater flexibility for use; 4) financial considerations; and 5) the potential offered by the IBM approach for creating a behavioral change.

**Description of the Audio Instructional Modules**

The modules, which the Center for Leadership and Administration decided to develop, were designed to function as one component of a comprehensive in-service program. They were designed to stimulate new or previously held thoughts regarding a specific concept, and initiate the participant to explore other aspects of the concept. Audio instructional modules were viewed as individualized units allowing the participant to select the skill he/she wished to improve, and progress at his/her optimum learning pace. They were designed as self-evaluative, providing the participant an opportunity to determine his/her progress as a result of the experience.

Four 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 modules were:

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 components of each module were enclosed in three ring binders. Different colored binders were used for each of the four instructional
units prepared. The basic components included in the binder were:

1) a cassette tape in a plastic envelope
2) the printed text
3) the exercises

Each text included a title page, a table of contents, an introduction, a description of the module, the prerequisites, time required to participate in the module, instructions to the participants and suggested activities.

The cassette tape, included in each audio instructional module, provided the audio portion of the instruction which is the essence of each module; all other components were designed to complement the audio presentation. Directions were provided on the audio tape to assist the participant's progress through the complementary printed information.

**The Initial Field Testing of the Audio Modules**

The initial field testing of the four audio modular instructional units was conducted in various States and under different conditions. Field tests were conducted in Florida, utilizing a workshop setting at Florida A & M University of Tallahassee. In Massachusetts initial testing was conducted at Rockland, Stoneham, and Turner Falls. The field tests conducted in Massachusetts were arranged by contacting local superintendents of schools or by contacting potential participants individually. The final initial field testing was conducted in Washington D.C.. The individuals participating in this field testing were school administrators, representing the Washington D.C. School District, who were attending a
summer institute sponsored by the school district.

**Revision of the Audio Instructional Modules**

**Staff Development: Helper-Helpee Relationships Part I and Part II**

The two audio instructional modules were revised so as to be more appealing to school administrators and more useful as instructional methods. Instead of treating the two presentations as separate entities, they were included within one binder as truly representing two parts of one modular presentation. An additional component was included in the suggested activities section consisting of exercises which the participants could utilize with his/her instructional staff.

As a result of an initial exploratory session held at the University of Massachusetts with a group of doctoral candidates, this investigator decided to completely re-organize the composition of Parts I and II of the Helper-Helpee Relationship Module. The main orientation of Part I was altered from serving as purely an introductory packet to one dealing with the skill of setting the climate for a helping relationship. Part I was arranged to deal with the initial response factor in a conference setting. Part II was also re-organized and re-written so as to help the participant improve his/her skills of listening effectively and to maintain a helping relationship.

The audio instructions for both Part I and Part II were completely re-written and subsequently recorded so as to better suit the new objectives for the two units.

The major objectives of this study was: 1) to determine the
suitability of using the audio modular instructional approach for providing practicing school administrators with selected interpersonal skills and knowledge relating to the area of staff development; and 2) to determine the relative degree of effectiveness of using the audio modular instructional approach for training school administrators to conduct selected staff development training exercises with members of their instructional staff. In relation to the second objective, training exercises were arranged so as to re-enforce the skills, which, it was hoped, administrators either learned or improved by participated in the two parts of the audio instructional module.

The physical appearance of the audio instructional module was designed so that the components of the module were enclosed in a maroon colored, plastic three ring binder with a plastic pocket on the inside of the front and rear portions of the binder. A Guidebook for the second participant was placed inside the front pocket while the guidebook for the third participant was placed inside the rear pocket. Both extra copies were clearly identified as such. A plastic envelope, containing the cassette tape, was located in the rear of the binder with specific instructions informing the participant not to turn the recorder on until the written instructions stated so. The audio instructions for Part I were located on side one of the cassette tape and the instructions for Part II were recorded on side two.

In order to clearly separate Part I of the audio instructional module from Part II the various sections in Part I were identified by blue dividers with blue tabs and the sections in Part II were identified
by red dividers and tabs.

The contents of Part I and Part II of the audio instructional module dealing with the Helper-Helpee Relationship are summarized as follows:

1. A title page, which included the names of the individuals who developed the module
2. A table of contents
3. An introduction which included the following:
   a) The Purpose of the Part
   b) The Description of the Part
   c) The Performance Objectives of the Part
   d) The Prerequisite
   e) The Time Required
   f) The Materials and Resources Required
4. Instructions to the Participants
5. Charts and Exercises

The five categories above were included separately for Part I and Part II since the information was different for each part. The introductory pages for each of the two parts are included in Appendix A of this report. By comparing these introductions, one can discover the similarities and differences between the approaches used in the two modular parts.

Field Testing of the Revised Audio Instructional Module: Helper-Helpee Relationship Part I and Part II

Phase One

As discussed earlier, informal testing was conducted early in the
summer of 1972 which resulted in further changes made to the two units.

First, the achievement test, based on the performance objectives for the two units, was constructed, validated and tested for reliability. Twenty-four doctoral candidates from the University of Massachusetts were used for this validation process.

The two units of the audio modular instructional packet were field tested using twenty practicing school administrators from the Commonwealth of Massachusetts. The twenty administrators represented such areas as Rockland, Quabbin, Amherst, Burlington, Turner Falls and Springfield. The administrators represented elementary schools, junior high schools, senior high schools, middle schools and central office administrations.

The administrators were contacted by the investigator and given the description of the module and explained what would be expected of them regarding participation in the study. They were given the choice of participating in the two units, either at their school district or at the University of Massachusetts. More than half of the administrators chose to participate at their place of work. Regardless of where they elected to participate, this investigator did not provide any additional instructions over and above those included in the instructional module.

Phase Two

The participants were asked to select no less than three of their subordinates whom they wanted to engage in the training exercises. Each of the administrators, after participating in the two units of the instructional module, was then given a copy of the guidebook and the two training exercises. They were asked to facilitate the exercises,
involving their subordinates, at a time they judged to be most convenient for all concerned. The recommendation was made, however, that they effect those exercises within a period of no longer than ten working days after their participation in the instructional module.

The administrators had a copy of the guidebook and the exercises but didn't have the cassette tape. They were asked to refer to the guidebook while facilitating the exercises if they judged it appropriate. Most of the administrators said that they used the guidebook as a reference only.

Most of the administrators involved selected members of their staff in the training exercises within one week. About fifteen percent of them required the full ten day period to find time to facilitate the exercises and to have the evaluation packets completed.
CHAPTER IV

METHODOLOGY OF THE STUDY

Chapter III described the background, development, composition and field testing of the two audio modular instructional units. This Chapter intends to 1) describe the process utilized in obtaining validity and reliability for the achievement portion of the testing instruments; 2) describe the study populations involved in Phase I and Phase II of the study; and 3) demonstrate and describe the assessment procedures utilized in (a) determining the suitability of using the audio modular approach, represented by the two units developed for the study, for providing school administrators with selected interpersonal skills and knowledge in staff development, and (b) determining the usefulness of the audio modular instructional units for the training of school administrators to function as facilitators in the training of staff members.

Validation of the Achievement Test

The achievement test utilized in this study was so designed as to serve a dual purpose. It was so arranged that the ten first questions were of a more general orientation dealing with the helping relationship and the last four questions applied more specifically to information included in the two audio modular units. The purpose for arranging the
test in this fashion was to permit this investigator to apply the test in its entirety during Phase I of the study and to apply the ten first questions of that test as the achievement test for Phase II. Both tests are presented in APPENDIX B as a part of the evaluation packets.

The subsequent sections will show how the 14 Question (Phase I) Test was subjected to a validation process in an attempt to determine whether it possessed the factors of reliability and validity. Also, it is shown how the 10 Question (Phase II) Test, using the same group and procedure, was subjected to a process to determine its degree of reliability as a test.

**Study Population Participating in the Validation Process**

Twenty-four graduate students at the University of Massachusetts participated in the validation process. These study members were divided into two equal groups; an experimental group and a control group. All the study members were given the Phase I Achievement Test designed for the two units. The experimental group was then organized on the basis of whether or not the members could meet in groups of three, one week later, to participate in the two units. A retest was given approximately one week later to all the study members. The twelve members comprising the control group took the retest (Test 2) one week after taking Test 1. The experimental group was organized in groups of three and took Test 2 prior to participating in the two units. The Pearson Product-Moment Correlation Formula was used to show the degree of relationship of the
two sets of scores representing Test 1 and Test 2.

The correlation coefficient was found to be .90897 which would indicate that the achievement test did possess the factor of reliability. The data used in the formula is presented in Table 1.

Using the same responses provided in Test 1 and Test 2 by the twenty-four students, the Pearson Product-Moment Correlation Formula was again used to determine the degree of relationship between the two sets of scores representing questions one to ten only. The correlation coefficient, in this application, was found to be .82281, again indicating that the ten first questions of the achievement test possessed the factor of reliability. The data used in this formula is presented in Table 2.

The Participation of the Experimental Group in the two units

After taking the retest (Test 2), the twelve members of the experimental group participated in the two audio instructional units. They were requested to organize four groups of three to experience the two units. They were then given Test 3 (Posttest). Test 3 was identical to Test 1 (Pretest) and Test 2 (Retest). The Pearson Product-Moment Correlation Formula was used to determine the relationship between Test 2 and Test 3 of the experimental group. The correlation coefficient, found to be .79504. The data used in the formula is presented in Table 3.

The t Test Applied to Test 2 and Test 3 of the Experimental Group

In attempting to determine whether the Achievement instrument
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TABLE 2

SCORES OF QUESTIONS 1 - 10 OF TEST 1 AND TEST 2 (RETEST) COMPUTED FOR THE PEARSON PRODUCT-MOMENT CORRELATION

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TABLE 3

SCORES OF TEST 2 AND TEST 3 OF EXPERIMENTAL GROUP COMPUTED FOR THE PEARSON PRODUCT-MOMENT CORRELATION

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TOTALS  90  144  732  1762  1115
possessed validity, the scores obtained by the experimental group for Test 2 and Test 3 were applied to the Student t Test. The t value is used to determine whether there exists a difference between the two sets of scores being compared. The larger the t value, the more probability that the difference between the two sets of scores is significant. The t formula used in this case is presented in Figure 2.

\[
\frac{\bar{X}_1 - \bar{X}_2}{\sqrt{(n_1-1)S_1^2 + (n_2-1)S_2^2}} \sqrt{\frac{n_1 n_2 (n_1 + n_2 - 2)}{n_1 + n_2}}
\]

Figure 2.--The formula used to arrive at the t value with regards to the scores, for Test 2 and Test 3, obtained by the experimental group.

The t was found to be 5.41 and was deemed statistically significant when compared with the table of t values. The degrees of freedom used was N-1 or 11. The distribution of the t Table was entered with 11 degrees of freedom and a probability level of 0.05. The point of intersection yielded a t value of 2.201. Assuming all other things being equal 5.41 t value is significant enough to point toward the validity of the test.

Summary of the Validation Process

The correlation coefficient of Test 1 and Test 2 (Phase I) was found to be .90897 which strongly supports the reliability aspect of the test. The correlation coefficient of Test 1 and Test 2 (Phase II) was found to
be .82281 which again would indicate that the ten first items of the test, as a test, possesses the factor of reliability.

The value of $t$ was found to be 5.41 and at the point of intersection of distribution of the $t$ Table it yielded a value of 2.201. This evidence would support that the test (Phase 1) may be considered valid.

The statistical data obtained substantiated that the achievement test possessed the characteristics of validity and reliability.

Study Population Involved

in Phase I and Phase II

The study population for the present study consisted of two groups; the group of administrators and the group of teachers. The group of administrators, identified as such, consisted of twenty practicing school administrators from the Commonwealth of Massachusetts. These administrators participated in Phase I of the study by going through the two audio instructional units. They then facilitated staff development training exercises involving members from their instructional staff. This part of the study is referred to as Phase II where the group of teachers numbered eighty four.

In total there were actually twenty-two administrators and closer to ninety participants involved in Phase I and Phase II of the study. Two of the administrators could not be included in the data since they facilitated the exercises with persons other than members of their instructional staff. Some six or seven teachers had to be deleted from the study since they were unable to fully participate in the exercises
and consequently, their data was incomplete.

As described earlier in this chapter the validation process of the achievement portion of the instruments involved twelve graduate students as a control group and twelve other graduate students as an experimental group.

In the following sections is presented a description of the composition of the group of administrators and the group of teachers in relation to the following criteria: 1) sex, 2) age, 3) years of teaching experience, 4) highest academic degree held, 5) type of school, and 6) school enrollment. The composition of the group of administrators will also be presented in relation to a) present position, b) years in present position, and c) years in educational administration.

The Comparison of the Composition of the Group of Administrators and the Group of Teachers 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 4. As is illustrated, eighteen males and two females participated in the two modular units, indicating that 90.0 percent of the administrators involved in both phases of the study were males. This compares with 41.7 percent of the group of teachers participating in Phase II of the study who were males.

The data in the table also illustrates that within the group of administrators none were under the age of 31. Within the group of teachers we find 15 in the age category of 20-25, and 26 in the age
TABLE 4

A COMPARISON OF THE COMPOSITION OF THE GROUP OF ADMINISTRATORS AND THE GROUP OF TEACHERS IN RELATION TO SEX AND AGE

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<th>Teachers Phase II (N = 84)</th>
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<td>%</td>
</tr>
<tr>
<td>SEX:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>90.0</td>
</tr>
<tr>
<td>Female</td>
<td>2</td>
<td>10.0</td>
</tr>
<tr>
<td>AGE:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-25</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>26-30</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>31-35</td>
<td>5</td>
<td>25.0</td>
</tr>
<tr>
<td>36-40</td>
<td>5</td>
<td>25.0</td>
</tr>
<tr>
<td>41-45</td>
<td>4</td>
<td>20.0</td>
</tr>
<tr>
<td>46-50</td>
<td>5</td>
<td>25.0</td>
</tr>
<tr>
<td>51-over</td>
<td>1</td>
<td>5.0</td>
</tr>
</tbody>
</table>

category of 26-30. So that where we find no administrators, 48.7% of the teachers are identified as under age 31. The data indicate that, in the category of 31-35, there are 25% of the administrators and 18.9% of the teachers; 25% of the administrators are between the ages of 36 and 40 as compared to 7.2% of the teachers. Between the ages of 41 and 50 we find 45% of the administrators as compared to 18% of the teachers. One of the administrators belonged to the group of 51 and over while there were 6 teachers in that same category.
These findings indicate that while almost the entire group of administrators were male, in the group of teachers the females outnumbered the males. Also, while 100% of the administrators were 31 years of age or older, almost half of the group of teachers were younger than 31.

The Composition of the Group of Administrators in Relation to Present Position; Years in Present Position; and Years in Educational Administration

The data presented in Table 5 shows the composition of the group of administrators in relation to their present position; years in their present position; and years in Educational Administration.

As illustrated by the data 55% of the administrators were high school assistant principals and that 65% had either 5 or less years of experience in their particular position. Three of the administrators had one year experience in Educational Administration, while 70% of the group had between 2 and 10 years experience.

These findings indicate that although the sample (20) was small in number, there was a good distribution in reference to the position assumed by the administrators, years in that position, and years of experience in Educational Administration.
TABLE 5

THE COMPOSITION OF THE GROUP OF ADMINISTRATORS IN RELATION TO PRESENT POSITION; YEARS IN PRESENT POSITION; AND YEARS IN EDUCATIONAL ADMINISTRATION

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Present Position:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sec. Ass't. Princ.</td>
<td>11</td>
<td>55.0</td>
</tr>
<tr>
<td>Elementary Princ.</td>
<td>5</td>
<td>25.0</td>
</tr>
<tr>
<td>High School Princ.</td>
<td>3</td>
<td>15.0</td>
</tr>
<tr>
<td>Central Office</td>
<td>1</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Years in Present Position:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>6</td>
<td>30.0</td>
</tr>
<tr>
<td>2-5</td>
<td>7</td>
<td>35.0</td>
</tr>
<tr>
<td>6-10</td>
<td>6</td>
<td>30.0</td>
</tr>
<tr>
<td>11-over</td>
<td>1</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Years in Ed. Administration:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>3</td>
<td>15.0</td>
</tr>
<tr>
<td>2-5</td>
<td>6</td>
<td>30.0</td>
</tr>
<tr>
<td>6-10</td>
<td>8</td>
<td>40.0</td>
</tr>
<tr>
<td>11-over</td>
<td>3</td>
<td>15.0</td>
</tr>
</tbody>
</table>

The Comparison of the Composition of the Group of Administrators and the Group of Teachers in Relation to Years of Teaching Experience

In Table 6 the composition and comparison of the two groups regarding years of experience as classroom teacher are presented.
TABLE 6

A COMPARISON OF THE COMPOSITION OF THE GROUP OF ADMINISTRATORS AND THE GROUP OF TEACHERS IN RELATION TO YEARS OF EXPERIENCE AS CLASSROOM TEACHER

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Administrators Phases I &amp; II (N = 20)</th>
<th>Teachers Phase II (N = 84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Years of Teaching Experience:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>--</td>
<td>12</td>
</tr>
<tr>
<td>2-5</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>6-10</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>11-15</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>16-over</td>
<td>--</td>
<td>3</td>
</tr>
</tbody>
</table>

The data in the table show that while there were twelve teachers with one year experience and three teachers with sixteen or more years of teaching experience none of the administrators fell into either of these categories. The category of between 2 and 5 years of teaching experience represents 15% of the administrators as compared to 33.6% of the teachers. Sixty percent of the administrators had between six and ten years of teaching experience while only 27.3% of the teachers fell into that same category. The greatest similarity existed in the category of between 11 and 15 years experience where we find 25% of the administrators and 21.3% of the teachers.

These findings show that, in relation to teaching experience, both groups were apparently well distributed.
A Comparison of the Composition of the Group of Administrators and the Group of Teachers in Relation to the Highest Academic Degree Held

In Table 7 are presented the data illustrating the composition of the two groups in relation to the highest academic degree held by the individuals.

**TABLE 7**

A COMPARISON OF THE COMPOSITION OF THE GROUP OF ADMINISTRATORS AND THE GROUP OF TEACHERS IN RELATION TO THE HIGHEST ACADEMIC DEGREE HELD

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Administrators Phases I &amp; II (N = 20)</th>
<th>Teachers Phase II (N = 84)</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>--</td>
<td>--</td>
</tr>
<tr>
<td>Bachelors +</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Masters</td>
<td>2</td>
<td>10.0</td>
</tr>
<tr>
<td>Masters +</td>
<td>14</td>
<td>70.0</td>
</tr>
<tr>
<td>Specialist</td>
<td>2</td>
<td>10.0</td>
</tr>
<tr>
<td>Doctorate</td>
<td>2</td>
<td>10.0</td>
</tr>
</tbody>
</table>

The data show that while 64.3% of the teachers hold either a Bachelors Degree or a Bachelors plus some additional credits or training, all of the administrators possessed degrees above a Bachelors. Seventy percent of the administrators had obtained credits beyond a Masters
degree as compared to 17.8% of the teachers who fell into that same category. Two of the administrators had obtained their Doctorates whereas none of the teachers are recorded in that category.

The findings indicate that the administrators, as a group, held higher academic degrees than did the group of teachers.

A Comparison of the Composition of the Group of Administrators and the Group of Teachers in Relation to the Type of School in which they are Employed and the School Enrollment

In Table 8 are presented the data which illustrate the composition of the two groups as related to the type of school where they work and the enrollment of that school.

The data show that in the category of elementary school we find 25% of the administrators and 20.3% of the teachers. Ten percent of the administrators and 21.4% of the teachers are illustrated as working in a Junior High School. Approximately the same percentage of the administrators and teachers work in a Senior High School setting. Forty-five percent of the administrators and 36.9% of the teachers indicated that they work in a combined Junior and Senior High School.

In relation to the characteristic of School Enrollment in both groups 70% or more work in a school with between 801 and 2000 students.
TABLE 8

A COMPARISON OF THE COMPOSITION OF THE GROUP OF ADMINISTRATORS AND THE
GROUP OF TEACHERS IN RELATION TO THE TYPE OF SCHOOL IN WHICH THEY ARE
EMPLOYED AND THE SCHOOL ENROLLMENT

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Administrators Phases I &amp; II (N = 20)</th>
<th>Teachers Phase II (N = 84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of School:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>Junior High</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Senior High</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Jr. &amp; Sr. High</td>
<td>9</td>
<td>31</td>
</tr>
<tr>
<td>School Enrollment:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-200</td>
<td>--</td>
<td>7</td>
</tr>
<tr>
<td>201-500</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>501-800</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>801-1000</td>
<td>8</td>
<td>34</td>
</tr>
<tr>
<td>1001-2000</td>
<td>6</td>
<td>28</td>
</tr>
</tbody>
</table>

Summary

In the preceding sections, was presented a description of the
composition of the two groups (administrators and teachers). The data
indicate that the two groups were similar in the following characteristics:
1) years of teaching experience, 2) Type of School and, 3) School
Enrollment. Regarding the distributions relating to sex, age and highest
academic degree the data show that the group of teachers had a much larger sample of female participants, that it was a younger group in composition and, that the teachers had fewer academic degrees.

The mean for the age factor for the group of administrators was computed to be 41.250 while for the group of teachers it was 34.143. The mean for the highest degree held characteristic for the group of administrators was computed to be 4.2 (slightly above the Masters level) while for the group of teachers it was 2.262 (slightly above Bachelors +).

Methods of Gathering and Processing the Data:

PHASE I

In Phase I of the study a number of assessment procedures were applied focusing on the determination of the suitability of utilizing the audio modular instructional units for providing the school administrators with selected interpersonal skills and knowledge in staff development. This pertained, more specifically to the helper/helpee relationship between the administrator and his/her instructional staff. The assessment procedures used in this phase were based on the criteria established in the definition of "suitability". These criteria, and the assessment procedures used for each criterion, may be summarized as, the assessment procedures used to determine: 1) the participants' interest in the experience, and their motivation as a result of the experience; 2) the worth of the experience as compared to alternative experiences, as perceived by the participants; 3) the connotative meaning
of the experience, as compared to the connotative meaning of a concept which signifies any other type of experience by which the participant could achieve the same learning objective; 4) the cognitive changes that took place in the participants as a result of the experience; 5) the potential for further development of learning experiences utilizing the same instructional approach; and 6) the expenditure of time and money used in the development and production of the learning experience.

In addition to these assessment procedures others were used to obtain information about the audio modular instructional units. These included 1) "open-ended" questions, on a written questionnaire, to determine the major strengths and weaknesses of the two audio modular instructional units; and 2) personal interviews conducted by the investigator to determine the participants' perceptions of the experience.

Procedures Used to Determine Participants' Interest in Experience and Motivation Resulting from Experience

Each participant, after completing the modular units, was asked to respond to a number of "closed" questions on a written questionnaire. These questions focused on the participant's attitude toward the audio modular instructional units. The rationale for using these questions and the content of these questions are presented in the following subsections.
Questions Pertaining to the Interest and Value of the Two Units as Perceived by the Participants

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 the participant's learning. These questions are presented in Figure 3.

1. I found participating in the audio instructional module, "Staff Development: Helper/Helpee Relationship (Part I & II)"
   ___ a) very interesting
   ___ b) somewhat interesting
   ___ c) Somewhat boring
   ___ d) very boring

2. I found participating in the audio instructional module, "Staff Development: Helper/Helpee Relationship (Part I & II)"
   ___ a) a very valuable learning experience
   ___ b) a learning experience of some value
   ___ c) an experience of little value
   ___ d) an experience which was worthless

Fig. 3 -- Questions relating to the degree of interest and value of the two units, as perceived by the participant.

As is shown here, in each of these questions there were two categorized responses indicating positive attitudes and two categories soliciting responses indicating negative attitudes. Both used the four scale response categories.

Additional Questions Utilizing the Likert-Type Five Scale Categories for Soliciting Responses

There were three additional questions asked, all incorporating the Likert-Type five scale categories for soliciting responses. These
questions are presented in Figure 4. All of these questions solicit the type of responses whereby two of the response categories solicit positive attitudes, two solicit negative attitudes and one solicits a neutral attitude.

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

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

9. How likely would you be in recommending to a fellow administrator
   that he/she participate in this module?
   ____ a) very likely
   ____ b) somewhat likely
   ____ c) no feeling either way
   ____ d) would be reluctant to recommend it
   ____ e) definitely would not recommend it

Fig.4 -- The additional questions incorporating the Likert-type five scale categories for soliciting responses.

Other "Closed" Questions Relating to the Participant's Attitudes Toward Technical Aspects of the Two Units

The questions presented in Figure 5, are a series of questions included in the questionnaire for the purpose of determining the participants' attitudes toward more specific aspects of the two units
11. The following items focus on the technical aspects of the audio instructional module, "Staff Development: Helper/Helpee Relationship (Part 1 & II)". 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. 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  
f) The synchronization between the text and audio portion.................................................... 1 2 3 4 5  
g) The ease and convenience with which the materials (exercises, cassette tape, extra guidebooks, etc.) can be utilized.................................................... 1 2 3 4 5  

Fig. 5 -- Questions relating to the technical aspects of the two units.

Procedures for Determining the Participants' Attitudes Toward the Two Units 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 module. The purpose for the "open-ended" questions was to supplement the data provided through the use of the "closed" questions. These questions are presented in Figure 6.
12. Complete the following statements:
   
   a) The discussion questions in this module
   
   b) The exercises in which I participated
   
   c) The diagrams in this module
   
   d) The fact that this module was presented in two parts
   
   e) One change that I would make in this module
   
   f) One aspect of this module which should definitely remain the same

Fig. 6 -- A sample of the "open-ended" statements soliciting information about the audio modular units.

Procedures used in Processing and Analyzing the Data

The method utilized in analyzing the data from the "closed" questions, including the Likert-Type categories, was to compute the number and percentage of the responses marked for each of the categories. In the Likert-Type questions, the categories were lettered from (a) to (e) with the exception of two questions which contained categories from (a) to (d). The (a) and (b) categories denoted positive attitudes while the (d) and (e) categories denoted negative attitudes. The questions containing (a) through (d) denote positive responses for (a) and (b) and negative responses for (c) and (d) categories.

The responses offered to the "open-ended" questions were categorized, and presented in the form of number and percentage of responses made for each category.
The Procedures Used to Determine the Perceived Worth of the Experience, as Compared to Alternative Approaches

There were two procedures used to collect data in this section. One was to determine the participants' choice of alternative instructional approaches as opposed to the two audio modular units. The other was to determine the participants' order of preference of alternative instructional approaches as compared to the audio modular instructional approach.

To obtain data supporting the participants' choice of alternative approaches to the existing two units, two "open-ended" questions were utilized. These are presented in Figure 7.

10. Briefly state what you feel you have learned from this module.

Fig. 7 -- The "open-ended" questions used to obtain data relating to participants' choice of alternative approaches.

In an attempt to determine the participants' order of preference of alternative instructional approaches as compared to the audio modular approach, the participants were asked to rank-order a list of several in-service instructional approaches. This rank ordering process was in relation to the participant's preference as to which instructional approach he/she would choose to experience. Within this list, a reference
to the audio modular approach was included. The question is presented in Figure 8.

15. 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

Fig. 8 -- The question which solicited the rank ordering of in-service approaches according to participant's preference.

Procedures used in Processing and Analyzing the Data

The responses obtained to the "open-ended" questions were categorized and presented in the form of the number and percentage of responses made for each category.

The data generated by the ranking question were processed in two different ways. The first method was to simply count the number of times each approach was assigned a certain rank value. The second approach was to weigh the responses, and determine the weighted mean score for each in-service approach listed. The numerical values that were assigned are presented in Figure 9.
<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. 9 -- The numerical values assigned to the rank given each item in Question #15.

The Assessment Procedures Used to Determine the Connotative Meaning of the Audio Modular Approach

In an attempt to move further toward a perspective on the audio modular approach as a concept, the participants were asked to react to two Semantic Differential Scales. On the first scale, the participants reacted to the concept, "Audio Modular Instruction as One Alternative Approach to In-Service Education for School Administrators". On the second scale, the participants reacted to the concept, "In-Service Educational Programs for School Administrators in Which You Have Participated (excluding the audio modular instructional approach)". The semantic differential scales and polar traits are shown in Figure 10.
Fig. 10 -- Semantic Differential Scales and Polar Traits.

Procedures Used in Processing and Analyzing the Data

The polarity differences were assigned values to the seven possible positions as shown below and analyzed:

\[
\begin{align*}
\text{Good} & : 6 : 5 : 4 : 3 : 2 : 1 : 0 & \text{Bad} \\
\text{Untimely} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Timely} \\
\text{Pleasant} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Unpleasant} \\
\text{Comfortable} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Uncomfortable} \\
\text{Meaningless} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Meaningful} \\
\text{Useless} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Useful} \\
\text{True} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{False} \\
\text{Skeptical} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Relieving} \\
\text{Promising} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Disappointing} \\
\text{Boring} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Interesting} \\
\text{Rough} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Smooth} \\
\text{Attentive} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Inattentive} \\
\text{Weak} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Strong} \\
\text{Free} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Constrained} \\
\text{Prohibitive} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Permissive} \\
\text{Shallow} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Deep} \\
\text{Active} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Passive} \\
\text{Still} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Moving} \\
\text{Slow} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Fast} \\
\text{Complex} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Simple} \\
\text{Tense} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Relaxed} \\
\text{Non-Threatening} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Threatening} \\
\text{Inferior} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Superior} \\
\text{Relevant} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Irrelevant} \\
\text{Near} & : \_ : \_ : \_ : \_ : \_ : \_ : \_ & \text{Far}
\end{align*}
\]

The twenty-five polar traits were put into five groups. Then the mean polarity scores for each of the concepts were determined for the factors of: 1) evaluation, 2) potency, 3) receptivity and 4) activity.
The five factors and related groups of polar traits are listed below:


2. **Potency** = (weak-strong) (free-constrained) (prohibitive-permissive) (shallow-deep)

3. **Receptivity** = (boring-interesting) (rough-smooth) (attentive-inattentive)

4. **Activity** = (active-passive) (still-moving) (slow-fast) (complex-simple)

5. **Miscellaneous** = (tense-relaxed) (non-threatening-threatening) (inferior-superior) (relevant-irrelevant) (near-far)

The mean polarity scores for the following individual polar traits were also calculated. These were the following: 1) Relevant-Irrelevant, 2) useful-useless, 3) promising-disappointing, 4) interesting-boring, 5) meaningful-meaningless.

The difference in the mean polarity scores for the two concepts was subjected to a t Test to determine if the difference in these scores reached a statistical level of significance. This t value was calculated for each of the four factors, and for each of the individual polar traits for which mean scores were determined.

**Assessment Procedures Used to Determine the Cognitive Changes**

The pretest-posttest pre-experimental design was utilized in an attempt to determine the cognitive changes which may have occurred as a
result of participating in the audio modular instructional units. This achievement test was based on the performance objectives for the two units and was validated and tested for reliability during the study. Samples of the questions in that test are presented in Figure 11.

11. In relation to an individual's needs, recent research reports show that the need for recognition and the need for achievement are stronger and more lasting than:
   - a. all other needs.
   - b. all other needs excluding financial ones.
   - c. most other needs.
   - d. all other needs excluding the need for survival.

12. Albert Moravain reports that the status of individuals involved in a conversation is a significant factor in determining the outcome of a conference. In reference to this, which of the following statements is incorrect?
   - a. an approving nod of the head by the higher status individual indicates encouragement to the individual speaking.
   - b. continual interruptions on the part of the higher status individual will cause the relationship to wane.
   - c. long periods of silence on the part of the higher status individual may cause the speaker to feel uncomfortable.
   - d. looking into the speaker's eyes while he/she is speaking will cause the relationship to wane.

13. If the person seeking help mistrusts the helper's competence to provide the necessary assistance, he/she will:
   - a. not come to see that person.
   - b. challenge the helper by posing a hypothetical or superficial problem.
   - c. most probably find a solution by himself or herself.
   - d. wait until the problem becomes overwhelming before coming to see the helper.

Fig. 11 -- Sample of the questions included in the fourteen item achievement test administered to all participating administrators.

Procedures Used in Processing and Analyzing the Data

The achievement test was administered twice to the school administrators who participated in the two units. This experimental group was administered the test before and after participating in the
two audio instructional units. The difference between the mean scores for the Pretest and Posttest were subjected to the t Test to determine if this difference in scores was significant.

Procedures Used to Determine the Potential for Further Development of Learning Experiences Using the Same Instructional Approach

The participants of the two units were asked to react to a "closed" question and a number of "open-ended" questions presented on a written questionnaire. These questions focused on 1) the participants' desire to participate in any additional audio modular instructional units; 2) the conditions under which they would participate in additional units; 3) the value of developing any more audio modular instructional units; and 4) the types of skills which could be learned through the use of the audio modular instructional approach. These questions are illustrated in Figure 12.

14. If you had the opportunity would you participate in other audio modular presentations?
   __ a) yes, definitely
   __ b) yes, probably
   __ c) I don't know
   __ d) probably not
   __ e) definitely not
19. Please complete the following statements:

a) I would spend time participating in an audio modular instructional unit if/only if:

b) I would definitely not spend time participating in an audio modular instructional unit if:

c) For anyone to develop any more audio modular instructional units I would recommend that he or she:

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

20. What kinds of skills and knowledges, as school administrator, do you think could be learned and/or improved through the use of audio modular instruction?

Fig. 12 -- A sample of the questions used to determine the potential for further development of audio modular units.

Procedures Used in Processing and Analyzing the Data

The data from the "open-ended" questions were categorized, and presented in the form of the number and percentage of responses made for each category.

Procedures Used to Measure the Time and Money Involved in the Development of the Units

In an attempt to determine the monetary cost of the units produced for the study, the investigator maintained a record of the expenditures made in the development and production of the two audio modular units. A similar attempt was made in maintaining records for the purpose of
determining the number of "man-hours" spent on the development and production of the two units.

Other Assessment Procedures Used

In addition to the assessment procedures used in the study relating to the criteria established for the term "suitability", other assessment procedures were used to obtain information about the audio modular units. These procedures included: 1) "open-ended" questions on a written questionnaire, administered to the participants, to determine the major strength and weakness of the two audio modular units, and 2) personal interviews conducted by the investigator with the participants to determine their perceptions of the experience during the first phase of the field testing. Table 13 shows the "open-ended" questions which invited the participants' reactions.

3. What was the major strength of this specific audio instructional module?

4. What was the major weakness of this specific audio instructional module?

Fig. 13 -- A sample of the "open-ended" questions soliciting responses pertaining to the major strength and weakness of the two audio units.

The data from the "open-ended" questions were categorized and reported in terms of the number and percentage of responses made for each
category. The information resulting from the interviews held by the investigator will be considered in the final conclusions and recommendations for this study.

Methods of Gathering and Processing Data

PHASE II

In Phase II of the study, the assessment approaches were used in an attempt to determine the relative degree of effectiveness of using the audio modular instructional units for training the school administrators to conduct the selected staff development training exercises with members of their instructional staff. The assessment approaches included 1) a subjective assessment approach soliciting reactions from the participants of the training exercises; 2) an objective assessment approach for attempting to determine the cognitive changes in the individuals as a result of participating in the exercises; 3) a Semantic Differential Scale approach for attempting to determine the connotative changes in the individuals as a result of participating in the exercises; and 4) a subjective assessment approach for soliciting reactions from the participants of the training exercises.

Procedures Used to Solicit Reactions From the Participants of the Training Exercises

In an attempt to determine the participants' attitudes toward their experience with the training exercises, the participants were asked to
react to a questionnaire containing both "open-ended" and "closed" questions. The "closed" questions, illustrated in Figure 14, dealt with their attitude toward the exercises in relation to whether they found them interesting and meaningful as learning experiences. The other questions attempted to solicit responses or reactions to such concerns as: 1) whether the participants would be willing to subject themselves to these kinds of exercises in the future; 2) whether they would include a facilitator in these kinds of exercises; 3) how well did the facilitator perform; and 4) whether they perceived the audio modular units as having helped their administrator in acting as facilitator.

1. I found participating in the exercises:
   ___ a. very interesting.
   ___ b. somewhat interesting.
   ___ c. somewhat boring.
   ___ d. very boring.

2. I found participating in the exercises:
   ___ a. a very valuable learning experience.
   ___ b. a learning experience of some value.
   ___ c. an experience of little value.
   ___ d. an experience which was worthless.

6. Now that I know what the exercises are like, if I had the choice I would:
   ___ a. have definitely participated in the exercises.
   ___ b. have probably participated in the exercises.
   ___ c. not have been able to decide.
   ___ d. have probably not participated in the exercises.
   ___ e. have definitely not participated in the exercises.
7. If I were involved in preparing training exercises such as the ones in which I have participated, I would:
   ___ a. definitely include a facilitator.
   ___ b. probably include a facilitator.
   ___ c. probably not include a facilitator.
   ___ d. definitely not include a facilitator.

8. The way these exercises were organized and presented, the person who facilitated the exercises was:
   ___ a. very good as facilitator.
   ___ b. good as facilitator.
   ___ c. fair as facilitator.
   ___ d. poor as facilitator.

11. Your facilitator, prior to conducting the exercise, participated in an audio modular instructional packet dealing with "Helper/Helpee Relationship". How helpful do you think this training was in helping him/her facilitate the exercises?
   ___ a. very helpful.
   ___ b. somewhat helpful.
   ___ c. hardly helpful.
   ___ d. wasn't helpful at all.

Fig. 14 -- The "closed" questions used to solicit reactions from the participants of the training exercises.

The "open-ended" questions illustrated in Figure 15, dealt with concerns such as 1) the major strength and weakness of the exercises; 2) the knowledge and skills the participants felt they had learned; 3) how well trained they thought the facilitator was; and 4) what changes they would suggest be made in the exercises.

3. What was the major strength of these exercises?

4. What was the major weakness of these exercises?
5. Briefly state what you feel you have learned from these exercises.

10. How well trained do you think your facilitator was to conduct these exercises?

12. What change(s) would you suggest be made in the exercises?

Fig. 15 -- The "open-ended" questions used to solicit reactions from the participants in the exercises.

Procedures Used in Processing and Analyzing the Data

The data from the "closed" questions are presented in the form of number and percentage of responses made for each response level. The answers to the "open-ended" questions were categorized, and presented in the form of the number and percentage of responses made for each category.

Assessment Procedures Used to Determine the Cognitive Changes

The one-group pretest-posttest pre-experimental design was used in an attempt to determine the cognitive changes which took place in the individuals as a result of participating in the training exercises. Each individual was administered the achievement test before participating in the training exercises and immediately after the exercises. A sample of the questions included in that test is presented in Figure 16.
5. One of the most important obstacles preventing individuals from receiving help is:
   a. that there is no solution to the problem.
   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 or 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.

Fig. 16 — Sample of the questions included in the ten item achievement test.

Procedures Used in Processing and Analyzing the Data

The pretests and posttests were scored to determine if there was any observable difference. The differences in the pretest and posttest were examined, using the Student t Test, to determine if any changes
reached a level of statistical significance.

**Procedures Used to Determine the Change in a Connotative Meaning as a Result of the Training Exercises**

The participants (84 teachers) were asked to react to two Semantic Differential Scales. On the first, administered before the exercises, the participants reacted to the concept, "Staff Development Training Exercises You Participated in Before Today Involving an Administrator as Facilitator". On the second scale, administered after the exercises, the participants reacted to the concept, "Staff Development Training Exercises You Participated In (including those you participated in today) Involving an Administrator as Facilitator". The semantic differential scale and polar traits were identical to the ones utilized for the administrators in Phase I. A sample of the scale and polar traits was shown in Figure 10.

**Procedures Used in Processing and Analyzing the Data**

The polarity differences were assigned values in exactly the same fashion as in the scale used in Phase I.

The polar traits were grouped into the same five factors and the same procedure was applied as that dealing with the Semantic Differential scale in Phase I of the study.
Assessment Procedures Used to Solicit Reactions from the Facilitators of the Exercises

An attempt was made to determine the school administrators' (the facilitators of the exercises) attitudes toward their experience in conducting the staff development training exercises, and their attitudes toward how effective the audio modular instructional units were in preparing them to conduct these exercises. This was accomplished through the use of 1) a written questionnaire incorporating both "open-ended" and "closed" questions administered after the training exercises had been facilitated; and 2) in-depth structured interviews conducted with a selected number of the administrators.

Procedures Used to Solicit Facilitators' Reactions through the Use of "Closed" Questions

The facilitators were asked to respond to two "closed" questions on a written questionnaire. The first question dealt with the value of the audio units in providing them with the skills and knowledge necessary for facilitating the training exercises. The second was an attempt to determine the facilitators' order of preference of alternative instructional approaches, as vehicles for preparing them to facilitate staff development exercises. The participants were asked to rank-order a list of several in-service approaches. This rank ordering process was done in relation to the facilitator's preference as to which approach he/she would choose. Within this list, a reference to the audio modular approach was included. Both questions are presented in Figure 17.
1. I found that as a result of my participation in the audio modular presentation, I was:
   ___ a. very well prepared to act as facilitator.
   ___ b. well prepared to act as facilitator.
   ___ c. adequately prepared to act as facilitator.
   ___ d. poorly prepared to act as facilitator.
   ___ e. unprepared to act as facilitator.

4. Suppose you were given the choice to participate in the following in-service educational programs in order to prepare yourself as facilitator in staff development training exercises, rank the following 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 book and read it.
   ___ d. visit a neighboring school district.
   ___ e. participate in an audio instructional unit.
   ___ f. have a discussion group session with other administrators from your district.

Fig. 17 -- The two "closed" questions included in the questionnaire administered to the facilitators.

Procedures Used in Processing and Analyzing the Data

The data from the Likert-Type question are presented in the form of number and percentage of responses made for each response category.

The data generated by the ranking question was processed in two different ways. The first method was to simply count the number of times each approach was assigned a certain rank value. The second approach was to weigh the responses, and determine the weighted mean score for each in-service approach listed.
Procedures Used to Obtain Data Focusing on the Major Strengths and Weaknesses of the Two Units

In an attempt to solicit responses concerned with the major strengths and weaknesses of the audio modular units in providing administrators with the skills and knowledge necessary for conducting staff development training exercises, two "open-ended" questions were included in the questionnaire. The questions are presented in Figure 18.

2. What were the major strengths of the two audio modular instructional units in providing you with the skills and knowledge necessary to conduct these exercises?

                                           ____________________________________________________________
                                           ____________________________________________________________

3. What were the major weaknesses of the two audio modular instructional units in providing you with the skills and knowledge necessary to conduct these exercises?

                                           ____________________________________________________________
                                           ____________________________________________________________

Fig. 18 -- A sample of the two "open-ended" questions used to determine the strengths and weaknesses of the two units.

Additional "Open-ended" Questions Used to Solicit Attitudes of the Facilitators

Several other "open-ended" questions were included in the questionnaire focusing on concerns such as, 1) the changes which should be made in the two units, and in the audio modular instructional approach to better provide administrators with expertise in conducting staff development training exercises, and 2) suggestions of topics for the further development of audio modular instructional units for the purpose
of helping practicing administrators conduct training exercises with their instructional staff. These questions are presented in Figure 19.

5. In order for an administrator to be better prepared to act as facilitator in the suggested staff development exercises, what changes would you suggest be made in the two audio modular units?

6. What changes would you make in the audio modular instructional approach in order to better provide administrators with assistance to conduct staff development training exercises?

7. What kinds of skills and knowledges do you think could be learned or improved through the use of audio modular instruction for the purpose of training practicing school administrators to conduct training exercises with their instructional staff.

Fig. 19 -- A sample of the additional "open-ended" questions used to solicit attitudes of the facilitators.

Procedures Used in Processing and Analyzing the Data

The answers to the "open-ended" questions were categorized, and presented in the form of the number and percentage of responses made for each category. The information resulting from the interviews held by the investigator will be considered in the final conclusions and recommendations for this study.
Summary

To an extent, the questions posed by the measurement instruments used in Phase I and Phase II of the field testing provided the framework for the analysis and treatment of the data collected.

This chapter described 1) the process used in obtaining validity and reliability for the achievement test, 2) the study populations involved in Phase I and Phase II of the study, and 3) the assessment procedures used in both Phases of the study. In the subsequent chapter, the data generated from the assessment procedures are presented and analyzed.
CHAPTER V
PRESENTATION AND ANALYSIS OF THE FINDINGS

In Chapter IV are described the validation process of the achievement test, the study populations involved in Phases I and II of the study, and the gathering and processing of the data.

The major objectives of this study were 1) to determine the suitability of using the audio modular approach, specifically represented by the two units developed for this study, for providing school administrators with selected interpersonal skills and knowledge in staff development, and 2) to determine the usefulness of the audio modular instructional approach, represented by the two units, for the training of school administrators to function as facilitators in the training of their staff members. The two major objectives may be most effectively described as Phase I and Phase II of this study.

In this chapter the data are presented and analyzed. This chapter is divided under two major sections: 1) the presentation and analysis of the findings for Phase I, and 2) the presentation and analysis of the findings for Phase II.

The Presentation and Analysis of the Findings: Phase I

In the following sections an analysis will be made of the data collected during Phase I of the study. The procedures used to gather
this data may be best summarized as the assessment procedures used to
determine: 1) the participants' interest in the experience, their
motivation as a result of the experience, and their attitudes toward
more specific aspects of the two units; 2) the worth of the experience
as compared to alternative experiences; 3) the connotative meaning of
the experience as compared to the connotative meaning of a concept sig-
nifying some other type of experience; 4) the cognitive changes that
took place in the participants as a result of the experience; 5) the
potential for further development of learning experiences using the
same approach; and 6) the expenditure of time and money in the develop-
ment and production of the experience.

In addition, the other procedures used included 1) "open-ended"
questions to determine the major strength and weakness of the two units;
and 2) personal interviews conducted by the investigator to determine
the participants' perceptions of the experience.

Results of the Questions used to
Determine the Participants' Interest
in the Experience, their Motivation
Resulting from the Experience, and
their Attitudes toward more specific
Aspects of the Two Units.

In order to solicit the kind of information deemed necessary to
provide data concerning the participants' interest, motivation and
general attitudes, a number of "closed" and "open-ended" questions were
utilized. The results of the questions are illustrated in the following
subsections.
Results of the Questions Pertaining to the Interest in and Value of the Two Units, as perceived by the Participants.

The results of the question in reference to how interesting the participants perceived the experience, are presented in Table 9.

TABLE 9

RESULTS OF THE RESPONSES TO THE STATEMENT, "I FOUND PARTICIPATING IN THE AUDIO INSTRUCTIONAL MODULE . . ."

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Very interesting</td>
<td>12</td>
</tr>
<tr>
<td>Somewhat interesting</td>
<td>8</td>
</tr>
<tr>
<td>Somewhat boring</td>
<td>0</td>
</tr>
<tr>
<td>Very boring</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

The data in this table show that all 20 participants found their participation in the audio modular units interesting. Sixty percent said that the units were "very interesting," while the other eight participants found them to be "somewhat interesting." It is important to note that no one answered in the latter two response categories, which would suggest that none of the participants perceived the experience to be "boring" nor even "slightly boring."

The participants were asked to respond to another question pertaining to how valuable they found the experience with the two units to be. The data illustrated in Table 10 present the results submitted.
TABLE 10

RESULTS OF THE RESPONSES TO THE STATEMENT, "I FOUND PARTICIPATING IN THE AUDIO INSTRUCTIONAL MODULE . . . ."

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>a very valuable learning experience</td>
<td>9</td>
</tr>
<tr>
<td>a learning experience of some value</td>
<td>11</td>
</tr>
<tr>
<td>an experience of little value</td>
<td>0</td>
</tr>
<tr>
<td>an experience which was worthless</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

From these data it appears that almost half the participants viewed the experience as "very valuable." All 20 participants found the experience to be valuable. Once again none of the respondents classified the experience as being either "worthless" or "of little value."

The participants were requested to estimate the amount of time they had spent participating in the two units and subsequently they were asked whether they thought the experience was worth that amount of time. According to the data obtained five of the participants said they spent between 45-60 minutes, 9 participants said they spent between 60-75 minutes, and 6 others claimed that they spent 75-90 minutes. These data are not as accurate as had been hoped they would be since it was evident through the interviews conducted by the investigator that several of the participants included the pre and post testing in their time estimation. The mean computed for that question would be in the vicinity of 65 minutes.
The data presented in Table 11 are the results of the responses to the statement concerning itself with whether the participants thought the experience was worth that amount of time.

TABLE 11

RESULTS OF THE RESPONSES TO THE STATEMENT, "I FEEL THAT THE EXPERIENCE I GAINED FROM PARTICIPATING ..."

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>was definitely worth this amount of time</td>
<td>9  17  45.0  95.0</td>
</tr>
<tr>
<td>was probably worth this amount of time</td>
<td>8  17  40.0</td>
</tr>
<tr>
<td>may or may not have been worth this amount of time</td>
<td>3  15.0</td>
</tr>
<tr>
<td>was probably not worth this amount of time</td>
<td>0  0.0</td>
</tr>
<tr>
<td>was definitely not worth this amount of time</td>
<td>0  0.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20  100.0</td>
</tr>
</tbody>
</table>

No one thought that the amount of time spent on the units was not worth it. This is significant in the light of the fact that some did see the participation in the units and the testing as one experience. Three of the respondents, representing 15% of the group, responded neutrally, while 95% of the participants thought the experience was either "probably" or "definitely" worth the amount of time. The mean was computed to be in the category of "was definitely worth this amount of time."

In Table 12 are the data presented in answer to the question asking if the participants would have chosen to have participated in the
experience if they had known what it entailed.

TABLE 12

RESULTS OF THE RESPONSES TO THE STATEMENT, "NOW THAT I KNOW WHAT THE MODULE IS LIKE, IF I HAD A CHOICE I WOULD:"

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>have definitely participated in the module</td>
<td>8</td>
</tr>
<tr>
<td>have probably participated in the module</td>
<td>16</td>
</tr>
<tr>
<td>not know whether I would or would not have participated...</td>
<td>8</td>
</tr>
<tr>
<td>have probably not participated in the module</td>
<td>4</td>
</tr>
<tr>
<td>have definitely not participated in the module</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

The data indicate that 80% of the respondents thought they, either "probably" or "definitely," would have participated in the module had they known, in advance, what it was about. Also, there were no responses in the negative categories. Four participants answered in the neutral category of the Likert-Type scale.

Additional Questions Dealing with the Attitudes of the Participants Toward the Two Units.

In an attempt to measure the participants' attitudes toward the experience, it was felt that an indication of the attitudes could be revealed by determining the participants' commitment to recommending the same experience to another administrator. The data presented in
Table 13 provide the results of the responses to that kind of question.

**TABLE 13**

RESULTS OF THE RESPONSES TO THE QUESTION, "HOW LIKELY WOULD YOU BE IN RECOMMENDING TO A FELLOW ADMINISTRATOR THAT HE/SHE PARTICIPATE IN THIS MODULE?"

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>very likely</td>
<td>11</td>
</tr>
<tr>
<td>somewhat likely</td>
<td>8</td>
</tr>
<tr>
<td>no feeling either way</td>
<td>1</td>
</tr>
<tr>
<td>would be reluctant to recommend it</td>
<td>0</td>
</tr>
<tr>
<td>definitely would not recommend it</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

The data indicate that 95% of the participants would recommend that a fellow administrator participate in the two units. Only one respondent was unsure as to whether he/she would recommend the two units to a fellow administrator. Once again no one responded in either of the two negative categories. The results would indicate that the participants would recommend the two units to fellow administrators.

Results of the Questions Pertaining to the Participant's Attitudes Toward more specific Aspects of the Two Units.

There were a number of questions that the participants were asked to answer pertaining to their perceptions on the technical aspects of the two units. The data are presented in Table 14.
### TABLE 14

RESULTS OF THE RESPONSES TO THE TECHNICAL ASPECTS OF THE AUDIO MODULAR UNITS

<table>
<thead>
<tr>
<th>Technical Aspects</th>
<th>Response Categories and Number of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outstanding No. %</td>
</tr>
<tr>
<td>General appearance</td>
<td>10 50.0</td>
</tr>
<tr>
<td>Clarity of instructions</td>
<td>9 45.0</td>
</tr>
<tr>
<td>Statement of objectives</td>
<td>12 60.0</td>
</tr>
<tr>
<td>Appearance of text</td>
<td>12 60.0</td>
</tr>
<tr>
<td>Quality of tape</td>
<td>6 30.0</td>
</tr>
<tr>
<td>Synchronization (tape &amp; text)</td>
<td>9 45.0</td>
</tr>
<tr>
<td>Ease &amp; convenience in use</td>
<td>10 50.0</td>
</tr>
</tbody>
</table>
As the information on the table indicates, more than 90.0% of the participants responded very positively on every technical aspect except for the question relating to the quality of the cassette tape. In reference to the aspect relating to the quality of the tape 75% of the respondents thought it to be "good" or "outstanding" while 25% found the tape to be "average." As indicated in the earlier chapters, the audio portion had been revised so many times that the investigator and his wife did the final recording of the tape. In the categories entitled "needs improving" and "very poor" we see no one elected either of these for any of the technical aspects.

In addition to the "closed" questions, several "open-ended" questions were included for the purpose of soliciting attitudinal responses toward the units. Table 15 provides the results of the responses to an "open-ended" statement pertaining to the discussion questions in the module.

**TABLE 15**

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE OPEN-ENDED STATEMENT, "THE DISCUSSION QUESTIONS IN THIS MODULE . . ."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>were stimulating and beneficial</td>
<td>6</td>
</tr>
<tr>
<td>were well developed</td>
<td>4</td>
</tr>
<tr>
<td>were very appropriate</td>
<td>4</td>
</tr>
<tr>
<td>were relevant and helpful</td>
<td>3</td>
</tr>
<tr>
<td>were well presented</td>
<td>2</td>
</tr>
<tr>
<td>should be given more time</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

From the data, it may be assumed that the participants thought the discussion questions in the two units were meaningful and valuable. Thirty percent claimed that the discussion questions were stimulating and beneficial. Four respondents felt that the discussion questions were very well developed and four others claimed that they were very appropriate. One participant did feel that the discussion questions should have been awarded more time.

The first unit contained two brief exercises dealing with the initial response factor in a helping relationship conference. The second unit incorporated a role playing exercise focusing on the development of effective listening skills. Table 16 provides the categorization of the responses dealing with the exercises in the two units.

TABLE 16

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE OPEN-ENDED STATEMENT, "THE EXERCISES IN WHICH I PARTICIPATED . . ."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>were definitely a learning situation</td>
<td>5</td>
</tr>
<tr>
<td>were stimulating and informative</td>
<td>5</td>
</tr>
<tr>
<td>were very helpful</td>
<td>3</td>
</tr>
<tr>
<td>were real situations</td>
<td>3</td>
</tr>
<tr>
<td>interesting but not real because of roles</td>
<td>2</td>
</tr>
<tr>
<td>were designed for a specific purpose</td>
<td>1</td>
</tr>
<tr>
<td>placed the objectives in a workable situation</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>
From the data provided, it may be seen that 80% of the responses fell into four categories wherein the first two categories represented 50% of the responses. Two participants felt that, although the exercises were interesting, they were not as real as intended because the participants were asked to assume roles. Fifteen percent of the respondents thought that the exercises created real situations.

In general it may be said that the participants viewed the exercises as meaningful and informative.

The two units incorporated several charts and diagrams as part of the modular presentation. In Table 17 is presented the categorization of the responses pertaining to the participants' reactions to the diagrams.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>were easy to read &amp; understand</td>
<td>5 20.0</td>
</tr>
<tr>
<td>were very good</td>
<td>5 20.0</td>
</tr>
<tr>
<td>were informative and vital to the module</td>
<td>4 20.0</td>
</tr>
<tr>
<td>were very useful</td>
<td>3 15.0</td>
</tr>
<tr>
<td>catch the eye and promote thought</td>
<td>1 5.0</td>
</tr>
<tr>
<td>are too few</td>
<td>1 5.0</td>
</tr>
<tr>
<td>were not diagrams but charts</td>
<td>1 5.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>20 100.0</td>
</tr>
</tbody>
</table>
The data show that 75% of the responses fell into the first four categories which signify that the participants thought the diagrams were easy to read, very appropriate and very useful. One respondent claimed that the diagrams were not diagrams but charts. One participant thought that there should have been more diagrams in the module.

The modular presentation was divided into two units. Each of the units had specific objectives, instructions and exercises. The modular presentation was so divided because it was felt by the investigator that each unit should deal with a specific skill or behavioral objective. The first part dealt with the initial response factor in a conference setting. The second part dealt with skill of effective listening.

The next two questions dealt with the participants' recommendations for altering the two units and their reactions to what part of the module they felt should definitely remain as it was presented. The results of the categorization of the responses to these two questions are presented in Tables 18 and 19.

In response to the statement dealing with the suggested changes, 65% of the participants felt that no change was necessary. Two respondents felt that Part 2 could be briefer than it is. Seven different categories were necessary to express the suggestions provided by the participants. It may be seen, however, that the majority of participants didn't wish to change the module at all.

Table 19 shows that 85% of the respondents felt that the one aspect of the module which should remain the same would be 1) the entire module, as represented by 50% of the participants, 2) the audio portion, as
TABLE 18
RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE OPEN-ENDED STATEMENT, "ONE CHANGE THAT I WOULD MAKE IN THIS MODULE . . ."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>None at all</td>
<td>13</td>
</tr>
<tr>
<td>Shorten Part 2</td>
<td>2</td>
</tr>
<tr>
<td>Add more to exercise no. 1</td>
<td>1</td>
</tr>
<tr>
<td>Eliminate participation in Part 1</td>
<td>1</td>
</tr>
<tr>
<td>Eliminate some of the instructions</td>
<td>1</td>
</tr>
<tr>
<td>Two parts should be given at different times</td>
<td>1</td>
</tr>
<tr>
<td>Shorten Part 1</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

TABLE 19
RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE OPEN-ENDED STATEMENT, "ONE ASPECT OF THIS MODULE WHICH SHOULD DEFINITELY REMAIN THE SAME . . ."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>The entire module</td>
<td>10</td>
</tr>
<tr>
<td>The audio portion</td>
<td>5</td>
</tr>
<tr>
<td>Exercises and instructions</td>
<td>3</td>
</tr>
<tr>
<td>Participation of those who use it</td>
<td>2</td>
</tr>
<tr>
<td>Remain as Two Parts</td>
<td>1</td>
</tr>
<tr>
<td>Part One</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>
represented by 20% of the responses, and 3) the exercises and instructions, as viewed by 15% of the respondents. The other suggestions were to have all participants involved, to retain the module as a two-part presentation and to retain Part One.

It is obvious, from the suggestions for changes and the responses provided in answer to the statement relating to what must remain the same, that the participants didn't appear to want any large changes.

Summary

In this section an analysis of the data pertaining to the participants': 1) interest in the experience, 2) motivation as a result of the experience and, 3) attitudes toward the more specific aspects of the module, was made.

In reference to the questions dealing with the participants' interest in the experience, it was shown that 100% of them viewed the experience as interesting and all claimed that it was a valuable learning experience. In neither the question dealing with interest nor the question dealing with the perceived value did anyone respond in the negative categories. In relation to the time they spent participating in the experience, once again all the participants felt that it was either "probably" or "definitely" worth that time. No one answered in the negative categories.

When asked whether they would have chosen to participate in the two units, knowing what they were like, 80% responded that they either "probably" or "definitely" would. In response to the question dealing
with their willingness to recommend the two units to their fellow administrators, 95% answered by saying that they would be "somewhat" or "very likely" to do so.

In relation to the "closed" questions pertaining to the technical aspects of the two units, the seven factors received very good support. No one felt that any of the seven aspects needed improvement or was very poor. The lowest rating was received on the aspect of the quality of the cassette tape where five participants felt that it was "average."

In order to clarify some points of concern regarding the two units, six "open-ended" statements were utilized. These statements, dealing with the discussion questions, the exercises, the diagrams, and the two-unit approach, received a high level of support from the respondents. The last two "open-ended" statements attempted to solicit suggestions for changes and to determine what part of the module was considered essential to the experience by the participants. Although the responses provided by the participants were gratifying and complimentary to this investigator, these data can't be used as well for the purposes of this study. The suggestions provided by the participants will help this investigator in refining the two units and in developing other similar modules.

Results from the Data Relating to the Perceived Worth of the Experience as compared to Alternative approaches.

In order to obtain the information necessary to analyze the participants' perceived worth of the experience as compared to alternative
approaches, two procedures were used to collect the data. The first was accomplished through the use of two "open-ended" questions utilized in an attempt to determine the participants' choice of alternative approaches to the existing two units. The second was accomplished by asking the participants to rank-order a list of several in-service instructional approaches, including the audio modular approach as one of the approaches within the list.

Results of the Questions Relating to the Participants' Choice of Alternative Approaches to the Two Units in this Study.

The two "open-ended" questions utilized for this purpose were so designed that the responses offered to the second question were contingent on those provided in the first. The first question asked the participants to state what they felt they had learned from the module. The second question then asked the respondents to name some other existing instructional method which they would have preferred in order to learn what they said they had learned from the modular presentation. In Table 20 are presented the results of the categorization of the responses to the first question.

As is illustrated in Table 20 all of the categories dealt with the objectives as they are presented in the introductions to Part I and Part II of the audio modular instructional module. Whether the participants actually learned or reinforced already existing behaviors and skills cannot be proven by the responses to this question but one fact is evident, that is, the participants were aware of the objectives of the two units after participating in the experience.
### TABLE 20

**RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE OPEN-ENDED QUESTION, "BRIEFLY STATE WHAT YOU FEEL YOU HAVE LEARNED FROM THIS MODULE"**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made in Each Category (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How to avoid the &quot;Game&quot; situation</td>
<td>4</td>
</tr>
<tr>
<td>The skill of more effective listening</td>
<td>4</td>
</tr>
<tr>
<td>Reenforcing of helping skills and human relations</td>
<td>4</td>
</tr>
<tr>
<td>The importance of setting the climate for a helping relationship</td>
<td>3</td>
</tr>
<tr>
<td>Will help me become more sensitive about my own behavior in a conference setting</td>
<td>3</td>
</tr>
<tr>
<td>Helper-Helpee relationship in administration is similar to counseling</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

The participants were then asked to mention any other existing instructional method which they would have preferred to the audio modular approach in order to learn the exact same thing. The responses to this "open-ended" question were categorized in the same way as was used for the other "open-ended" questions and statements. The results of the categorization of the responses are presented in Table 21.

This table illustrates that 55% of the participants indicated that no other method or approach would be better than the audio modular units for gaining the skills or knowledge the respondents felt they had gained from the two units. Another 30% of the responses show that the participants felt that the existing units would be much stronger if the
following additions were made: 1) additional instructional modules, as represented by 3 responses; 2) additional simulation exercises, as represented by 2 responses; and 3) the use of an overhead projector, as represented by one response. Only one participant felt that he/she would have preferred to discuss with his/her peers instead of participating in the module. So, it may be said that, 95% of the responses provided indicate that the participants felt that there was no better method than the two units.

**TABLE 21**

**RESULTS OF THE CATEGORIZATION OF THE RESPONSES 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 and Percent of Responses Made in Each Category (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>None</td>
<td>11</td>
</tr>
<tr>
<td>Additional instructional modules</td>
<td>3</td>
</tr>
<tr>
<td>Film or Video Taping</td>
<td>2</td>
</tr>
<tr>
<td>Additional simulation exercises</td>
<td>2</td>
</tr>
<tr>
<td>Adding the use of an overhead projector for the charts</td>
<td>1</td>
</tr>
<tr>
<td>Discussions with peers</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

Results of the Question
Soliciting the Rank Ordering of In-Service Approaches.

In this question, an attempt was made to move beyond the specific reference to the two units and to determine the participants' attitude
toward the audio modular approach as compared with other forms of in-service training approaches. The data presented in Table 22 provide the results of this rank ordering process.

As is illustrated in this table, 12 participants (60%) ranked the modular approach as their highest preference in the list of other forms of in-service training. Sixteen respondents, representing 80% of the participants, ranked the audio modular approach as either their first or second choice of preference, while none of the participants ranked the modular approach as either last or second to last choice.

The in-service approach ranked closest to the audio modular approach was "discussion group with other administrators from my district." This approach was ranked by four respondents, representing 20% of the participants as their highest preference.

The two approaches which appear to have been ranked the lowest were 1) attend an administrative conference to listen to speakers, and 2) purchase a professional level book and read it. Neither of these alternatives was ranked by anyone as highest or second highest preference.

In order to gain a clearer perspective of these rankings the scores were weighted and the means for these weighted scores, representing each approach, were calculated. The numerical value assigned each rank order is presented in Figure 9 (Chapter IV). In the last two columns on the right hand side of Table 22 are presented the sum-total of the weighted score and the weighted mean score for each approach.

As is illustrated in the Table, the mean of the weighted score for the audio modular approach was 4.03. The mean for the discussion group approach was 3.55. Reading a professional level book and attending a
<table>
<thead>
<tr>
<th>Activity</th>
<th>Highest 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Sum of Weighted Scores</th>
<th>Weighted Mean Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend an administrative conference to listen to speakers</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>9</td>
<td></td>
<td></td>
<td>19</td>
<td>.95</td>
</tr>
<tr>
<td>Attend an administrative conference involving a number of seminars</td>
<td>3</td>
<td>7</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td></td>
<td>64</td>
<td>3.02</td>
</tr>
<tr>
<td>Purchase a professional level book and read it</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>10</td>
<td></td>
<td></td>
<td>20</td>
<td>1.00</td>
</tr>
<tr>
<td>Visit a neighboring school district</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>1</td>
<td>40</td>
<td>2.00</td>
</tr>
<tr>
<td>Participate in an audio modular instructional unit</td>
<td>12</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>86</td>
<td>4.03</td>
</tr>
<tr>
<td>Have a discussion session with other administrators from my district</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td></td>
<td>71</td>
<td>3.55</td>
</tr>
</tbody>
</table>
conference to listen to speakers were the lowest with mean weighted scores of 1.00 and .95 respectively.

Summary

In this section were presented the results from the data relating to the perceived worth of the experience, and the approach, as compared to alternative approaches. The two procedures used to collect the data were 1) the use of two "open-ended" questions eliciting information relating to the participants' choice of alternative approaches to the existing two units, and 2) the use of rank-ordering a list of approaches in an attempt to determine the participants' order of preference of alternative approaches as compared to the audio modular approach.

As a result of the two "open-ended" questions it was found that the participants had, in fact, either learned or refreshed their knowledge on the learning objectives for the two units. The data obtained from the responses provided to the second question show that more than half of the participants felt that there was no better instructional method suited to teach them what they had learned through the two modular units. The majority of the other responses were categorized as 1) need for additional modules, 2) need for films or video taping, 3) need for additional simulation exercises, and 4) need for the use of an overhead projector. Only one participant felt that he/she would have preferred to have a discussion with his/her peers.

The analysis of the results to the ranking of in-service approaches in an order of preference, showed that 12 of the administrators ranked
the audio modular approach as their highest preference. The second highest preference was to hold a discussion session with fellow administrators. The lowest preference was received by the approach which represented attending a conference to listen to speakers. The computed mean weighted scores only substantiated the order of preferences as it appeared in the original count.

Results from the Semantic Differential Scales used to Determine the Connotative Meaning of the Audio Modular Approach

In an attempt to move further toward a perspective on the audio modular approach as a concept, the participants were asked to react to two concepts through the use of a Semantic Differential Technique. The participants were asked to react to two concepts 1) "audio modular instruction as one alternative approach to in-service education for school administrators," and 2) "in-service educational programs for school administrators in which you have participated (excluding the audio modular instructional approach)."

The data illustrated in Table 23 show the results of the participants' responses to the semantic differential scales, as these responses relate to the factors of evaluation, receptivity, potency and activity. The mean scores of the four factors as pertaining to the concept "audio modular instructional approach" are higher than those for the same factors as pertaining to the concept "other forms of In-Service training." Concept I (audio modular approach) received higher values than did concept II (other in-service training). The difference of the
TABLE 23
THE RESULTS OF THE RESPONSES TOWARD THE AUDIO MODULAR APPROACH COMPARED WITH OTHER FORMS OF IN-SERVICE EDUCATION FOR ADMINISTRATORS, AS RELATED TO THE FACTORS OF EVALUATION, RECEPTIVITY, POTENCY AND ACTIVITY

<table>
<thead>
<tr>
<th>Factor</th>
<th>Mean Score</th>
<th>(S.D.)</th>
<th>Mean Score</th>
<th>(S.D.)</th>
<th>Difference in Scores</th>
<th>t value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation</td>
<td>5.8167</td>
<td>0.719</td>
<td>4.5111</td>
<td>0.942</td>
<td>1.3056</td>
<td>4.87</td>
</tr>
<tr>
<td>Receptivity</td>
<td>5.7333</td>
<td>0.792</td>
<td>4.4500</td>
<td>1.136</td>
<td>1.2833</td>
<td>4.48</td>
</tr>
<tr>
<td>Potency</td>
<td>5.2125</td>
<td>0.758</td>
<td>4.4625</td>
<td>1.033</td>
<td>0.7500</td>
<td>3.28</td>
</tr>
<tr>
<td>Activity</td>
<td>4.7625</td>
<td>0.732</td>
<td>3.9125</td>
<td>0.779</td>
<td>0.8500</td>
<td>3.28</td>
</tr>
</tbody>
</table>

*With 19 degrees of freedom and probability level of 0.05 (two-tailed test) t value significant at 2.093.
weighted mean scores for the factor of evaluation was calculated to be 1.3056. When this information was subjected to the t Test, 4.87 was computed as the t value. The distribution of the t Table was entered with 19 degrees of freedom and a probability level of 0.05. The point of intersection yielded a t value of 2.093. Thus demonstrating that the change possessed statistical significance. For the other three factors (receptivity, potency and activity) the differences in means were computed to be 1.2833, 0.7500 and 0.8500 respectively. When the data were subjected to t Tests they yielded the following t values: a) receptivity--4.48; b) potency--3.28; and c) activity--3.28. All three t values were found to be statistically significant.

From the comparison of the results provided for concept I and those for concept II, the data clearly indicate that the participants preferred the "audio modular approach" to "other in-service training approaches" in which they had participated.

Table 24 illustrates the comparison of the results obtained, using the Semantic Difference Technique, in five specific polar traits. The polar traits isolated for this comparison were those, which the investigator felt, would more specifically indicate the participants' attitudes toward the two concepts. The weighted mean polarity score for the polar trait meaningful-meaningless was computed at 6.2 for Concept I and 5.0 for Concept II. The difference in the weighted mean polarity scores, calculated for the other four traits were found to be: 1) useful-useless = 1.4, 2) promising-disappointing = 1.45, 3) interesting-boring = 1.5, and 4) relevant-irrelevant = 1.65. The data obtained from these individual polar traits were subjected to a t Test and all five were
<table>
<thead>
<tr>
<th>Polar Traits</th>
<th>Audio Modular Instructional Approach</th>
<th>Mean Polarity Scores (Sum of Weighted Responses) (N=20)</th>
<th>Other Forms of In-Service Training</th>
<th>Difference in Scores</th>
<th>t value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaningful-Meaningless</td>
<td>6.2000 0.696</td>
<td>5.000 0.918</td>
<td>1.2000</td>
<td>4.33</td>
<td></td>
</tr>
<tr>
<td>Useful-Useless</td>
<td>6.0500 0.759</td>
<td>4.6500 1.226</td>
<td>1.4000</td>
<td>3.76</td>
<td></td>
</tr>
<tr>
<td>Promising-Disappointing</td>
<td>5.9500 0.826</td>
<td>4.5000 1.239</td>
<td>1.4500</td>
<td>4.92</td>
<td></td>
</tr>
<tr>
<td>Interesting-Boring</td>
<td>6.0000 0.858</td>
<td>4.5000 1.504</td>
<td>1.500</td>
<td>3.94</td>
<td></td>
</tr>
<tr>
<td>Relevant-Irrelevant</td>
<td>5.9500 0.887</td>
<td>4.300 1.302</td>
<td>1.6500</td>
<td>6.02</td>
<td></td>
</tr>
</tbody>
</table>

*With 19 degrees of freedom and probability level of 0.05 (two-tailed test), t value is deemed significant at 2.093.
found to be significant. The data, presented in Table 24, indicate that for the 5 polar traits, the audio modular instructional approach (as a concept) elicited a greater positive reaction than did the concept which signified "other forms of in-service training approaches" in which the participants had been involved.

In an attempt to compare, more fully, the connotative meaning of the audio modular approach with the connotative meaning of a concept representing other types of in-service approaches the mean polarity scores for Concept I and Concept II were computed. For Concept I, signifying the audio modular approach, the mean score was determined to be 5.411 and the standard deviation was .58. In relation to Concept II, signifying other approaches, the mean score was computed to be 4.3532 with a standard deviation of .831. The difference of the mean scores (1.0578) obtained a t value of 5.05 which established statistical significance for that difference.

Summary

The data from the application of two semantic differential scales indicated that the audio modular instructional approach elicited a greater positive reaction than did the concept signifying any other in-service approach for the factors of evaluation, potency, activity and receptivity. This difference, which was evident from the comparison of the mean scores, was deemed statistically significant by applying the t Test to the difference calculated for each of the factors.
This evidence was supported by the individual computations effected for five polar traits. In all five cases, the mean polarity scores relating to the audio modular approach were found to be greater than those relating to any other in-service approach. Once again all of the individual polarity score differences were determined statistically significant, through the application of the t Test.

**Results from the Data Obtained in Relation to the Cognitive Changes that took Place in the Participants**

The results from the objective portion of the evaluation packet are presented in this section in an attempt to measure the amount of cognitive change which took place due to the experience with the two units.

The pretest-posttest pre-experimental design was utilized in an attempt to determine those changes. The achievement test was validated and tested for reliability as seen in Chapter IV of this study. A copy of the 14 item achievement test is included in Appendix B of this report.

Table 25 illustrates the comparison of the two applications of the test (Pre and Post) relating to minimum score, maximum score, range, mean score and standard deviation. The comparison points out certain changes that occurred as a result of participation in the two audio instructional units. The data relating to the pretest show the minimum score as 3 and the maximum as 7. After experiencing the two units, using the same achievement test and the same group of administrators,
### TABLE 25

**COMPARISON OF THE PRETEST AND POSTTEST RELATING TO MINIMUM SCORE, MAXIMUM SCORE, RANGE, MEAN SCORE, AND STANDARD DEVIATION**

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size:</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Minimum score:</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Maximum score:</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Range:</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Mean score:</td>
<td>5.3</td>
<td>9.6</td>
</tr>
<tr>
<td>Standard Deviation:</td>
<td>1.342</td>
<td>1.903</td>
</tr>
</tbody>
</table>

### TABLE 26

**THE STUDENT t TEST APPLICATION TO THE DIFFERENCE IN MEAN SCORES BETWEEN THE PRETEST AND POSTTEST**

<table>
<thead>
<tr>
<th></th>
<th>No. of Cases</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>Standard Error</th>
<th>(Difference) Mean</th>
<th>S.D.</th>
<th>Standard Error</th>
<th>t Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>20</td>
<td>5.3</td>
<td>1.349</td>
<td>.300</td>
<td>-4.3</td>
<td>1.658</td>
<td>.371</td>
<td>11.60</td>
</tr>
<tr>
<td>Post-Test</td>
<td>20</td>
<td>9.6</td>
<td>1.903</td>
<td>.426</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the minimum score appears to be 6 and the maximum score becomes 13. Taking into account the fact that the test had earlier been established as both valid and reliable, we may assume, on the basis of the evident rise in minimum and maximum scores, that this difference may be attributed largely to the experience in which the participants had been engaged between the Pretest and Posttest periods. It is also evident that the mean score did change from 5.3, calculated as the mean score for the pretest, to 9.6, computed as the mean score for the posttest.

In an attempt to compare the mean scores more empirically, the difference between the mean scores for the pretest and posttest were subjected to the Student t Test to determine if this difference was significant. In Table 26 are illustrated the t Test applications to the difference in mean scores. The t value was found to be 11.6 and was deemed statistically significant when compared with the table of t values. The degrees of freedom used was N-1 or 19. The distribution of the t Table was entered with 19 degrees of freedom and a probability level of 0.05. The point of intersection yielded a t value of 2.093.

Summary

The fourteen item achievement test was administered twice to the school administrators who participated in the two units. The test was administered before and after they participated in the experience. The difference between the minimum/maximum score established for the pretest and posttest indicated that a degree of cognitive change did take place as a result of the experience. The mean score rose from 5.3 to
9.6 which further indicated that a cognitive change took place. Finally the difference of the mean scores was subjected to a t Test to determine whether that difference was significant. The t value of 11.6, a statistically significant factor, provided still further confirmation of the change that took place.

Results from the Questions Relating to the Determination of the Potential for further Development of learning experiences Using the same instructional Approach

In an attempt to determine the potential for further development of learning experiences using the audio modular approach one "closed" question, four "open-ended" completion statements, and one "open-ended" question were asked. The data obtained have been tabulated and the results placed on separate tables. The following subsections have been divided according to the information solicited by the respective questions. The subsections are as follows: 1) results from the "closed" question relating to the participants' desire to participate in additional audio modular instructional units; 2) two "open-ended" completion statements relating to the conditions under which the participants would or would not participate in any more audio modular units; 3) two "open-ended" completion statements attempting to determine the value of developing more audio modular units; and 4) one "open-ended" question soliciting information concerning the types of skills which could be learned through the use of the audio modular instructional approach.
Results from the "closed" Question Relating to the Participants' Desire to Participate in Other Modules

In Table 27 are presented the answers obtained to the "closed" question "If you had the opportunity would you participate . . .?"

<table>
<thead>
<tr>
<th>Response Pattern</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Yes, definitely</td>
<td>12</td>
</tr>
<tr>
<td>Yes, probably</td>
<td>4</td>
</tr>
<tr>
<td>I don't know</td>
<td>2</td>
</tr>
<tr>
<td>Probably not</td>
<td>2</td>
</tr>
<tr>
<td>Definitely not</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>20</td>
</tr>
</tbody>
</table>

The results show that 80% of the participants "probably" or "definitely" would participate in additional audio modular presentations. Sixty percent said that they definitely would participate if they had the opportunity. Only two administrators answered by saying that they probably would not participate. Two participants chose the neutral response category in answer to this question. No one elected to state that he or she would definitely not participate in additional audio modular presentations if he/she had the opportunity.
Results of the Categorization of the Two Completion Statements

In Tables 28 and 29 are presented the data obtained from the categorization of the answers provided by the respondents to the two "open-ended" statements referring to the conditions under which the respondents would or would not participate in an audio modular instructional unit.

TABLE 28

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE OPEN-ENDED STATEMENT "I WOULD SPEND TIME PARTICIPATING IN AN AUDIO MODULAR INSTRUCTIONAL UNIT IF/ONLY IF . . ."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>I thought it was useful &amp; helpful</td>
<td>6</td>
</tr>
<tr>
<td>I had the time</td>
<td>4</td>
</tr>
<tr>
<td>I knew what it dealt with</td>
<td>3</td>
</tr>
<tr>
<td>It dealt with an interesting area</td>
<td>1</td>
</tr>
<tr>
<td>I thought it would help me</td>
<td>1</td>
</tr>
<tr>
<td>I had a specific problem</td>
<td>1</td>
</tr>
<tr>
<td>Time were provided during the day</td>
<td>1</td>
</tr>
<tr>
<td>It was as short as this one</td>
<td>1</td>
</tr>
<tr>
<td>Credit were given for it</td>
<td>1</td>
</tr>
<tr>
<td>I were given one</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

In reference to the question relating to the conditions under which the administrators would spend time participating in an audio modular unit, very little conclusion can be reached because of the variety of responses. Thirty percent of the respondents did say that
they would participate if they thought it would be helpful and useful. Four participants said that they would participate if they had the time. Three others said that their participation would depend on what the presentation dealt with. The other ideas expressed ranged from such answers as "I had a specific problem" to "I were given credit." There were seven responses that could not have been categorized or grouped with any other and still connote what the participant was saying.

TABLE 29

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE OPEN-ENDED STATEMENT "I WOULD DEFINITELY NOT SPEND TIME PARTICIPATING IN AN AUDIO MODULAR INSTRUCTIONAL UNIT IF . . . ."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I thought it wouldn't be helpful or useful</td>
<td>8</td>
</tr>
<tr>
<td>It had to be done at a specific time</td>
<td>3</td>
</tr>
<tr>
<td>I had a crisis at work</td>
<td>2</td>
</tr>
<tr>
<td>I couldn't get my hands on it</td>
<td>2</td>
</tr>
<tr>
<td>It didn't involve people I work with</td>
<td>2</td>
</tr>
<tr>
<td>There were no follow up activities</td>
<td>1</td>
</tr>
<tr>
<td>I thought it would be a waste of time</td>
<td>1</td>
</tr>
<tr>
<td>It had to be done after school</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL 20 100.0

The data provided in Table 29 provided basically the same results as obtained from Table 28. Forty percent said that they would definitely not spend time participating in an audio modular unit if they thought it wouldn't be useful or helpful. A response category provided in Table 29
which was not evident before was the one where 15% of the respondents said they wouldn't participate in an audio modular unit if it had to be completed at a specified time. This probably relates more so to the composition of the two units developed for this study, in that, it was required that three people be involved in the units.

Results of the Two "Open-ended" Statements Soliciting Responses Pertaining to the Value of Developing more Audio Modular Units.

In an attempt to solicit responses pertaining to the value of developing additional audio modular units, the participants were asked to complete an "open-ended" statement specifically referring to recommendations for anyone developing more audio modular instructional units. The results of the categorization of the answers are illustrated in Table 30.

**TABLE 30**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retain the same format</td>
<td>6</td>
</tr>
<tr>
<td>Survey the field for current topics of interest</td>
<td>4</td>
</tr>
<tr>
<td>Deal with one skill at a time</td>
<td>3</td>
</tr>
<tr>
<td>Do extensive field testing first</td>
<td>3</td>
</tr>
<tr>
<td>List objectives very carefully</td>
<td>1</td>
</tr>
<tr>
<td>Have it deal with a variety of skills</td>
<td>1</td>
</tr>
<tr>
<td>Make it helpful</td>
<td>1</td>
</tr>
<tr>
<td>Make it as short as this one</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>
All participants responded to the statement. Thirty percent of the participants were impressed with the two units they experienced and so recommended that anyone who would develop other modules retain the same format. Four other respondents said that, before developing additional modules, one should survey the field for current topics of interest. Three participants felt that a unit should deal with one skill at a time while one respondent felt that the module should deal with a variety of skills. One participant claimed that the unit should be as short as the two developed for this study. Over all the comments were supportive and encouraging. There were no negative responses or statements made.

In an attempt to solicit more specific information concerning the participants' attitude toward the audio modular approach and the potential for future development of instructional units, the respondents were asked to complete the statement "If I were to receive an audio modular instructional unit on a Monday of a 'typical' work-week I would . . . ." The analysis of the answers provided for the preceding question ascertained that the participants encouraged the development of additional units. This question attempted to elicit responses relating to whether the participants felt they would actually participate in a modular unit, if they received one. The results of the categorization of responses to that question are illustrated in Table 31.

Half the respondents claimed that if they were to receive an audio instructional unit they would either complete it during the week (25%), or that they would try to complete it as soon as possible (25%). Four participants responded by saying that they would first check whether
the unit was appropriate to their needs. Ten percent claimed that they would complete it during the week-end. Two said that they would encourage others to participate with them. Only two respondents said they would put it aside.

**TABLE 31**

RESULTS OF THE CATEGORIZATION OF THE RESPONSES RELATED TO THE "OPEN-ENDED" STATEMENT, "IF I WERE TO RECEIVE AN AUDIO MODULAR INSTRUCTIONAL UNIT ON A MONDAY OF A 'TYPICAL' WORK-WEEK I WOULD:"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete it during the week</td>
<td>5     25.0%</td>
</tr>
<tr>
<td>Try to complete it as soon as possible</td>
<td>5     25.0%</td>
</tr>
<tr>
<td>Check if it was appropriate</td>
<td>4     20.0%</td>
</tr>
<tr>
<td>Complete it during the week-end</td>
<td>2     10.0%</td>
</tr>
<tr>
<td>Put it aside</td>
<td>2     10.0%</td>
</tr>
<tr>
<td>Encourage others to participate with me</td>
<td>2     10.0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>20    100.0%</td>
</tr>
</tbody>
</table>

Responses Related to the "Open-Ended" Question Asking Participants to Recommend Skills for Modular Units

Table 32 presents the data obtained from the "open-ended" question requesting suggestions as to what skills and knowledges the participants felt could be learned and/or improved through the use of audio modular units.

Eighteen participants responded to this question, generating 50 answers. These responses were categorized under 20 different categories. More than fifty percent fell into the categories of: Communication (18%),
Listening (8%), Administrative skills (8%), Organizational behavior (6%), and Human relations (6%). It was interesting to note that 8% thought there was no limit to the skills that could be learned or improved upon through the use of the audio modular technique. Some of the responses particularly interesting to this investigator were: decision making skills (4%), negotiating skills (4%), and conducting conferences (2%).

**TABLE 32**

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE QUESTION, "WHAT KIND OF SKILLS AND KNOWLEDGES, AS SCHOOL ADMINISTRATOR, DO YOU THINK COULD BE LEARNED AND/OR IMPROVED THROUGH THE USE OF AUDIO MODULAR INSTRUCTION?"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Communication</td>
<td>9</td>
</tr>
<tr>
<td>Listening</td>
<td>4</td>
</tr>
<tr>
<td>No limit</td>
<td>4</td>
</tr>
<tr>
<td>Administrative skills</td>
<td>4</td>
</tr>
<tr>
<td>Organizational behavior</td>
<td>3</td>
</tr>
<tr>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>Budget</td>
<td>2</td>
</tr>
<tr>
<td>Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>Inter-Group Relations</td>
<td>2</td>
</tr>
<tr>
<td>Clarifying and Supporting</td>
<td>2</td>
</tr>
<tr>
<td>Group Dynamics</td>
<td>2</td>
</tr>
<tr>
<td>Teacher Problems</td>
<td>2</td>
</tr>
<tr>
<td>Negotiation Skills</td>
<td>2</td>
</tr>
<tr>
<td>Planning Techniques</td>
<td>2</td>
</tr>
<tr>
<td>Diagnostic Skills</td>
<td>2</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1</td>
</tr>
<tr>
<td>Conduct Conferences</td>
<td>1</td>
</tr>
<tr>
<td>Alternative Thinking</td>
<td>1</td>
</tr>
<tr>
<td>Filing information</td>
<td>1</td>
</tr>
<tr>
<td>Responding effectively</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>50</td>
</tr>
</tbody>
</table>
Summary

In this section, one "closed" question, four "open-ended" completion statements and one "open-ended" question were asked in an attempt to solicit the participants' reactions toward further development of learning experiences using the same audio modular approach.

Table 27 and Table 31 are somewhat related in that they solicited information regarding the respondents' willingness to participate in other audio modular units and the time when they would choose to participate. In Table 27 we find that 80% of the respondents said that they would participate in other instructional units. More than half of the administrators said they definitely would participate. Only two of the responses were made in the category of "probably not" participate. No one responded by saying that they definitely would not participate. In Table 32, 25% said that if they were given an audio instructional unit, they would participate in it during that week. Another 25% said they would participate as soon as possible. The other responses were supportive, with the exception of two who said that they would put it aside.

Tables 28 and 29 provide the categorization of the responses to statements intended to determine the conditions under which the participants would or would not participate in audio modular instructional units.

Table 30 provides the responses obtained from the participants relating to suggestions for someone developing more audio modular units. Thirty percent felt that additional units should retain the same format.
as the two they had experienced. Fifteen percent suggested that the audio modular units deal with one skill at a time while one respondent said that each unit should deal with a variety of skills. If the responses were to be grouped along the similarities between the suggestions and the characteristics of the two units developed for this study, it would be seen that about 90% of the responses resembled the characteristics of two units.

In Table 32 are presented twenty skills or knowledges that the participants felt could be learned and/or improved through the use of audio modular instructional units. Although there were fifty answers provided, two of the participants didn't answer the question. The skill of effective communication was the highest on the list, representing 18% of the total number of skill areas or knowledges referred to.

**The Expenditure of Time and Money in the Development and Production of the two Modular Units.**

In an attempt to determine the monetary cost of the units produced for this study, the investigator maintained an accurate record of the expenditures made in the development and production of the two audio modular instructional units. Although accurate figures are available for the cost factor, it must be understood that the production cost would most probably have been lower if more than the actually 10 copies were produced. Receipts were kept for all items purchased for the production of the copies. These items include such things as: 1) binders, 2) dividers, 3) cassette tapes, 4) covers for second and third copies,
5) pouch for cassette tape, 6) tabs for identifying the sections and 7) labels. Also included in the cost account was considered the preparation of the text and the duplicating costs for both text and audio portion. As it was, the audio modular units cost $13.45 to reproduce on a ten-unit basis. The cost element would have been slightly higher if this investigator had engaged professional announcers to record the audio portion.

The time element was more difficult to compute since the two units used in this study were not entirely original in approach or orientation. As was discussed earlier, the two units were originally designed and pre-tested in 1970. Although this investigator re-designed the two units completely, the account of time expended on the development and reproduction is tempered by that existing variable. The other variable which added greatly to the time factor lies in the area of recording the actual audio portion. The preparation of the audio portion and the recording itself took over 60 hours. The audio portion was re-done some four times before this investigator felt it was ready as an instructional device. The recording involved this investigator and his wife, as a dialogue between two individuals comprised an integral part of the audio portion of the module.

The two units, which were used in the study, represented the third major reorganization of the module. Between the first and second revision, graduate students were used in an attempt to refine the product. The time spent by some six graduate students in this process could be estimated at about 15 hours. The revisions were made, under the supervision and guidance of this investigator’s chairman, Dr. Roger Peck,
whose time commitment can be roughly estimated at, at least, 50 hours.

The packaging of the modules took an enormous amount of time since the ten copies were being prepared simultaneously. Adding to the overall time factor was this investigator's intention to produce modules which would be attractive to the user.

Only an estimation, and a rough one at that, can be made regarding the time factor. In summary, it must be said that somewhere between 300 to 500 "man-hours" were spent on the development and production of the two units.

Results of the other Assessment Procedures Used

The additional procedures used in Phase I of the study included 1) "open-ended" questions on a written questionnaire, to determine the major strength and weakness of the two units, and 2) personal interviews conducted by the investigator with the participants to determine their perceptions of the experience during Phase I of the field testing.

Results from the "Open-Ended" Questions Soliciting Reactions Relating to the Major Strength and Major Weakness of the units

The results of the two questions are presented in Tables 33 and 34. Among the perceived strengths of the two audio modular units were such things as 1) convenient and flexible, answered by 20% of the respondents, and 2) combination of reading and listening to provide a participatory learning experience, answered by 25% of the respondents. Both of these strengths attributed to the two units are characteristics of any audio
modular instructional unit. So, it may be said that what 45% of the participants perceived as the major strength of the two units, developed for this study, were factors which should exist in any audio modular unit. Three participants felt that the greatest strength of the two units was in providing a learning experience geared at individual differences. The fact that the units dealt with skills required of most administrators was listed as the major strength by two participants.

Forty-five percent of the respondents said that there appeared to be no major weakness in the two units. Three participants felt that the units were repetitious in certain areas, while two respondents claimed that they found the units too lengthy. The other weaknesses, as perceived by the participants, were 1) Too Rogerian in approach (10%), 2) Time of day when presented (10%), 3) Difficulty in assuming roles (5%), and 4) at times, appeared too authoritarian (5%).

| TABLE 33 |
| RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE QUESTION, "WHAT WAS THE MAJOR STRENGTH OF THIS SPECIFIC AUDIO INSTRUCTIONAL MODULE?" |

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made in Each Category (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Combination of reading and listening to provide a participatory learning experience</td>
<td>5</td>
</tr>
<tr>
<td>Convenient and flexible</td>
<td>4</td>
</tr>
<tr>
<td>Reinforced communication techniques</td>
<td>3</td>
</tr>
<tr>
<td>Provided a learning experience geared at individual differences</td>
<td>3</td>
</tr>
<tr>
<td>Concerned with skills needed by all who work with people</td>
<td>2</td>
</tr>
<tr>
<td>Provided useful techniques</td>
<td>2</td>
</tr>
<tr>
<td>Clear and understandable</td>
<td>1/20</td>
</tr>
<tr>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>
TABLE 34

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE QUESTION, "WHAT WAS THE MAJOR WEAKNESS OF THIS SPECIFIC AUDIO INSTRUCTIONAL MODULE?"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made in Each Category (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>9 45.0</td>
</tr>
<tr>
<td>Too repetitious in certain areas</td>
<td>3 15.0</td>
</tr>
<tr>
<td>Too lengthy</td>
<td>2 10.0</td>
</tr>
<tr>
<td>Too Rogerian in approach</td>
<td>2 10.0</td>
</tr>
<tr>
<td>Time of day when I participated</td>
<td>2 10.0</td>
</tr>
<tr>
<td>Difficulty in assuming a role</td>
<td>1 5.0</td>
</tr>
<tr>
<td>At times appeared too authoritarian</td>
<td>1 5.0</td>
</tr>
<tr>
<td></td>
<td>20 100.0</td>
</tr>
</tbody>
</table>

Investigator's Perceptions Based on Informal Interviews Conducted with the Participants.

Because the participation in Phase I of the study was conducted through workshop sessions, this investigator had an excellent opportunity to informally interview the administrators after each session.

Most of the participants involved in Phase I of the field testing reacted in a very positive manner toward the units as instructional vehicles. The most outstanding advantage, expressed by many of the participants, was in the fact that this approach did not require them to travel to a predetermined location. Several administrators said that, even though they knew they needed more training in effective listening and in helping skills, they would not have travelled away from their school district to participate in such an experience. The second feature
of the two units, and the audio modular approach, appreciated by several administrators was the fact that they had the opportunity to decide when they would participate. Because the two units in this study, however, required the participation of three individuals, several assistant principals said that the timing was determined by their superiors.

A third point brought out by many of the participants was that the exercises included in unit two were ideally suited to encourage practicing administrators in realizing how little actual listening they do in their day-to-day activities. Most of the groups selected a topic of their own choice, to discuss during the listening exercise.

As a result of the field testing, this investigator has been contacted by two school districts requesting copies of the instructional units.

Summary

The results of the categorization of the question dealing with the perceived major strength of the two audio modular units showed that the greatest strength was in the approach. In reaction to the question dealing with the major weakness, almost half the participants claimed that they couldn't find any weakness in the two units.

The interviews held by the investigator with the participants supported the positive responses recorded in the data and helped to explain some of the negative attitudes. The one isolated explanation, considered by the investigator as significant, dealt with the fact that some of the assistant principals did not appreciate having to participate in the module at a time chosen to suit their superiors.
The Presentation and Analysis
of the Findings: Phase II

In the following sections an analysis will be made of the data collected from Phase II of the study. In this phase of the study, four different assessment approaches were used to determine the relative degree of effectiveness of using the audio modular instructional units for training school administrators to conduct the selected staff development training exercises with members of their instructional staff. The assessment procedures utilized were 1) Six "closed" and five "open-ended" questions soliciting reactions from the participants of the training exercises; 2) an objective assessment approach for attempting to determine the cognitive changes in the individuals as a result of participating in the exercises; 3) two Semantic Differential Scales used in an attempt to determine the connotative changes which might have taken place as a result of participating in the exercises; and 4) a subjective assessment approach for soliciting reactions from the participants (facilitators) of the training exercises.

Results of the Questions used to Solicit Reactions from the Participants of the Training Exercises (Teachers)

In an attempt to determine the participants' attitudes toward the experience, the teachers were asked to react to six "closed" questions and five "open-ended" questions. In the following two subsections are presented the results to these questions. The first subsection will include the results provided to the six "closed" questions and the
second subsection will provide the results of the categorization of responses to the "open-ended" questions.

Results of the "closed" Questions Pertaining to the Attitudes of the Participants in the Training Exercises (Teachers)

The "closed" questions dealt with the attitudes of the participants in relation to: 1) whether they found the experience interesting and meaningful; 2) whether they would be willing to subject themselves to other similar experiences; 3) whether they thought a facilitator was necessary; 4) whether they thought their facilitator performed well; and 5) whether they felt that the administrator was well trained as a facilitator.

Tables 35 and 36 present the data obtained from the responses to the questions relating to perceived interest and value. As illustrated in Table 35, 54.8% of the participants involved in the training exercises found them to have been "very interesting." Eighty-two of the 84 respondents felt the exercises were interesting. Only two participants said that they thought the exercises were somewhat boring. This number represented 2.4% of the total number of responses provided to the "closed" question relating to how interesting the participants found the exercises. It is interesting to note that not one of the eighty-four respondents felt that the exercises were "very boring."

Table 36 illustrates that 75 participants (89.3%) responded by saying that they found participating in the exercises a valuable learning experience. Over 35% of the participants felt that the exercises provided a very valuable learning experience. Ten percent stated that
they found the exercises to be an experience of little value. Once again, as in the case presented in Table 35, in answer to the question "I found participating in the exercises:" no one found the exercises to be of no worth to their own learning.

**TABLE 35**

**RESULTS OF THE RESPONSES TO THE QUESTION, "I FOUND PARTICIPATING IN THE EXERCISES:"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=84)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>very interesting</td>
<td>46</td>
</tr>
<tr>
<td>somewhat interesting</td>
<td>36</td>
</tr>
<tr>
<td>somewhat boring</td>
<td>2</td>
</tr>
<tr>
<td>very boring</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>84</td>
</tr>
</tbody>
</table>

**TABLE 36**

**RESULTS OF THE RESPONSES TO THE QUESTION, "I FOUND PARTICIPATING IN THE EXERCISES:"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=84)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>a very valuable learning experience</td>
<td>30</td>
</tr>
<tr>
<td>a learning experience of some value</td>
<td>45</td>
</tr>
<tr>
<td>an experience of little value</td>
<td>9</td>
</tr>
<tr>
<td>an experience which was worthless</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>84</td>
</tr>
</tbody>
</table>
Table 37 illustrates the results of the responses provided to the "closed" question pertaining to how willing to participate the participants would have been if they had known, in advance, what the exercises were like. Forty-seven (56%) respondents said that they definitely would have participated in the exercises. It appears that over 90 percent (91.7%) would have either probably or definitely gone through the experience had they had the choice. Four answered in the neutral category while three participants (3.6%) felt that if they had a choice they probably would not have participated in the exercises. No one responded in the "definitely not" response category.

**TABLE 37**

RESULTS OF THE RESPONSES TO THE QUESTION "NOW THAT I KNOW WHAT THE EXERCISES ARE LIKE, IF I HAD THE CHOICE I WOULD:"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>have definitely participated in the exercises</td>
<td>Number No. 47</td>
</tr>
<tr>
<td>have probably participated in the exercises</td>
<td>Number No. 30</td>
</tr>
<tr>
<td>not have been able to decide</td>
<td>Number No. 4</td>
</tr>
<tr>
<td>have probably not participated in the exercises</td>
<td>Number No. 3</td>
</tr>
<tr>
<td>have definitely not participated in the exercises</td>
<td>Number No. 0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>Number No. 84</strong></td>
</tr>
</tbody>
</table>

The participants were asked whether they thought staff development training exercises, such as the ones they participated in, should
be facilitated. The results of the responses to that question are presented in Table 38.

**TABLE 38**

RESULTS OF THE RESPONSES TO THE QUESTION, "IF I WERE INVOLVED IN PREPARING TRAINING EXERCISES SUCH AS THE ONES IN WHICH I HAVE PARTICIPATED, I WOULD:"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=84)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>definitely include a facilitator</td>
<td>58</td>
</tr>
<tr>
<td>probably include a facilitator</td>
<td>24</td>
</tr>
<tr>
<td>probably not include a facilitator</td>
<td>1</td>
</tr>
<tr>
<td>definitely not include a facilitator</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>84</td>
</tr>
</tbody>
</table>

It appears evident that well over 90 percent of the participants felt that similar training exercises should include a facilitator. Fifty-eight respondents (69%) thought that training exercises should definitely include a facilitator. Two participants felt that if they were involved in preparing training exercises, they would probably or definitely not include a facilitator.

In Table 39 are presented the results to the "closed" question intended to find out how well the participants thought their facilitator functioned. The data in this table show that no one felt that the administrator had functioned poorly as a facilitator. Seventy-nine (94%) said that the administrator was either a good or very good facilitator. Five participants thought their administrator was a fair facilitator.
TABLE 39

RESULTS OF THE RESPONSES TO THE QUESTION, "THE WAY THESE EXERCISES WERE ORGANIZED AND PRESENTED, THE PERSON WHO FACILITATED THE EXERCISES WAS:"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=84)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>very good as facilitator</td>
<td>46</td>
</tr>
<tr>
<td>good as facilitator</td>
<td>33</td>
</tr>
<tr>
<td>fair as facilitator</td>
<td>5</td>
</tr>
<tr>
<td>poor as facilitator</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>84</td>
</tr>
</tbody>
</table>

Another "closed" question was utilized to find out how well prepared, the participants thought, the administrator was to facilitate the training exercises. The results of the responses to that question are illustrated in Table 40.

TABLE 40

RESULTS OF THE RESPONSES TO, "YOUR FACILITATOR, PRIOR TO CONDUCTING THE EXERCISES, PARTICIPATED IN AN AUDIO MODULAR INSTRUCTIONAL PACKET DEALING WITH HELPER/HELPEE RELATIONSHIP. HOW HELPFUL DO YOU THINK THIS TRAINING WAS IN HELPING HIM/HER FACILITATE THE EXERCISES?"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=84)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>very helpful</td>
<td>64</td>
</tr>
<tr>
<td>somewhat helpful</td>
<td>20</td>
</tr>
<tr>
<td>hardly helpful</td>
<td>0</td>
</tr>
<tr>
<td>wasn't helpful at all</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>84</td>
</tr>
</tbody>
</table>
The participants were told that the administrator had undergone an instructional packet before facilitating the exercises. The question then asked was "How helpful do you think this training was in helping him/her facilitate the exercises?" All 84 respondents said that they thought the training was somewhat helpful (23.8%) or very helpful (76.2%). Not one of the participants answered in the negative categories provided.

Results of the Categorization of the "Open-Ended" Questions Pertaining to the Attitudes of the Participants (TEACHERS)

The "open-ended" questions dealt with concerns such as 1) the major strength and weakness of the training exercises, 2) the knowledge and skills the participants felt they had learned through the exercises, 3) how well trained the facilitator was perceived to have been, and 4) changes that should be made in the exercises.

In Table 41 are presented the data obtained from the categorization of the responses to the question relating to the major strength of the training exercises. Eighty-one participants responded to the question. There was a variety of responses provided by the participants resulting in the creation of eighteen categories. Some of the responses provided were: a) teaches one to really listen (17.2%); b) importance of communication (9.9%); c) innovative and interesting approach (9.9%); d) participation by all (8.6%); and e) helped clarify and evaluate my own actions (7.4%). No observations can be made empirically as the categories were well dispersed regarding number and percent of responses in each. By simply scanning the categories, it is evident that many
of them relate to the approach.

TABLE 41

RESULTS OF THE CATEGORIZATION OF RESPONSES TO THE QUESTION
"WHAT WAS THE MAJOR STRENGTH OF THESE EXERCISES?"

<table>
<thead>
<tr>
<th>Response Category</th>
<th>Number and Percent of Responses Made in Each Category*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Teaches one to really listen</td>
<td>13</td>
</tr>
<tr>
<td>Shows the importance of communication</td>
<td>8</td>
</tr>
<tr>
<td>Innovative and interesting approach</td>
<td>8</td>
</tr>
<tr>
<td>Participation by all</td>
<td>7</td>
</tr>
<tr>
<td>Helped clarify &amp; evaluate my actions</td>
<td>6</td>
</tr>
<tr>
<td>Made one play a realistic role</td>
<td>6</td>
</tr>
<tr>
<td>Interesting to see how others react</td>
<td>5</td>
</tr>
<tr>
<td>Open &amp; frank manner</td>
<td>5</td>
</tr>
<tr>
<td>Clarity and usefulness</td>
<td>5</td>
</tr>
<tr>
<td>Relaxed atmosphere, small group</td>
<td>4</td>
</tr>
<tr>
<td>A good &quot;refresher&quot;</td>
<td>3</td>
</tr>
<tr>
<td>Forces one to speak precisely</td>
<td>3</td>
</tr>
<tr>
<td>Presented new ideas</td>
<td>2</td>
</tr>
<tr>
<td>The way it was facilitated</td>
<td>2</td>
</tr>
<tr>
<td>Non verbal cues</td>
<td>1</td>
</tr>
<tr>
<td>Well structured and organized</td>
<td>1</td>
</tr>
<tr>
<td>Involvement with administrators</td>
<td>1</td>
</tr>
<tr>
<td>Understanding the helping relationship</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>81</td>
</tr>
</tbody>
</table>

*3 did not respond.

Table 42 presents the 77 categorized responses relating to the perceived weaknesses of the training exercises. The most outstanding weakness was categorized as dealing with the time limitations. The investigator had suggested that the facilitators stop the exercises at a time when they felt that either the objectives had been met or that there was an impasse created in the role playing. For the two similar exercises included in the two audio modular units a suggested time limit
of five minutes per exercise was proposed. It would appear that in at least 21 instances the participants felt that the exercises should not have been terminated. Sixteen other respondents felt that they could not identify the major weakness of the exercises. Obviously, some of the participants thought that the pre and post testing and opinionnaires were part of the exercises since ten listed those as the major weakness. As with the question relating to the major strength, this question elicited a variety of responses which this investigator categorized into 15 response patterns.

TABLE 42

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE QUESTION "WHAT WAS THE MAJOR WEAKNESS OF THESE EXERCISES?"

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number and Percent of Responses Made in Each Category*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Too brief and therefore limiting</td>
<td>21</td>
</tr>
<tr>
<td>None</td>
<td>16</td>
</tr>
<tr>
<td>Questionnaires &amp; Pretest/Posttest</td>
<td>10</td>
</tr>
<tr>
<td>Assuming roles caused tenseness and artificiality</td>
<td>8</td>
</tr>
<tr>
<td>Need a few specific examples of student problems to deal with</td>
<td>4</td>
</tr>
<tr>
<td>Exercises like these require more involvement</td>
<td>3</td>
</tr>
<tr>
<td>Time of day chosen for them</td>
<td>3</td>
</tr>
<tr>
<td>Topic chosen for exercise</td>
<td>2</td>
</tr>
<tr>
<td>Facilitator should not be administrator</td>
<td>2</td>
</tr>
<tr>
<td>Forced one to take an opposite viewpoint</td>
<td>2</td>
</tr>
<tr>
<td>Implied that there was only one way to deal with problems</td>
<td>2</td>
</tr>
<tr>
<td>Not enough background provided</td>
<td>1</td>
</tr>
<tr>
<td>Lack of tapes</td>
<td>1</td>
</tr>
<tr>
<td>Not enough time to prepare for roles</td>
<td>1</td>
</tr>
<tr>
<td>Provided no proof that this method was better than any other</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>77</td>
</tr>
</tbody>
</table>

*8 participants did not respond.
The next "open-ended" question asked the participants to list the skills and knowledges they felt they had learned from the exercises. Table 43 illustrates the results of the responses provided by 75 participants. Slightly over 45% of those who answered the question felt that they had learned how to listen more effectively. Another eleven (14.7%) participants thought the exercises were helpful in teaching them how to better handle a student-teacher conference. Nine (12%) participants said that the exercises helped focus their attention on knowledge they already possessed but didn't use. The other responses ranged from categories such as, "nature of the role of helper and helpee" (five participants--6.7%) to "how to moderate exercises" (one participant--1.2%).

**TABLE 43**

RESULTS OF THE CATEGORIZATION OF RESPONSES MADE TO THE QUESTION "BRIEFLY STATE WHAT YOU FEEL YOU HAVE LEARNED FROM THESE EXERCISES."

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number and Percent of Responses Made in Each Category*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Listening more effectively</td>
<td>34</td>
</tr>
<tr>
<td>Handle a student-teacher conference better</td>
<td>11</td>
</tr>
<tr>
<td>Reaffirmation of knowledge I had but wasn't using</td>
<td>9</td>
</tr>
<tr>
<td>Nature and role of helper and helpee</td>
<td>5</td>
</tr>
<tr>
<td>Learning to understand people</td>
<td>4</td>
</tr>
<tr>
<td>Need for mutual respect</td>
<td>3</td>
</tr>
<tr>
<td>Satisfying the speaker</td>
<td>2</td>
</tr>
<tr>
<td>Asking proper opening questions</td>
<td>2</td>
</tr>
<tr>
<td>Speaking clearly</td>
<td>2</td>
</tr>
<tr>
<td>Not sure</td>
<td>2</td>
</tr>
<tr>
<td>How to moderate exercises</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>75</td>
</tr>
</tbody>
</table>

*9 participants did not respond.
In order to supplement a "closed" question relating to how effectively the facilitator functioned, an "open-ended" question soliciting reactions from the participants was asked. In Table 44 are provided the results of the categorization of the responses to the question "How well trained do you think your facilitator was to conduct these exercises?"

**TABLE 44**

RESULTS OF THE CATEGORIZATION OF RESPONSES TO THE QUESTION "HOW WELL TRAINED DO YOU THINK YOUR FACILITATOR WAS TO CONDUCT THESE EXERCISES?"

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number and Percent of Responses Made in Each Category (N=84)</th>
</tr>
</thead>
<tbody>
<tr>
<td>very well trained</td>
<td>32 (38.1)</td>
</tr>
<tr>
<td>excellently trained</td>
<td>16 (19.0)</td>
</tr>
<tr>
<td>well trained</td>
<td>13 (15.5)</td>
</tr>
<tr>
<td>fairly well trained</td>
<td>10 (11.9)</td>
</tr>
<tr>
<td>did an excellent job, given the time constraints</td>
<td>6 (7.1)</td>
</tr>
<tr>
<td>can't judge</td>
<td>3 (4.1)</td>
</tr>
<tr>
<td>was helpful and informative</td>
<td>3 (4.1)</td>
</tr>
<tr>
<td>not very well</td>
<td>1 (1.2)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>84 (100.0)</strong></td>
</tr>
</tbody>
</table>

In comparison to the responses provided in Table 39, the responses to the "open-ended" question were similar since in both tables more than half the respondents felt that the facilitator was well trained and prepared. Also in comparison to Table 39, the responses were similar in relation to how well prepared and trained the participants felt
their facilitators were to conduct the exercises. Only one respondent felt that the administrator was not very well trained to facilitate the exercises.

Table 45 illustrates the responses provided to the question inviting suggestions for changes in the exercises. Five participants did not respond to this question. Of the 79 who did answer the question, thirty-seven (46.8%) felt that no change was necessary. Sixteen others thought that the time allotment should be increased. This supports the information relating to the perceived weakness of the exercises. Once again, twelve (15.2%) respondents felt that the change should be in the exclusion of the testing instruments and questionnaires. Five participants (7.3%) thought that the exercises should be facilitated during the day instead of after a day's work.

**TABLE 45**

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE QUESTION, "WHAT CHANGE(S) WOULD YOU SUGGEST BE MADE IN THE EXERCISES?"

<table>
<thead>
<tr>
<th>Response Categories</th>
<th>Number and Percent of Responses Made in Each Category*</th>
</tr>
</thead>
<tbody>
<tr>
<td>None at all</td>
<td>37 46.8</td>
</tr>
<tr>
<td>Increase time allotment</td>
<td>16 20.3</td>
</tr>
<tr>
<td>Exclude the questionnaire &amp; testing</td>
<td>12 15.2</td>
</tr>
<tr>
<td>Be done during the day (working)</td>
<td>5 7.3</td>
</tr>
<tr>
<td>Involve more people</td>
<td>3 3.8</td>
</tr>
<tr>
<td>Give participants additional material</td>
<td>3 3.8</td>
</tr>
<tr>
<td>Role playing should be optional</td>
<td>2 2.5</td>
</tr>
<tr>
<td>Better pairing for listening exercises</td>
<td>1 1.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>79 100.0</td>
</tr>
</tbody>
</table>

*5 participants did not respond.
Summary

Six "closed" questions were asked in an attempt to obtain indications from the participants relating to their attitudes toward the training exercises and their facilitators. The results from the answers indicate that the participants found the exercises both interesting and valuable. Of the 84 participants who responded, more than 95% thought that the exercises were interesting. Slightly less than 90% of the respondents said that they found the exercises to be a valuable learning experience. When asked if they would have participated in the exercises, knowing what they were like, over 80% said that they either probably or definitely would have and no one felt that he/she would definitely not have participated.

The other three "closed" questions dealt with the attitudes of the participants toward the facilitator. The results from these questions were supported later on by similar responses to "open-ended" questions relating to the effectiveness of the facilitator. When asked whether they thought a facilitator should be included in training exercises, the data show that over 90% of the participants felt that training exercises should include a facilitator. The participants were asked to respond to two "closed" questions and later to an "open-ended" question dealing with how effectively they thought the facilitator functioned. In the case of the "closed" question, 94% of the participants said that the facilitator was either good or very good. In answer to the "closed" question relating to how well trained the facilitator was, as perceived by the participants (teachers), all 84 respondents felt that the training was helpful. No one answered in either of the two negative categories.
In response to the "open-ended" question pertaining to the same point only one participant felt that the facilitator was not very well trained.

The participants were asked to respond to two "open-ended" questions in an attempt to determine the perceived strengths and weaknesses of the training exercises. The results indicated that the participants saw the major strength of the exercises to be primarily in the approach adopted, and secondly in the objectives of the exercises. In relation to the "weakness" question, two factors became evident upon analysis of the results. First, some participants (28.5%) objected to the time limit imposed by the facilitators. Secondly, some of the participants viewed the testing and opinionnaires as part of the exercises.

The data show that, when asked what they had learned from their participation in the exercises, almost all the participants listed the learning objectives of the two exercises. Thirty-four (45.3%) said that they had learned how to listen more effectively. Almost fifty percent of the respondents felt that no changes were necessary in the training exercises.

Results of Assessment Procedures Utilized to Determine the Cognitive Changes

The one group pretest posttest design was used in an attempt to determine the cognitive changes which took place as a result of participating in the training exercises. Each individual was administered the achievement test before participating in the exercises and immediately after the exercises.
Table 46 illustrates the comparison of the two applications of the test (Pre and Post) relating to minimum score, maximum score, range, mean score, and standard deviation. The data relating to the pretest show the minimum score as 0.00, the maximum as 8 and the range of 8. The data from the posttest illustrate the minimum score as 1.00, the maximum as 9 and the range of 8. There is an observable change between the pretest and posttest scores. The mean score for the Pretest was computed at 4.702. The mean score for the Posttest was calculated at 6.155, which shows a difference of 1.4524 between the scores resulting from the two applications of the test (pre and post).

Table 47 illustrates the t value computed for the difference in mean scores. The t value was determined at 10.22 which was deemed statistically significant when applied to the table of t values. The degrees of freedom used was determined at N-1 or 83 degrees. The distribution of the t Table was entered with 83 degrees of freedom and a probability level of 0.05 (two-tailed test). The point of intersection yielded a value of 1.99.

Summary

The ten item achievement test was administered twice to the teachers participating in the training exercises. The difference between the minimum/maximum score established for the pretest and posttest indicated that a degree of cognitive change took place as a result of the participation in the exercises. The mean score rose from 4.702 to 6.155 thus further indicating that a cognitive change did take place. Finally the
### Table 46
Comparison of the Pretest and Posttest Relating to Minimum Score, Maximum Score, Range, Mean Score, and Standard Deviation

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample size:</td>
<td>84</td>
<td>84</td>
</tr>
<tr>
<td>Minimum score:</td>
<td>0.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Maximum score:</td>
<td>8.00</td>
<td>9.00</td>
</tr>
<tr>
<td>Range:</td>
<td>8.00</td>
<td>8.00</td>
</tr>
<tr>
<td>Mean score:</td>
<td>4.702</td>
<td>6.155</td>
</tr>
<tr>
<td>Standard Deviation:</td>
<td>1.566</td>
<td>1.533</td>
</tr>
</tbody>
</table>

### Table 47
The Student t Test Applied to the Difference in Mean Scores Between the Pretest and Posttest

<table>
<thead>
<tr>
<th></th>
<th>No. of Cases</th>
<th>Mean Score</th>
<th>S.D.</th>
<th>Standard Error</th>
<th>(Difference) Mean</th>
<th>S.D.</th>
<th>Standard Error</th>
<th>t Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>84</td>
<td>4.702</td>
<td>1.566</td>
<td>0.171</td>
<td>-1.4524</td>
<td>1.302</td>
<td>0.142</td>
<td>10.22</td>
</tr>
<tr>
<td>Post-Test</td>
<td>84</td>
<td>6.155</td>
<td>1.533</td>
<td>0.167</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
difference of the mean scores was subjected to a $t$ Test to determine if that difference was significant. The $t$ value of 10.22 provided confirmation that the change was statistically significant.

Results of Procedures used to Determine a change in the Connotative meaning as a result of the training exercises

The participants were asked to react to two Semantic Differential Scales. On the first, administered before the exercises, the participants reacted to the Concept "Staff Development Training Exercises You Participated in before today, Involving an Administrator as Facilitator." On the second scale, administered after the exercises, the participants reacted to the Concept "Staff Development Training Exercises You Participated in (including those you participated in today) Involving an Administrator as Facilitator." The polar traits utilized in these two Semantic Differential Scales were the same as the ones used for the two concepts applied during Phase I of the study. The data illustrated in Table 48 show the results of the participants' responses to the scales, as related to the factors of evaluation, receptivity, potency and activity. The weighted mean scores for the four factors in Concept I "other training exercises" are lower than those computed for the same factors relating to Concept II "Training Exercises--Present study."

The differences between the weighted mean scores, for the four factors, were subjected to a $t$ Test. In all four cases, the change demonstrated by the difference between the weighted mean scores, was determined to be statistically significant.
TABLE 48
THE RESULTS OF THE RESPONSES TO THE CONNOTATIVE CONCEPTS IN RELATION TO THE FACTORS OF EVALUATION, RECEPITIVITY, POTENCY AND ACTIVITY

<table>
<thead>
<tr>
<th>Factor</th>
<th>Training Exercises (Present Study)</th>
<th>Training Exercises (Others)</th>
<th>Difference in Scores</th>
<th>t value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Score (S.D.)</td>
<td>Mean Score (S.D.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>5.6574 (.880)</td>
<td>4.0767 (1.132)</td>
<td>1.5807</td>
<td>10.36</td>
</tr>
<tr>
<td>Receptivity</td>
<td>5.7976 (1.035)</td>
<td>4.1071 (1.267)</td>
<td>1.6905</td>
<td>10.61</td>
</tr>
<tr>
<td>Potency</td>
<td>5.1905 (1.043)</td>
<td>3.8452 (1.123)</td>
<td>1.3452</td>
<td>8.86</td>
</tr>
<tr>
<td>Activity</td>
<td>5.0565 (1.080)</td>
<td>3.8899 (1.197)</td>
<td>1.1667</td>
<td>7.55</td>
</tr>
</tbody>
</table>

* With 83 degrees of freedom and probability level of 0.05 (two-tailed test), t value significant at 1.99.
Table 49 illustrates the comparison of the results obtained, through the same scales, in five specific polar traits. The difference in the weighted mean polarity scores for all five polar traits was found to be higher in relation to the concept including the training exercises developed for this study. Once again, the differences between the weighted mean scores were subjected to a t Test and all were determined statistically significant.

Summary

The data from the application of the two Semantic Differential Scales clearly indicated that the concept including the exercises developed for this study, elicited a greater positive reaction than did the concept excluding the exercises for the factors of evaluation, potency, activity and receptivity. The difference was determined statistically significant through the use of the Student t Test. This evidence was supported by the individual computations made for five polar traits. In all five cases, the mean polarity scores relating to the present two training exercises were found to be greater in value than those relating to training exercises excluding the two developed for this study. The differences were again determined statistically significant through the Student t Test.

Results of the Assessment Procedures used to solicit reactions from the Facilitators of the Exercises

An attempt was made to determine the school administrators' attitudes toward their experience in conducting the staff development
TABLE 49

THE RESULTS OF THE RESPONSES TO THE CONNOTATIVE MEANING OF THE CONCEPTS AS RELATED TO SEVERAL SPECIFIC POLAR TRAITS

<table>
<thead>
<tr>
<th>Polar Traits</th>
<th>Mean Polarity Scores (Sum of Weighted Responses) (N=84)</th>
<th>Training Exercises (Present Study)</th>
<th>Training Exercises (Others)</th>
<th>Difference in Scores</th>
<th>t value*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Score (S.D.)</td>
<td>Mean Score (S.D.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meaningful-Meaningless</td>
<td>5.9524 (1.097)</td>
<td>3.9167 (1.723)</td>
<td>2.0357</td>
<td>9.29</td>
<td></td>
</tr>
<tr>
<td>Useful-Useless</td>
<td>5.7738 (1.329)</td>
<td>4.0238 (1.613)</td>
<td>1.7500</td>
<td>7.36</td>
<td></td>
</tr>
<tr>
<td>Promising-Disappointing</td>
<td>5.3333 (1.329)</td>
<td>3.9405 (1.516)</td>
<td>1.3929</td>
<td>7.38</td>
<td></td>
</tr>
<tr>
<td>Interesting-Boring</td>
<td>5.8095 (1.435)</td>
<td>3.6905 (1.763)</td>
<td>2.1190</td>
<td>9.94</td>
<td></td>
</tr>
<tr>
<td>Relevant-Irrelevant</td>
<td>6.0119 (1.367)</td>
<td>3.9167 (1.858)</td>
<td>2.0952</td>
<td>8.73</td>
<td></td>
</tr>
</tbody>
</table>

* With 83 degrees of freedom and probability level of 0.05 (two-tailed test), t value is deemed significant at 1.99.
training exercises and their attitudes on how effective the audio modular instructional units were in preparing them to facilitate these exercises. This was accomplished through the use of 1) a written questionnaire incorporating both "open" and "closed" questions administered after the training exercises had been conducted, and 2) structured interviews conducted with four of the administrators.

Results of the "Closed" Questions Soliciting Reactions from the Facilitators

The facilitators were asked to respond to two "closed" questions on a written questionnaire. The first question dealt with the value of the experience with the two units (Phase I) in providing them with the skills and knowledge necessary for facilitating the training exercises. The second was an attempt to determine the facilitators' order of preference of alternative instructional approaches as vehicles for preparing them to facilitate staff development exercises.

The results of the responses to the question, "I found that as a result of my participation in the audio modular presentation, I was:" are presented in Table 50. All of the administrators said that the experience with the two units did prepare them to act as facilitators. No one felt that, as a result of participating in the two units, he/she was "poorly prepared" or "unprepared" to act as facilitator. Fifteen (75%) administrators answered by saying that they were "well" and "very well" prepared to act as facilitators.

Table 51 illustrates the results of the ranking of in-service approaches in an order of preference. The process for this ranking of preference was applied in identically the same way as in Table 22.
As is shown in the table, 13 facilitators (65%) ranked the audio modular approach as their highest preference, while no one ranked the approach as either the lowest or second to the lowest.

**TABLE 50**

RESULTS OF THE RESPONSES TO THE QUESTION "I FOUND THAT AS A RESULT OF MY PARTICIPATION IN THE AUDIO MODULAR PRESENTATION, I WAS:"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>very well prepared to act as facilitator</td>
<td>5</td>
</tr>
<tr>
<td>well prepared to act as facilitator</td>
<td>10</td>
</tr>
<tr>
<td>adequately prepared to act as facilitator</td>
<td>5</td>
</tr>
<tr>
<td>poorly prepared to act as facilitator</td>
<td>0</td>
</tr>
<tr>
<td>unprepared to act as facilitator</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>

As in Table 22, once again the same two in-service approaches were ranked closest to the audio modular approach and, the same two ranked lowest. In this application of the ranking for preference question, the mean of the weighted score for the audio modular approach was computed at 4.20, slightly higher than in Table 22.

**Summary**

In answer to the "closed" question pertaining to how well the administrators felt the two audio modular units helped prepare them to facilitate the training exercises, all the respondents felt that the units were helpful. Fifteen administrators (75%) said that, as a result
TABLE 51

RESULTS OF THE RESPONSES TO THE RANKING OF IN-SERVICE APPROACHES
IN AN ORDER OF PREFERENCE

<table>
<thead>
<tr>
<th>responses made (N=20)</th>
<th>highest scores</th>
<th>sum of weighted scores</th>
<th>weighted mean scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>attend an administrative conference to listen to speakers</td>
<td>5 2 7 6</td>
<td>28</td>
<td>1.40</td>
</tr>
<tr>
<td>attend an administrative conference involving a number of seminars</td>
<td>5 3 5 4 3</td>
<td>63</td>
<td>3.15</td>
</tr>
<tr>
<td>purchase a professional level book and read it</td>
<td>1 2 4 2 11</td>
<td>20</td>
<td>1.00</td>
</tr>
<tr>
<td>visit a neighboring school district</td>
<td>1 5 5 7 2</td>
<td>36</td>
<td>1.80</td>
</tr>
<tr>
<td>participate in an audio modular instructional unit</td>
<td>13 4 2 1</td>
<td>84</td>
<td>4.20</td>
</tr>
<tr>
<td>have a discussion session with other administrators from my district</td>
<td>2 11 1 4 1 1</td>
<td>64</td>
<td>3.20</td>
</tr>
</tbody>
</table>
of their participation in the two audio modular units, they were "well" and "very well" prepared to act as facilitators.

In reference to the ranking for preference of in-service approaches, including the audio modular approach, the results were very similar to the first application of that question. The audio modular approach was ranked highest by 13 administrators (65%). No one ranked the audio modular approach in either of the two lowest categories.

Results of the Responses relating to the major Strengths and Weaknesses of the two units

In an attempt to solicit responses concerned with the major strength and weakness of the audio modular units in providing administrators with the skills and knowledge necessary for conducting the staff development training exercises, two "open-ended" questions were included in the questionnaire. The results of the categorization of the responses are presented in Tables 52 and 53. In reference to the major strength of the two units, nine (35%) respondents felt that the major strength lay in helping administrators be better prepared to act as facilitators. Some 40% of the respondents answered this question by listing the characteristics of the audio modular approach. Two participants felt that the major strength of the two units was in providing them with a better understanding of communication.

Six administrators (30%) could find no apparent weaknesses in the two units. Eight other administrators felt that "time pressure" was the major weakness of the two units. Ten percent of the respondents felt that the major weakness lay in the fact that role playing exercises
are more difficult to facilitate since some people find it difficult to role play.

**TABLE 52**

**RESULTS OF THE CATEGORIZATION OF RESPONSES TO THE QUESTION "WHAT WERE THE MAJOR STRENGTHS OF THE TWO AUDIO MODULAR INSTRUCTIONAL UNITS . . ."**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better prepared to facilitate</td>
<td>9</td>
</tr>
<tr>
<td>Clear, concise and practical</td>
<td>2</td>
</tr>
<tr>
<td>Logical approach to inservice</td>
<td>2</td>
</tr>
<tr>
<td>Clearer understanding of communication</td>
<td>2</td>
</tr>
<tr>
<td>Experience with exercises</td>
<td>2</td>
</tr>
<tr>
<td>Exercises dealt with same thing as units</td>
<td>1</td>
</tr>
<tr>
<td>Versatility</td>
<td>1</td>
</tr>
<tr>
<td>List of objectives</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

**TABLE 53**

**RESULTS OF THE CATEGORIZATION OF RESPONSES TO THE QUESTION "WHAT WERE THE MAJOR WEAKNESSES OF THE TWO AUDIO MODULAR INSTRUCTIONAL UNITS . . ."**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No apparent weaknesses</td>
<td>6</td>
</tr>
<tr>
<td>Time pressure</td>
<td>4</td>
</tr>
<tr>
<td>Not enough time for the exercises</td>
<td>4</td>
</tr>
<tr>
<td>Some find it difficult to role play</td>
<td>2</td>
</tr>
<tr>
<td>Not enough background provided with exercises</td>
<td>2</td>
</tr>
<tr>
<td>Too many instructions</td>
<td>1</td>
</tr>
<tr>
<td>Not enough follow-up</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>
Results of Categorization of
Additional "open-ended" questions
utilized to solicit attitudes
from the administrators.

Several "open-ended" questions were included in the questionnaire. These questions focused on: 1) the changes which should be made in the two audio modular units and in the approach in order to better prepare school administrators to facilitate staff development exercises; 2) suggestions of topics for the further development of audio modular instructional units for the purpose of helping practicing school administrators conduct training exercises with their instructional staff.

Tables 54 and 55 illustrate the results of the categorization of the responses to the questions soliciting suggestions for possible changes in the two units and in the approach. In the case of the two units 10 administrators (55.6%) felt that no change was necessary and in reference to the approach 9 administrators (45%) answered in the same manner. The other changes suggested by the administrators relating to the two units were: a) more time (16.7%); b) divide the two parts into two modules (11.1%); c) cut out the testing (11.1%); and d) more audio packets (5.5%). Regarding the audio modular approach 4 administrators (20%) said that they couldn't suggest any changes. Another suggestion proposed by 3 administrators (15%) was that more tape instruction be provided. This investigator found this suggestion in contradiction with the responses made earlier, Table 34, regarding the major weakness of the two audio units where 3 administrators said it was too lengthy. It may be assumed, perhaps, that the suggestion in this table (Table 55) proposed that some tape instruction be provided
to assist the facilitator better conduct the training exercises.

The remaining suggestions were singularly proposed.

TABLE 54

RESULTS OF THE CATEGORIZATION OF THE RESPONSES MADE TO THE QUESTION "IN ORDER FOR AN ADMINISTRATOR TO BE BETTER PREPARED TO ACT AS FACILITATOR . . . WHAT CHANGES WOULD YOU SUGGEST BE MADE IN THE TWO AUDIO MODULAR UNITS?"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses in Each Category (N=20)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>No change at all</td>
<td>10</td>
</tr>
<tr>
<td>More time</td>
<td>3</td>
</tr>
<tr>
<td>Two parts should be two packets</td>
<td>2</td>
</tr>
<tr>
<td>Cut out the testing</td>
<td>2</td>
</tr>
<tr>
<td>More audio packets</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>18</td>
</tr>
</tbody>
</table>

*2 participants did not respond.

TABLE 55

RESULTS OF THE CATEGORIZATION OF THE RESPONSES TO THE QUESTION "WHAT CHANGES WOULD YOU MAKE IN THE AUDIO MODULAR INSTRUCTIONAL APPROACH IN ORDER TO BETTER PROVIDE ADMINISTRATORS WITH ASSISTANCE TO CONDUCT STAFF DEVELOPMENT TRAINING EXERCISES?"

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses in Each Category (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>None</td>
<td>9</td>
</tr>
<tr>
<td>Don't know</td>
<td>4</td>
</tr>
<tr>
<td>More tape instruction</td>
<td>3</td>
</tr>
<tr>
<td>More models for role playing</td>
<td>1</td>
</tr>
<tr>
<td>Include overhead transparencies</td>
<td>1</td>
</tr>
<tr>
<td>Make the presentation more intense</td>
<td>1</td>
</tr>
<tr>
<td>Pace should be faster</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20</td>
</tr>
</tbody>
</table>
In Table 56 are presented the results of the categorization of responses to the question "What kind of skills and knowledges do you think could be learned or improved through the use of audio modular instruction for the purpose of training practicing school administrators to conduct training exercises with their instructional staff?"

There were 28 responses generated to this question, as opposed to the 50 responses provided to a similar question (Table 32). The categories of responses were similar in both tables and the skill which appeared most frequently was "Communication" (Table 32--18% and Table 56--17.9%). The other skills and knowledges suggested more than once in Table 59 are: 1) Human relations (10.7%), 2) Unlimited (10.7%), 3) Awareness of others' feelings (10.7%), and 4) Decision-making (7.1%).

### TABLE 56

RESULTS OF THE CATEGORIZATION OF RESPONSES TO THE QUESTION "WHAT KINDS OF SKILLS AND KNOWLEDGES DO YOU THINK COULD BE LEARNED OR IMPROVED . . ."

<table>
<thead>
<tr>
<th>Categories</th>
<th>Number and Percent of Responses Made in Each Category (N=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Communication</td>
<td>5</td>
</tr>
<tr>
<td>Human relations</td>
<td>3</td>
</tr>
<tr>
<td>Unlimited</td>
<td>3</td>
</tr>
<tr>
<td>Awareness of others' feelings</td>
<td>3</td>
</tr>
<tr>
<td>Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>Brainstorming</td>
<td>1</td>
</tr>
<tr>
<td>Alternative thinking</td>
<td>1</td>
</tr>
<tr>
<td>How to avoid the &quot;game&quot;</td>
<td>1</td>
</tr>
<tr>
<td>How to become a better helper</td>
<td>1</td>
</tr>
<tr>
<td>Curriculum Development</td>
<td>1</td>
</tr>
<tr>
<td>Organizational Development</td>
<td>1</td>
</tr>
<tr>
<td>Listening</td>
<td>1</td>
</tr>
<tr>
<td>Responding to Critics</td>
<td>1</td>
</tr>
<tr>
<td>Interviewing</td>
<td>1</td>
</tr>
<tr>
<td>Innovations in Education</td>
<td>1</td>
</tr>
<tr>
<td>School Law</td>
<td>1</td>
</tr>
<tr>
<td>Open Classroom Techniques</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>28</td>
</tr>
</tbody>
</table>
Summary

The administrators were asked to respond to five "open-ended" questions relating to: 1) the major strength and weakness of the two units in preparing the participants (Phase I) to act as facilitators, 2) suggestions for changes to the two units and the audio modular approach, and 3) suggestions of skills and knowledges which could be taught or improved upon through the use of the audio modular method, in preparing administrators to act as facilitators. Although the questions were asked, in this instance, relating to the training of administrators as facilitators, the responses were not significantly different from those provided earlier to similar questions. In reference to the major strength, 35 percent thought it was in the area of better preparing them to act as facilitators. As for the major weakness, 30 percent of the respondents felt there was no apparent weakness. Another weakness mentioned by eight respondents was in the area of the time constraints.

The administrators were then asked to suggest possible changes in the two units and the audio modular approach. More than half of the respondents felt that no change was necessary in the two units and in relation to the approach, 45% answered by saying "no change" while another 20% said they didn't know what changes should be made.

Finally, the facilitators were asked to suggest skills and knowledges which could be taught or improved upon through the use of the audio modular approach in preparing practicing administrators to conduct staff development training exercises. The responses provided to this "open-ended" question were very similar to those provided to an earlier,
similarly oriented, question. The most frequently mentioned skill, in both applications, was that of communication.

Results obtained from the Interviews with Four Administrators.

The interviews were held, individually, with four administrators, after they had acted as facilitators in conducting the staff development exercises. These interviews were held when the investigator returned to the school districts to retrieve the test materials.

The interviews were structured so that the same questions were posed to the four administrators. The questions asked dealt with the same concerns as did the questions in the opinionnaires. The interviews were held to obtain additional feedback from the facilitators relating to their attitudes toward the effectiveness of the two units, the potential for future development of audio modular units pertaining to staff development and to gain additional information concerning their general impressions of Phases I and II of the study. The four administrators represented 1) a junior and senior high school principal from the Quabbin Regional area, 2) an elementary school principal from the Rockland school district, and 3) a high school assistant principal from the Deerfield area, and 4) an assistant principal/guidance director from the Burlington area.

In relation to the two units and the audio modular approach all four administrators said that their previous in-service experiences had been limited to traditional programs. The approach utilizing a cassette tape supplemented by a programmed text was unique and stimulated their
curiosity. They claimed that the audio modular instructional units provided an alternative learning experience adaptable to an administrator's work schedule. There was agreement among the administrators interviewed, that the audio modular instruction was a beneficial experience.

Their impressions of the two units, developed for this study, were extremely favorable and somewhat complimentary. They felt that the conference skills were very appropriate and that the organization and presentation of the two units was well accomplished. All were very eager to suggest others who might want to participate in the two units. Since the field testing, this investigator has been contacted by several administrators who were referred by the participants. One workshop has been arranged for a group of elementary administrators in the Quabbin school district and another is being planned for a group of administrators from the Harvard area.

In reference to the training exercises, the administrators felt that some written and audio instructions would be helpful. On the other hand, one of the administrators claimed that he would prefer to facilitate exercises which didn't involve written or taped instructions because he felt that he could make the training less formal and more appropriate to the needs of his staff.

The greatest problem, all four administrators agreed, was the testing and opinionnaire process which was necessary because this was a study. They said that they understood the instrumentation was used for this investigator's study and although they were informed of this situation in advance, they found the answering of tests and opinionnaires
detracted from the quality of both the units and the exercises. All four said that the tests and questionnaires took longer to complete than the two units and exercises. Two administrators claimed that their teachers, participating in the exercises, were enthusiastic about the exercises but that they had difficulties in asking the teachers to complete the questionnaires.

Summary

As a result of the structured interviews held with four of the participating administrators, it would appear that the modular approach is perceived as an effective technique for presenting selected concepts, skills and information. In relation to the two units, developed for this study, the information solicited from the administrators was highly supportive.

The major weakness, as expressed by the administrators interviewed, lay in the very fact that this was a study and therefore necessitated data-furnishing questionnaires and tests.
CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study was exploratory in nature, in that it was an initial attempt to determine how effective the audio modular instructional approach would be for training practicing school administrators to conduct their instructional staff. The study also reflected a higher level of exploration, in that it was the third study in a series of studies attempting to determine the suitability of using the audio modular instructional approach as an alternative in-service training technique for presenting selected concepts and skills to school administrators.

The major objectives of the study were 1) to determine the suitability of utilizing the audio modular instructional approach for providing practicing school administrators with selected interpersonal skills and knowledge relating to the area of staff development; and, 2) to determine the relative degree of effectiveness of using the audio modular approach for training school administrators to conduct selected staff development training exercise with members of their instructional staff.

In the preceding chapter the findings were presented and analyzed. In the present chapter a summary of the findings will be presented, followed by the conclusions reached from these findings. The recommendations based upon the findings and conclusions of this study will then be presented.
The procedure used to present the summary of results will be identical to the one utilized, in the previous chapter, to present the findings and the analysis of these findings. The summary will therefore be divided into two major sections: 1) the summary of the findings for Phase I, and 2) the summary of the findings for Phase II.

The Summary of the Findings: Phase I

In the following sections, the summaries of the findings for Phase I of the study will be presented.

The Summary of the Findings relating to the Participants' interest in the Experience, their motivation resulting from the experience and, their attitudes toward more specific aspects of the two units

The data appear to indicate that the participants had a positive attitude toward their experience with the two modular units. On the two "closed" questions pertaining to their interest in the experience, results show that 100 percent viewed the experience as interesting and valuable. In neither the question dealing with interest nor the question relating to the perceived value did any one of the respondents answer in the negative response categories. In reference to the time they spent participating in the two units, once again all the participants felt that it was either "probably" or "definitely" worth that amount of time.

In response to the question relating to whether they would have chosen to participate in the two units, knowing what they were like, 80 percent felt that they either "probably" or
"definitely" would have participated. The results from the question dealing with their willingness to recommend the two units to their fellow administrators show that 95 percent would be "somewhat likely" or "very likely" to do so. The data indicate that the participants felt that the technical aspects, such as, general appearance and synchronization of tape and text, were very good. The lowest rating, of the seven aspects listed, was the quality of the tape which was judged by 5 participants to be "average."

To support the data obtained through the use of the "closed" questions, the participants were asked to complete six "open-ended" statements relating to the two modular units. The responses to the statements pertaining to the discussion questions, exercises, diagrams and the two-unit composition of the module, indicated a high level of support. The participants appeared to want no major changes in the two modular units. In fact, 65 percent felt that no change at all was necessary and 50 percent indicated, in a subsequent question, that the two units should remain exactly as they are.

Summary of the Findings
Relating to the Perceived Worth of the Experience as Compared to Alternative Approaches

The results from the two "open-ended" questions eliciting information relating to the participants' choice of alternative approaches, indicate that more than 50 percent of the participants felt that there was no instructional method better suited to teach them what they had learned by participating in the audio instructional units. In reference to suggested changes, more than half
the participants felt that no change was necessary. The majority of the other responses categorized as 1) the need for additional modules, 2) the need for films or videotaping, 3) the need for additional simulation exercises, and 4) the need for the use of an overhead projector.

The analysis of the results to a ranking of in-service approaches in an order of preference, 12 (60%) administrators ranked the audio modular approach as their highest preference. The second highest preference was given to holding a discussion session with fellow administrators.

Summary of the Findings
Relating to the Connotative meaning of the experience as compared to the connotative meaning of a concept signifying any other type of experience

In an attempt to move toward a broader perspective on the audio modular instructional approach as a concept, the participants were asked to react to two Semantic Differential Scales for determining the connotative meaning of the concepts: 1) "audio modular instruction as one alternative approach to in-service education for school administrators," and 2) "in-service educational programs for school administrators in which you have participated (excluding the audio modular instructional approach)."

The data from the application of the scales indicate that the audio modular instructional approach elicited a greater positive reaction than did the concept signifying any other in-service
approach for the factors of evaluation, potency, activity, and receptivity. The difference of the weighted mean scores for the factors were calculated at 1.3056 for evaluation, 1.2833 for receptivity, 0.7500 for potency and 0.8500 for activity. When their differences were subjected to the t Test they were all found to be statistically significant.

The same process was applied to five individual polar traits. In all five, the audio modular instructional approach elicited a greater positive reaction. When the mean polarity scores for the entire Concept I were compared to the mean polarity score for Concept II, it was found that the difference of the mean scores was 1.0578, representing a t value of 5.05, in favor of the audio modular approach.

**Summary of the Findings Relating to the cognitive changes that took place in the individuals**

An attempt was made to measure the degree of cognitive change that took place in the participants as a result of participating in the experience. The achievement test was validated and tested for reliability. The fourteen item test was administered twice to the school administrators who participated in the two units. The test was administered before and after the administrators participated in the experience. The comparison between the minimum/maximum scores established for the pretest and posttest showed that a degree of cognitive change did take place as a result of the experience.
The mean score changed from 5.3 to 9.6, which further indicated that a cognitive change took place. Finally the difference of the mean scores was subjected to a t Test to determine whether that difference was significant. The t value of 11.6, a statistically significant factor, provided confirmation that the positive cognitive change was significant.

Summary of Findings Relating to the Potential for Further Development of learning experience utilizing the same instructional approach

In an attempt to determine the potential for further development of learning experiences using the same approach, one "closed" question, four "open-ended" completion statements and, one "open-ended" question were asked.

The data indicate that 80 percent of the respondents expressed a desire to participate in additional instructional units. More than 50 percent said that they definitely would participate. In relation to when the administrators would participate in an audio instructional unit, if they were given one, only two administrators said they would put it aside.

To further solicit participant reaction to the audio modular approach, an open-ended statement was asked to obtain suggestions for the development of additional audio modular instructional units. Thirty percent felt that future units should retain the same format as the two they had experienced.
The final "open" question was directed at obtaining information relating to the skills and topics which the participants felt could be learned and/or improved upon, through the use of audio instructional units. From the responses received, 50 suggestions were recorded covering 20 areas. The skill of communication was the highest preference representing 18 percent of the total number of skill areas referred to.

Summary of the Findings
Relating to the Expenditure of Time and Money

In an attempt to determine the monetary cost of the two units produced for this study, the investigation maintained an accurate record of the expenditures made in the development and production of the two units. The cost of the module was $13.45 per copy, as calculated on a ten-unit basis. Only an estimation could be made regarding the amount of time it took to develop and produce the two units. In summary, it may be said that between 300 to 500 "man-hours" were spent on the development and production of the two units.

Summary of the Findings
Resulting from Additional "Open-Ended" Questions and Informal Interviews Conducted With the Participants

In relation to the major strength and weakness of the two audio modular units, the data indicate that the participants felt the greatest strength was in the approach and almost half claimed they couldn't find any weaknesses in the two instructional units.
The interviews conducted with the participants supported the positive responses recorded in the data and helped explain some of the negative attitudes expressed in a few instances.

The Summary of the Findings: Phase II

In the following sections, the summaries of the findings for Phase II of the study will be presented.

Summary of the Findings
Relating to the Attitudes of the Teachers to the Training Exercises

In an attempt to determine the participants' attitudes toward the experience the teachers were asked to react to six "closed" questions and five "open-ended" questions. In the following two subsections are presented the summaries of the findings. The first subsection will include the summary of results provided to the six "closed" questions and, the second subsection will provide the summary of results of the categorization of responses to the "open-ended" questions.

Summary of the Results
Provided to the Six "Closed" Questions

The teachers found the training exercise both interesting and valuable. Of the 84 participants who responded, more than 95 percent thought the exercises were interesting. Slightly less than 90 percent said that they found the exercises to be a valuable learning experience. When asked if they would have
participated in the exercises, knowing what they were like, over 80 percent responded by saying that they either "probably" or "definitely" would have, and no one felt that he/she would definitely not have participated.

The other "closed" questions dealt with the participants' attitudes toward the facilitators. The data show that over 90 percent of the participants felt that training exercises, such as the ones in which they participated, should include a facilitator. Ninety four percent of the respondents felt that the administrator was either a "good" or a "very good" facilitator. All eighty four participants said that they felt the training the administrators received, prior to conducting the exercises, was helpful.

Summary of the Results Obtained From the "Open-Ended" Questions

The teachers were asked to respond to two "open-ended" questions in an attempt to determine the perceived major strengths and weaknesses of the training exercises. The results indicate that the participants felt the major strength of the exercises was primarily in the approach adopted and secondly in the objectives of the exercises. Concerning the weaknesses, some participants (28.5%) objected to the time limits imposed, by the administrators, on the exercises. Secondly, some of the participants viewed the testing ad opinionnaires as part of the training exercises as that was one of the weaknesses mentioned.
The data show that, when asked what they thought they had learned from the exercises, almost all of the teachers listed the learning objectives of the two exercises. Thirty four (45.3%) said that they had learned how to listen more effectively. Slightly less than 50 percent felt that no changes should be made in the exercises.

Summary of the Findings Relating to the Cognitive Changes Which Took Place in the Individuals

The one group pretest - posttest non - equivalent pre-experimental design was used in an attempt to determine the cognitive changes which took place as a result of their participation in the training exercises. The ten item achievement test was administered twice to the teachers. The difference between the minimum/maximum scores established for the pretest and posttest indicated that a degree of cognitive change took place as a result of the experience. The mean score rose from 4.702 to 6.155 thus further indicating that there was a change. Finally the difference between the mean scores was subjected to a t Test. The computed t value of 10.22 provided confirmation that the change was statistically significant.
Summary of the Findings
Relating to the Change in
the Connotative Meaning

The data from the application of the two Semantic Differential Scales clearly indicate that the concept including the exercises developed for this study elicited a greater positive reaction than the concept excluding the exercises, for the factors of evaluation, potency, activity and receptivity. The difference was determined statistically significant through the application of the Student t Test. This evidence was supported by the individual computations made for five polar traits. In all five cases, the mean polarity scores relating to the training exercises were computed to be greater in value than those relating to training exercises with the exclusion of the two developed for this study. These differences were applied to the t Test and determined statistically significant.

Summary of the Findings
Relating to the Attitudes
of the Facilitators

An attempt was made to determine the school administrators' attitudes toward their experience in conducting the staff development training exercises and their attitudes on how effective the audio modular instructional units were in preparing them to facilitate these exercises. In the following subsections are presented the summaries of the findings obtained from the 1) "closed" questions, 2) "open-ended" questions, and 3) structured interviews with selected members.
Summary of the Findings
Obtained From the Responses
to the "Closed" questions

All of the administrators felt that the two audio modular units helped them facilitate the training exercises. Fifteen respondents (75%) said that, as a result of their participation in the two units, they were "well" and "very well" prepared to act as facilitators.

The results to the ranking for preference of in-service approaches were very similar to the first application of that question. The audio modular approach was ranked highest by 13 administrators (65%).

Summary of the Findings
Obtained From the Responses
to the "Open - Ended" Questions

In response to the questions pertaining to the major strengths and weaknesses of the units in preparing administrators to act as facilitators, 35 percent felt that the major strength lay in preparing them to facilitate better. Some 40 percent answered the "strength" question by listing the characteristics of the audio modular approach. Six (30%) administrators felt that there was no apparent weakness. Eight other respondents (40%) felt that "time pressure" was the major weakness of the two units.

The administrators were then asked to suggest possible changes which should be made in the two units and in the audio modular approach. More than half the administrators felt that
no change was necessary in the two units. In reference to the audio modular approach, 45 percent answered by saying "no change" while another 20 percent claimed they didn't know what changes should be made.

When asked to suggest which skills could be taught or improved up through the audio modular approach, the most frequently mentioned skill was communication.

**Summary of the Results Obtained from Interviews**

Structured interviews were conducted with four administrators at the time when this investigation was collecting the test materials. As a result of the interviews, it would appear that the audio modular approach is perceived as an effective technique for presenting selected topics, skills and information. In relation to the two units, developed for this study, the information solicited from the administrators was highly supportive and complimentary.

The major weakness, as expressed by the administrators interviewed, lay in the very fact that this was a study and therefore necessitated data through the use of questionnaires and tests.
Conclusions: Phase I

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 major questions could not be determined from analysis of the findings of the study. Before a conclusion can be reached as to the suitability of the modular approach, the three answers to the following questions must be determined:

1. What are the attitudinal changes which take place, in the individuals, as a result of their participation in the audio modular instructional units?

2. Will the administrators actually take time out from their duties during a "typical week" to participate in an audio modular instructional packet?

3. If the participants had an actual choice among various available alternative instructional approaches, would they choose an audio modular instructional packet in preference to the other approaches?

Some minor conclusions were reached from a summary of the findings. These conclusions fall under two categories: (1) the conclusions relating to the two units used in the study; and (2) the conclusions relating to the audio modular instructional approach.

Conclusions Relations to the Two Units in the Study

1. The two audio units provided an experience to which is perceived, by the participants as being: (a) an interesting experience
(b) a valuable experience; (c) an experience which was worth the amount of time spent in participation; (d) an experience worth recommending to others (e) a method better suited to teach that which the participants felt they had learned from the two units; and (f) an experience in which the participants would have chosen to participate if they knew beforehand what it was like.

2. The perceived major strength of the two audio modular units is the approach utilized.

3. Cognitive changes occur in the participants as a result of their participation in the two audio modular units. The nature of these cognitive changes are focused on the achievement of a greater number of the performance objectives which are stated in the introduction to each of the two units.

Conclusion Relating to the Audio Modular Instructional Approach

1. The experience with the audio modular instructional approach is perceived by the participants as being of more worth than: (a) attending an administrative conference to listen to speakers; (b) attending an administrative conference in which a number of seminars are held; (c) purchasing a professional level book and reading it; (d) visit a neighboring school district; and (e) have a discussion group session with other administrators from the district.

2. The audio modular approach is perceived of as being more relevant, more useful, more promising, more interesting and more meaningful than other in-service instructional approaches in which the individuals have participated.
3. The audio modular approach elicits a significantly higher positive connative meaning when compared to other in-service approaches in which the individuals have participated.

4. After being exposed to an audio modular instructional unit, the participants wish to participate in additional units developed with the same format.

Conclusions: Phase II

From the analysis and summary of the findings a general conclusion must be made; that is, no conclusion can be reached as to the relative degree of effectiveness of using the audio modular approach for training school administrators to conduct selected staff development training exercises with members of their instructional staff. Before a conclusion can be reached, these questions must be empirically answered. The four major questions are:

1. If the administrators were given a choice would they participate in the audio modular instructional packet before conducting the staff development training exercises.

2. If the administrator had not experienced the audio modular packet before conducting the staff development exercises would he/she be less effective as facilitators.

3. After participating in an audio modular packet relating to staff development, would the administrator actually facilitate the training exercises.

4. Is there a correlation between the cognitive and attitudinal changes which occur in the administrators, as a result of their participation in the audio modular instructional packet, and the cognitive and attitudinal changes occurring in the teachers whom these administrators engage in the staff development exercises.
Some minor conclusions were reached from a summary of the findings. These conclusions fall under two categories: (1) the conclusions based on the reactions obtained from the participants (teachers) of the training exercises; and (2) the conclusions based on the reactions obtained from the facilitators (administrators) of the training exercises.

Conclusions Based on the Reactions Obtained from the Participants (Teachers) of the Exercises

1. The training exercises, as perceived by the participants, provide: (1) an interesting and valuable learning experience; (2) an experience in which the participants would have chose to participate, if they knew before hand what it was like; and (3) training exercises, such as the two used in this study, require a facilitator.

2. The audio modular units are perceived as a good method for preparing administrators to act as facilitators in staff development exercises.

3. A major strength of these staff development training exercise is in the approach.

4. Cognitive changes occur in the participants as a result of their participation in the training exercises. The nature of these cognitive changes are focused on the achievement of a greater number of the performance objectives for the exercises.

5. The training exercises elicit a significantly higher positive connotative meaning than do other staff development training exercises in which the individuals have participated.
Conclusions Based on the Reactions Obtained from the Facilitators (Administrators) of the Training Exercises

1. As a result of participating in the audio modular instructional packet the administrators feel that they are better prepared to facilitate the staff development training exercises.

2. The audio modular instructional approaches for providing school administrators with the necessary skills and knowledge to conduct the staff development training exercises, as indicated by the attitudes of the administrators involved in Phase I and II of this study.

3. The skills, most often mentioned, which could be gained through the audio modular instructional approach is effective communication.

RECOMMENDATIONS

The recommendations based upon the findings and conclusions of the study will be presented in two sections: (1) those that relate to the further development and use of the audio instructional module; and (2) those that relate to further studies of the audio modular instructional approach.

Recommendations for the Further Development and Use of the Audio Instructional Module

1. Further modules should be developed utilizing basically the same approach as that used in the present study. The following criteria should be utilized:
a. The modules should not require the participants to take over 60 minutes to complete.

b. The modules should be constructed so that they allow for active involvement and interaction of the participants experiencing the module together.

c. Care should be exercised to maintain a high level of technical quality for the audio tapes and a high degree of attractiveness and readability for the pages in the guidebook.

d. Care should be exercised to make certain that the participants know when to turn on the audio portion of the module and what pages to follow in the guidebook.

e. Proper feedback procedures should be included throughout the module so that the participants are able to test their perceptions against the perceptions and knowledge of the person who developed the module.

f. Care must be exercised to avoid too much redundancy.

g. A number of exercises should be included at the end of the module. The participants of the module should be directed to study the exercises and utilize the appropriate ones with their staff.

2. Modules should be developed providing a greater variety of audio visual materials. The use of the additional audio visual materials should be optional and it should be so designed as to provide additional information. The major medium for providing instructions to the participants should be the audio tape and the guidebook.

3. The two parts of the audio instructional module, developed for this study should be revised, taking into account the suggestions made by the participants who experienced the module. The audio portion of the instructions should be produced utilizing professional announcers.

4. The administrators, participating in the audio modular units, should be encouraged to use critical issues in their school district as the discussion topics for the exercises.
5. The administrators should be provided with a copy of the guidebook to which they can refer when facilitating the staff development exercises.

6. Additional exercises, over and above the two utilized in this study, should be developed and attached to the audio instructional module. These exercises should be based on the objectives which are stated for the audio instructional module. Several of these exercises could have suggested activities which the individuals may try on their own, after participating in the exercises.

7. Audio modular instructional units should be developed for use in school administrator conferences. The modular units would provide the structure for the facilitation of the small group seminars at the conference.

8. The two units, developed for this study, should be reorganized so that they may be adopted for use in high school classes. They should be designed so as to provide training for teachers who wish to act as facilitators with their students.

**Recommendations for the Further Studies of the Audio Modular Instructional Approach**

1. Instruments should be constructed, validated, and made reliable; and, appropriate research designs 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 an audio modular instructional unit.
2. An assessment approach should be identified to determine whether the school administrator would take time off from his/her daily duties to participate in the audio modular instructional units. This process may be achieved by sending an audio modular unit to a randomly selected sample of administrators. A brief letter of introduction would indicate that the unit would be picked up in the near future. Two weeks later the investigator should go to the school administrators to pick up the modular units. At this time the investigator would conduct structured interviews with the administrators, and make a request that they complete a number of assessment instruments. The interviews would be conducted with each administrator whether he had completed the modular unit or not.

3. A similar study might be oriented at determining whether the administrators, after participating in an audio modular instructional unit, would facilitate staff development training exercises with their subordinates. At an administrative conference, a randomly selected group of administrators may be asked to participate in an audio modular instructional unit. They would then be given a copy of the guidebook and several suggested staff development exercises. Several weeks later the investigator would visit the administrators to determine whether they facilitated the exercises.

4. An assessment approach should be identified to determine whether there is a correlation between the cognitive and attitudinal changes which take place in the administrator as a
result of participating in an audio modular instructional unit and, the cognitive and attitudinal changes which take place in the subordinates as a result of the administrator's facilitation of staff development training exercises with them.

5. An assessment approach should be identified to compare the audio modular approach with other in-service approaches in relation to training administrators to act as facilitators. One group would participate in the audio modular approach while the other group would participate in an approach of its choice, focusing on the same performance objectives. Both groups would then facilitate staff development training exercises with their instructional personnel. A comparison may be made on the following criteria: a) how well the administrators felt they were trained to act as facilitators; b) how well their subordinates felt the administrators were trained as facilitators; and c) through the use of a pretest-posttest design it could be ascertained whether the difference in approaches had any bearing on the administrators' in the attitudinal and cognitive domains.
APPENDIX A

WRITTEN TEXT OF THE
TWO AUDIO MODULAR UNITS
STAFF DEVELOPMENT:
THE HELPER - HELPEE RELATIONSHIP
(PART 1)

These Audio Modular Instructional Materials
have been developed under the joint direction of:

George Bryniawsky
Center for Leadership and Administration
School of Education
University of Massachusetts

and

Roger H. Peck
Department of Administration and Supervision
Southern Connecticut State College
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CHARTS
(NOTE: THIS MODULAR PRESENTATION REQUIRES THE PARTICIPATION OF THREE INDIVIDUALS THROUGHOUT THE PRESENTATION.)

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.

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 Helper-Helpee relationship in order to produce these desired outcomes. The participants will have an opportunity to become involved in two exercises within this module. This will allow for an assessment and refinement of his/her leadership skills in the helping relationship, specifically in reference to the proper initial response in a conference setting.
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.

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.

5. Identify the differences and similarities existing between the "game" and a Helper-Helpee relationship.

PREREQUISITE

None.

TIME REQUIRED

Approximately 30 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 1)" is enclosed in the plastic pocket in back of the Guidebook.

2. An Audio Cassette tape recorder.

3. This Audio-Instruction Module Guidebook, plus two extra copies in the front and back pockets of the notebook binder cover.

4. A pencil for each participant and several sheets of paper.

5. 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 PARTICIPANTS

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 30 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:

George Bryniawsky
Center for Leadership and Administration
School of Education
University of Massachusetts
Amherst, Massachusetts 01002

or

Roger H. Peck
Department of Administration and Supervision
Southern Connecticut State College
YOU SHOULD NOW BE READY TO PARTICIPATE IN THE MODULE.

PLEASE TURN TO NEXT PAGE (CHART 1) AND START TAPE.
THE ROLE OF THE ADMINISTRATOR IS CHANGING

1. TECHNOLOGICAL CHANGES.

2. INNOVATIONS IN EDUCATION.

3. NEW KNOWLEDGE AND MATERIALS.

4. INTEREST EXPRESSED BY CITIZENS AND PARENTS IN EDUCATION.

5. EDUCATIONAL FINANCIAL ACCOUNTABILITY.

6. STUDENT INVOLVEMENT IN DECIDING SCHOOL PROGRAMS AND CURRICULUM.

7. TEACHER INVOLVEMENT IN DECISION MAKING.

CHART 1
In reference to GROWING PEOPLE, Carl Rogers says that the school administrator should be "AN INDIVIDUAL WHO CAN LISTEN, UNDERSTAND, ACCEPT, CLARIFY AND COMMUNICATE."
Mr. Haus, I can't do anything with Hap Courtney; he's causing so much disturbance the rest of the class is getting out of hand. No matter what I try it doesn't seem to work!
EXERCISE #1

1. Read the directions through completely before beginning the exercise.

2. Turn back to Chart 3 and read over Mrs. Starr's statement to Mr. Haus. After you have studied Mrs. Starr's statement, turn to Chart 4.

3. Each individual participant in the group is to take the role of Mr. Haus. With Chart 4 in front of you, each person in the group is to write down on a separate sheet of scratch paper the response he/she (playing the role of Mr. Haus) would make to Mrs. Starr. (Write down on the paper the exact words you would say to Mrs. Starr.) DO NOT WRITE IN THE MODULAR GUIDEBOOK.

4. After you have finished these responses, set the written responses aside for the time being. Do not show each other your responses yet; and do not discuss them at this time. You will have the opportunity to exchange your ideas on these responses later in this presentation.

5. After all of the persons in the group have finished writing the responses, turn the tape recorder on again to continue the presentation.

CHART 5
WHY DON'T YOU....?

YES...
BUT....

"THE GAME"
SIMILARITIES IN THE HELPING RELATIONSHIP
AND THE "GAME"

I. INDIVIDUAL'S CONCEPTION OF UNIQUENESS OF HIS/HER PROBLEM

II. SKEPTICISM REGARDING TRUSTWORTHINESS OF THE HELPING PERSON

III. INDIVIDUAL'S NEED FOR RECOGNITION

IV. INDIVIDUAL IS SEEKING HELP

CHART 7
HELPER/HELPEE RELATIONSHIP

The helper/helpee relationship is one in which one of the participants intends that there should come about, in one or both parties, a more functional use of the latent inner resources of the individual.
HELPER/HELPEE RELATIONSHIP VS. "WHY DON'T YOU" "YES, BUT" GAME

PROBLEM DELINEATION VS. ADVICE GIVING
TOTAL COMMITMENT VS. INSENSITIVITY
LISTENING VS. IMPATIENT HEARING

CHART 9
FIRST SET OF BASIC ASSUMPTIONS CONCERNING
THE HELPER/HELPEE RELATIONSHIP

The Major Desired Outcomes of the Helper/Helpee Relationship are:

1. THE HELPEE BECOMES MORE AUTONOMOUS (more independent of the Helper)

2. THE HELPEE ACCEPTS THE PROBLEM AS HIS/HER OWN

3. THE HELPEE DEVELOPS A MORE FUNCTIONAL USE OF HIS/HER LATENT INNER RESOURCES (more able to use these resources in solving the present and future problems)

CHART 10
SECOND SET OF BASIC ASSUMPTIONS CONCERNING THE HELPER/HELPEE RELATIONSHIP

In Order to Produce the Major Desired Outcomes of the Helper/Helppee Relationship (as presented in Chart 10), the Helper must display such behaviors as the following:

1. LISTENING RATHER THAN TELLING

2. CLARIFYING RATHER THAN GIVING ADVICE

3. GETTING THE HELPEE TO SAY MORE CLEARLY WHAT HE (the Helpee) MEANS

4. TRYING TO UNDERSTAND WHAT THE HELPEE IS SAYING RATHER THAN ASSUMING HE (the Helper) ALREADY KNOWS

5. DOING AND SAYING THINGS THAT MAKE THE HELPEE FEEL MORE AT EASE

6. REFRAINING FROM MAKING JUDGMENTAL OR EVALUATIVE STATEMENTS

CHART 12
DIRECTIONS FOR EXERCISE

EXERCISE #2

1. Read the directions through completely before beginning the exercise.

2. Glance back at Chart 3 and read over Mrs. Starr's statement again. Then turn to Chart 4.

3. Each individual participant in the group is to take the role of Mr. Haus. With Chart 4 in front of you, each person in the group is to write down on a separate sheet of scratch paper the response he/she would make to Mrs. Starr. (Write down on the paper the exact words you would say to Mrs. Starr.) DO NOT WRITE IN THE MODULAR GUIDEBOOK.

4. After the members of the group have finished writing down their responses, compare these responses among the members of the group; and, compare the responses made for Exercise #1 with the responses made during the present exercise. Have any of the members changed their responses from the first exercise? If so, why? What would be the "tone" of the Haus-Starr conference if your responses were made by Mr. Haus? What would be the outcome of the conference?

5. After you have finished the exercise, turn on the recorder and continue on with the modular presentation.
STAFF DEVELOPMENT:
THE HELPER - HELPEE RELATIONSHIP
(PART 11)

These Audio Modular Instructional Materials have been developed under the joint direction of:

George Bryniawsky
Arthur H. Eve

Center for Leadership and Administration
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Southern Connecticut State College
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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.

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 Helper-Helpee relationship in order to produce these desired outcomes. Part 1 of this Audio Modular Instructional Unit dealt with the initial response factor. In this shorter Part 11, the participant will be involved in one exercise which will re-enforce the skills necessary for a helping relationship to exist.
Upon completion of this module, the participant should be able to:

1. Identify the major commonalities found in individuals seeking help.

2. Identify the most common barriers present which prevent individuals from accepting help.

3. Describe the effects "advice giving" has on a potential helping relationship.

4. Distinguish between the listening skills necessary for a successful helping relationship and the listening habits normally developed by individuals.

5. Identify basic techniques which can be implemented to assist administrators establish an effective helping relationship.

PREREQUISITE

The participant should have completed the Part 1 of this module before beginning this part.

TIME REQUIRED

Approximately 20 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 11)" is enclosed in the plastic pocket in back of the Guidebook.

2. An Audio Cassette tape recorder.

3. This Audio-Instruction Module Guidebook, plus two extra copies in the front and back pockets of the notebook binder cover.

4. A pencil for each participant and several sheets of paper.

5. 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 PARTICIPANTS

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

1. Take the module where you will not be interrupted, and give it your complete attention.
2. Set aside sufficient time (approximately 20 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:

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or

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Southern Connecticut State College
YOU SHOULD NOW BE READY TO PARTICIPATE IN THE MODULE.

PLEASE TURN TO NEXT PAGE (CHART 1) AND START TAPE.
SIMILARITIES IN THE HELPING RELATIONSHIP
AND THE "GAME"

I. INDIVIDUAL'S CONCEPTION OF UNIQUENESS OF HIS/HER PROBLEM

II. SKEPTICISM REGARDING TRUSTWORTHINESS OF THE HELPING PERSON

III. INDIVIDUAL'S NEED FOR RECOGNITION

IV. INDIVIDUAL IS SEEKING HELP

HELPER/HELPEE RELATIONSHIP VS "WHY DON'T YOU" "YES, BUT" GAME

PROBLEM DELINEATION VS ADVICE GIVING
TOTAL COMMITMENT VS INSENSITIVITY
LISTENING VS IMPATIENT HEARING

CHART 1
TECHNIQUES FOR IMPROVING THE
ADMINISTRATOR-TEACHER CONFERENCE

- ESTABLISH A NEED FOR CHANGE
- ALLEVIATE POINTS OF STRESS
- ALTER THE ENVIRONMENT
- ESTABLISH AN ATMOSPHERE OF TRUST

CHART 2
A REVIEW OF THE BASIC ASSUMPTIONS

A. The Major Desired Outcomes of the Helper-Helpee Relationship are:

1. THE HELPEE BECOMES MORE AUTONOMOUS (more independent of the Helper)
2. THE HELPEE ACCEPTS THE PROBLEM AS HIS/HER OWN
3. THE HELPEE DEVELOPS A MORE FUNCTIONAL USE OF HIS/HER LATENT INNER RESOURCES (more able to use these resources in solving the present and future problems)

B. In order to Produce the Major Desired Outcomes of the Helper-Helpee Relationship, the Helper must display such behaviors as the following:

1. LISTENING RATHER THAN TELLING
2. CLARIFYING RATHER THAN GIVING ADVICE
3. GETTING THE HELPEE TO SAY MORE CLEARLY WHAT HE (the Helpee) MEANS
4. TRYING TO UNDERSTAND WHAT THE HELPEE IS SAYING RATHER THAN ASSUMING HE (the Helper) ALREADY KNOWS
5. DOING AND SAYING THINGS THAT MAKE THE HELPEE FEEL MORE AT EASE
6. REFRAINING FROM MAKING JUDGMENTAL OR EVALUATIVE STATEMENTS

CHART 3
SUGGESTIONS ON HOW THE HELPER CAN ASSIST THE HELPEE IN CLARIFYING HIS PROBLEM

The Helper can Assist the Helpee Clarify His Problem by Looking at:

1. HOW CLEAR IS IT?

2. IS IT SEVERAL PROBLEMS OR ONE?

3. WHAT DO YOU WANT TO BE DIFFERENT?

4. PROBE FOR MORE INFORMATION WITH QUESTIONS, LIKE "WHAT HAPPENS WHEN...?"

5. IS IT STATED IN TERMS OF A GRIPE OR A GOAL?

6. WHAT IS THE GOAL?

CHART 4
DIRECTIONS FOR EXERCISE

EXERCISE #1

(FIRST SCAN THE DIRECTIONS BELOW, BUT DON'T START THE EXERCISE UNTIL YOU HAVE LISTENED TO THE PROGRAM TAPE AGAIN FOR FURTHER CLARIFICATION OF THE DIRECTIONS.)

1. This is a communication exercise, focusing on speaking precisely and listening carefully. The objectives of the exercise are:
   a. To stimulate the participants to listen carefully to others in order to improve their comprehension of what was said.
   b. To stimulate participants to speak more precisely.
   c. To further the understanding of the complexity of and difficulties involved in communication.

2. For this exercise, two of the participants are to sit in chairs face-to-face. The present exercise requires the use of an observer or monitor.

3. Select a topic about which the two persons, sitting face-to-face have very strong opinions. Each of these persons is to take opposing sides to the issues. (The exercise works best if you choose aspects that involve your own personal values and points of view.)

4. Begin your discussion of the topic. The rule you are to follow in discussion is as follows:

   THE LISTENER CAN SPEAK UP FOR HIMSELF ONLY AFTER HE HAS FIRST RESTATE THE IDEAS AND FEELINGS OF THE PREVIOUS SPEAKER ACCURATELY, AND TO THAT SPEAKER'S SATISFACTION.

In other words each of you is to recapitulate to the other's satisfaction what the speaker has said before the listener may reply.

CHART 5 (continued on next page)
(Directions for Exercise #1, continued.)

5. The monitor is to listen carefully and to check periodically as to whether a speaker has been satisfied with the recapitulation given by the listener. He is there to provide a third, more objective opinion.

6. Either the listener or the monitor should not hesitate to ask the speaker to stop when he feels he cannot remember anymore - part of the exercise is to place the responsibility for understanding on the listener.

7. Continue your discussion until you are satisfied that you are clear about some of the problems involved in this form of a discussion, and have been able to resolve these difficulties.

8. When the discussion of the topic is terminated, have a brief exchange of ideas on your experience with this form of dialogue. As you listen, keep the following questions in mind:

a. Questions concerning the Speaker:
   1. Does the speaker organize his thoughts before speaking?
   2. Does the speaker try to include too many ideas, often unrelated, in his statement making comprehension difficult?
   3. Does the speaker answer the points made by the previous speaker; thereby, actually responding to what has been said?

b. Questions concerning the Listener:
   1. Does the listener give undivided attention?
   2. Does the listener think about his answers, instead of paying full attention?
   3. Does the listener tend to listen for details rather than the essential message?

9. From your discussion of the exercise, write down your conclusions as to the kinds of problems which make it difficult for two people to understand each other in a conversation.

CHART 5 (continued on next page)
(Directions for Exercise 1, continued)

(BEFORE YOU RE-READ THE DIRECTIONS FOR THIS EXERCISE, TURN THE RECORDER ON AGAIN FOR FURTHER CLARIFICATION OF THESE DIRECTIONS.)

TURN THE RECORDER ON NOW

10. When you have completed the exercise, continue on with the modular presentation.
SUGGESTED READINGS


SUGGESTED ACTIVITIES

1. Adapt the Listening exercise (Exercise 61) used in this module, for use in a school staff meeting. Suggestions for such a use of the exercise are presented in the Handbook for Staff Development and Human Relations Training (see Suggested Readings) on pages 119-120.

2. Construct role-playing situations in which the administration, teachers and students participate. Utilize these role-playing situations as part of the staff development program for your school.

3. Make it a practice to restate what other persons have said to you before you express your opinions on the issues at hand.

4. Record some of your administrator-teacher conferences on audio tape, and have the concerned teachers and yourself critique these conferences together.

CHART 7
DIRECTIONS FOR EXERCISE

EXERCISE #1

IN FACILITATING THIS EXERCISE REMEMBER WHAT YOU EXPERIENCED WHEN YOU PARTICIPATED IN THE SAME EXERCISE.

THIS EXERCISE SHOULD NOT LAST LONGER THAN 5 MINUTES.

1. This is a communication exercise, focusing on speaking precisely and listening carefully. The objectives of the exercise are:
   a. To stimulate the participants to listen carefully to others in order to improve their comprehension of what was said.
   b. To stimulate participants to speak more precisely.
   c. To further the understanding of the complexity of and difficulties involved in communication.

2. For this exercise, two of the participants are to sit in chairs face-to-face. The present exercise requires the use of an observer or monitor.

3. Select a topic about which the two persons, sitting face-to-face have very strong opinions. Each of these persons is to take opposing sides to the issues. (The exercise works best if you choose aspects that involve your own personal values and points of view.)

4. Begin your discussion of the topic. The rule you are to follow in discussion is as follows:
   
   THE LISTENER CAN SPEAK UP FOR HIMSELF ONLY AFTER HE HAS FIRST RESTATED THE IDEAS AND FEELINGS OF THE PREVIOUS SPEAKER ACCURATELY, AND TO THAT SPEAKER'S SATISFACTION.

In other words each of you is to recapitulate to the other's satisfaction what the speaker has said before the listener may reply.

(continued on next page)
(Directions for Exercise #1, continued.)

5. The monitor is to listen carefully and to check periodically as to whether a speaker has been satisfied with the recapitulation given by the listener. He is there to provide a third, more objective opinion.

6. Either the listener or the monitor should not hesitate to ask the speaker to stop when he feels he cannot remember anymore - part of the exercise is to place the responsibility for understanding on the listener.

7. Continue your discussion until you are satisfied that you are clear about some of the problems involved in this form of a discussion, and have been able to resolve these difficulties.

8. When the discussion of the topic is terminated, have a brief exchange of ideas on your experience with this form of dialogue. As you listen, keep the following questions in mind:

   a. Questions concerning the Speaker:

      1. Does the speaker organize his thoughts before speaking?

      2. Does the speaker try to include too many ideas, often unrelated, in his statement making comprehension difficult?

      3. Does the speaker answer the points made by the previous speaker; thereby, actually responding to what has been said?

   b. Questions concerning the Listener:

      1. Does the listener give undivided attention?

      2. Does the listener think about his answers, instead of paying full attention?

      3. Does the listener tend to listen for details rather than the essential message?

9. From your discussion of the exercise, write down your conclusions as to the kinds of problems which make it difficult for two people to understand each other in a conversation.
DIRECTIONS FOR EXERCISE

EXERCISE #2

BEFORE BEGINNING WITH THIS EXERCISE YOU MAY WISH TO DISCUSS THE MAJOR DESIRED OUTCOMES OF A HELPING RELATIONSHIP.

1. This exercise requires the participation of three persons. In this exercise two of the persons in the group are to conduct a role-playing session based on a student-teacher conference setting. One of the participants is to take the role of the teacher, and the other participant is to take the role of the student. The third participant in the group is to observe and monitor the session.

2. The participant taking the role of the student is to start the session with the statement "I can't take it in this school anymore, everyone is out to get me. I guess the only thing for me to do is quit and show all these teachers that I can do something."

3. The role of the monitor is to observe the discussion, and to make special note of the following:
   a. The non-verbal gestures, and the eye-contact of the actors.
   b. The behavior displayed by the Helper as it relates to the types of behaviors proposed in the modular presentation.

4. The monitor is to terminate the discussion when he/she feels that the participants have either reached an impasse, or have arrived at a point where it is clear that the participants are on a fixed course of action. (The role-playing session should not last more than five minutes.)

5. When the session is finished, the participants and the facilitator have a brief discussion of the experience. The person who had played the role of the student should relate to the group his/her feelings and attitudes which he/she experience' in the role-playing situation.

6. The facilitator should enter the discussion by focusing his/her remarks on the relation of the behaviors he/she observed to the Helper behaviors proposed in the modular presentation.
APPENDIX B

INSTRUMENTS USED IN
PHASE I AND PHASE II
OF THE STUDY
INSTRUMENTATION

PHASE I
**Audio Modular Instruction Questionnaire**

**Biographical Data**

NAME: 

ADDRESS: 

- STREET 
- CITY 
- STATE 

DATE OF BIRTH: 

- MONTH 
- YEAR 

SEX: 

- FEMALE 
- MALE 

PRESENT EMPLOYER: 

ADDRESS 

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<td>OTHER: (EXPLAIN)</td>
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**Type of School in Which You Are Presently Employed**

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<td>2001-UP</td>
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</table>

ANY FURTHER DESCRIPTION OF THE SCHOOL: 

NUMBER OF YEARS YOU HAVE HAD AS A CLASSROOM TEACHER: 

IF YOU ARE PRESENTLY IN AN ADMINISTRATIVE POSITION, HOW LONG HAVE YOU BEEN IN YOUR PRESENT POSITION? 

NUMBER OF YEARS YOU HAVE BEEN IN EDUCATIONAL ADMINISTRATION:
PHASE I

PHASE I contains the following two parts:

Part I - Opinionnaire for the audio modular instructional unit, "Staff Development: The Helper/Helper Relationship (Part I & II)."

Part II - Opinionnaire for the audio modular instructional approach.

Directions:

When completing the multiple choice questions, place a checkmark on the line next to the statement that most appropriately answers the question or completes the sentence. When answering the open-ended questions, write your answers in brief form.

Please complete Phase I before beginning Phase II.
PHASE I

Part I - Opinionnaire for the audio modular instructional unit, "Staff Development: Helper/Helpsee Relationship (Part I & II)."

Directions: When completing the multiple choice questions, place a check-mark on the line next to the statement that most appropriately answers the question or completes the sentence. When answering the open-ended questions, write your answers in brief form.

1. I found participating in the audio instructional module, "Staff Development: Helper/Helpsee Relationship (Part I & II)"
   _____ a) very interesting
   _____ b) somewhat interesting
   _____ c) Somewhat boring
   _____ d) very boring

2. I found participating in the audio instructional module, "Staff Development: Helper/Helpsee Relationship (Part I & II)"
   _____ a) a very valuable learning experience
   _____ b) a learning experience of some value
   _____ c) an experience of little value
   _____ d) an experience which was worthless

3. What was the major strength of this specific audio instructional module?

4. What was the major weakness of this specific audio instructional module?
5. Which of the following responses represents the total time you spent participating in the module?

   _____ a) 30 - 40 minutes
   _____ b) 45 - 60 minutes
   _____ c) 60 - 75 minutes
   _____ d) 75 - 90 minutes
   _____ e) 90 - 105 minutes
   _____ f) 105- 120 minutes
   _____ g) over 2 hours
   _____ h) over 2½ hours

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
   _____ ee) was definitely not worth this amount of time

7. 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?
8. Now that I know what the module is like, if I had the choice I would:
   _____ a) have definitely participated in the module
   _____ b) have probably participated in the module
   _____ c) not know whether I would or would not have participated in the module
   _____ d) have probably not participated in the module
   _____ e) have definitely not participated in the module

9. How likely would you be in recommending to a fellow administrator that he/she participate in this module?
   _____ a) very likely
   _____ b) somewhat likely
   _____ c) no feeling either way
   _____ d) would be reluctant to recommend it
   _____ e) definitely would not recommend it

10. Briefly state what you feel you have learned from this module.

What other existing instructional method would you have preferred to participate in, in order to learn this?
11. The following items focus on the technical aspects of the audio instructional module, "Staff Development: Helper/Helppe Relationship (Part I & II)". 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. 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
f) The synchronization between the text and audio portion........................................ 1 2 3 4 5
g) The ease and convenience with which the materials (exercises, cassette tape, extra guidebooks, etc. can be utilized)......................................................... 1 2 3 4 5

12. Complete the following statements:

a) The discussion questions in this module ____________________________

b) The exercises in which I participated ________________________________

c) The diagrams in this module ________________________________________

d) The fact that this module was presented in two parts ____________________

e) One change that I would make in this module __________________________

f) One aspect of this module which should definitely remain the same ________________
13. In the back pages of the modular guidebook are provided a number of activities and exercises which could be used with your staff. How likely is it that you might use some of these suggested activities and exercises?

____ a) very likely
____ b) somewhat likely
____ c) uncertain whether I will try any
____ d) reluctant to try any
____ e) definitely will not try any

PART II - THE AUDIO MODULAR APPROACH

Opinionnaire for the audio modular instructional approach as an instructional in-service alternative.

Directions: When completing the multiple choice questions, place a check-mark on the line next to the statement that most appropriately answers the question or completes the sentence. When answering the open-minded questions, write your answers in brief form.

14. If you had the opportunity would you participate in other audio modular presentations?

____ a) yes, definitely
____ b) yes, probably
____ c) I don't know
____ d) probably not
____ e) definitely not

15. 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
15. (con't.)
   _____ 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.)

16. For the following question place an X in the space which best represents your feelings.
   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

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

18. The major weaknesses of the audio modular instructional approach as an in-service technique are:
19. Please complete the following statements:

a) I would spend time participating in an audio modular instructional unit if/only if: _____________________________

b) I would definitely not spend time participating in an audio modular instructional unit if: _____________________________

c) For anyone to develop any more audio modular instructional units I would recommend that he or she: _____________________________

d) If I were to receive an audio modular instructional unit on a Monday of a "typical" work-week I would: _____________________________

20. What kinds of skills and knowledges, as school administrator, do you think could be learned and/or improved through the use of audio modular instruction?

21. Any additional comments.
PHASE II

PHASE II contains the following three parts:

Part I - Semantic Differential

Part II - Achievement Test for the audio modular instructional unit, "Staff Development: Helper/Helper Relationship (Part I & II)."

Part III - Semantic Differential

Directions:

When completing the multiple choice questions, place a check-mark on the line next to the statement that most appropriately answers the question or completes the sentence. When answering the open-minded questions, write your answers in brief form.
PHASE II
FIRST SEMANTIC DIFFERENTIAL
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 judgments on the basis of what these things mean to you. You will find two concepts to be judged and beneath them 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 follow:


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:


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:


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.


Be sure to check every scale for every concept --- DO NOT OMIT ANY.
**PART I**

**CONCEPT I: AUDIO MODULAR INSTRUCTION**  
*(AS ONE ALTERNATIVE APPROACH FOR IN-SERVICE EDUCATION FOR SCHOOL ADMINISTRATORS)*

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 solution to the 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.
   e. effectively demonstrating the leadership abilities of the helping individual.

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

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

Which of the following best describe 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 for 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."
11. In relation to an individual’s needs, recent research reports show that the need for recognition and the need for achievement are stronger and more lasting than:

   ___ a. all other needs.
   ___ b. all other needs excluding financial ones.
   ___ c. most other needs.
   ___ d. all other needs excluding the need for survival.

12. Albert Moravian reports that the status of individuals involved in a conversation is a significant factor in determining the outcome of a conference. In reference to this, which of the following statements is incorrect?

   ___ a. an approving nod of the head by the higher status individual indicates encouragement to the individual speaking.
   ___ b. continual interruptions on the part of the higher status individual will cause the relationship to wane.
   ___ c. long periods of silence on the part of the higher status individual may cause the speaker to feel uncomfortable.
   ___ d. looking into the speaker’s eyes while he/she is speaking will cause the relationship to wane.

13. If the person seeking help mistrusts the helper’s competence to provide the necessary assistance, he/she will:

   ___ a. not come to see that person.
   ___ b. challenge the helper by posing a hypothetical or superficial problem.
   ___ c. most probably find a solution by himself or herself.
   ___ d. wait until the problem becomes overwhelming before coming to see the helper.
14. The basic techniques for changing the traditional conference to a helping relationship are: (check the one that least applies).

____ a. to apply recognition by one or both participants that a change is necessary.

____ b. for both participants to alleviate the stresses impinging on the conference.

____ c. the understanding of the administrator for the person seeking help and vice versa.

____ d. the development of a school wide trust.
PART III

SECOND SEMANTIC DIFFERENTIAL

DIRECTIONS:

Follow same procedure as for the first Semantic Differential.
**PART III**

**CONCEPT II: IN-SERVICE EDUCATIONAL PROGRAMS FOR ADMINISTRATORS IN WHICH YOU HAVE PARTICIPATED (EXCLUDING THE AUDIO MODULAR INSTRUCTIONAL APPROACH)**

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INSTRUMENTATION

PHASE II
## AUDIO MODULAR INSTRUCTION QUESTIONNAIRE
### BIOGRAPHICAL DATA

**DATE:**

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**NAME:**

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**ADDRESS:**

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- **STREET:**
- **CITY:**
- **STATE:**

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**DATE OF BIRTH:**

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- **MONTH:**
- **YEAR:**

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**SEX:**

- **FEMALE**
- **MALE**

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**PRESENT EMPLOYER:**

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**ADDRESS**

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### PRESENT POSITION

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### TYPE OF SCHOOL IN WHICH YOU ARE PRESENTLY EMPLOYED

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**ANY FURTHER DESCRIPTION OF THE SCHOOL:**

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**NUMBER OF YEARS YOU HAVE HAD AS A CLASSROOM TEACHER:**

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**IF YOU ARE PRESENTLY IN AN ADMINISTRATIVE POSITION, HOW LONG HAVE YOU BEEN IN YOUR PRESENT POSITION?**

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**NUMBER OF YEARS YOU HAVE BEEN IN EDUCATIONAL ADMINISTRATION:**

---
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 solution to the 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.
   e. effectively demonstrating the leadership abilities of the helping individual.

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

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

Which of the following best describe 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 for 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 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 judgments on the basis of what these things mean to you. You will find two concepts to be judged and beneath them 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 follow:

fair :X: :: :: :: :: :: unfair
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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 :: :: X : :: :: :: :: :: weak
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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 :: :: :X: :: :: :: :: :: passive
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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 :: :: :: :: X :: :: :: :: dangerous

Be sure to check every scale for every concept --- DO NOT OMIT ANY.
### SEMANTIC DIFFERENTIAL: CONCEPT I

**STAFF DEVELOPMENT TRAINING EXERCISES YOU PARTICIPATED IN BEFORE TODAY INVOLVING AN ADMINISTRATOR AS FACILITATOR**

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SECOND SEMANTIC DIFFERENTIAL

DIRECTIONS:

Follow same procedure as for the first Semantic Differential.
### SEMANTIC DIFFERENTIAL: CONCEPT II

**STAFF DEVELOPMENT TRAINING EXERCISES YOU PARTICIPATED IN**
(including those you participated in today)
**INVOLVING AN ADMINISTRATOR AS FACILITATOR**


STAFF DEVELOPMENT: TRAINING EXERCISES
OPINIONNAIRE

Directions: When completing the multiple choice questions, place a check-mark on the line next to the statement that most appropriately answers the question or completes the sentence. When answering the open-ended questions, write your answers in as brief a form as possible.

1. I found participating in the exercises:
   ___ a. very interesting.
   ___ b. somewhat interesting.
   ___ c. somewhat boring.
   ___ d. very boring.

2. I found participating in the exercises:
   ___ a. a very valuable learning experience.
   ___ b. a learning experience of some value.
   ___ c. an experience of little value.
   ___ d. an experience which was worthless.

3. What was the major strength of these exercises?

4. What was the major weakness of these exercises?
5. Briefly state what you feel you have learned from these exercises.

6. Now that I know what the exercises are like, if I had the choice I would:
   ___ a. have definitely participated in the exercises.
   ___ b. have probably participated in the exercises.
   ___ c. not have been able to decide.
   ___ d. have probably not participated in the exercises.
   ___ e. have definitely not participated in the exercises.

7. If I were involved in preparing training exercises such as the ones in which I have participated, I would:
   ___ a. definitely include a facilitator.
   ___ b. probably include a facilitator.
   ___ c. probably not include a facilitator.
   ___ d. definitely not include a facilitator.

8. The way these exercises were organized and presented, the person who facilitated the exercises was:
   ___ a. very good as facilitator.
   ___ b. good as facilitator.
   ___ c. fair as facilitator.
   ___ d. poor as facilitator.
9. Please complete the following statement.

The training exercises would have been much more meaningful if the facilitator


10. How well trained do you think your facilitator was to conduct these exercises?


11. Your facilitator, prior to conducting the exercise, participated in an audio modular instructional packet dealing with "Helper/Helppee Relationship". How helpful do you think this training was in helping him/her facilitate the exercises?

   a. very helpful.
   b. somewhat helpful.
   c. hardly helpful.
   d. wasn't helpful at all.

12. What change(s) would you suggest be made in the exercises?


13. Any Additional Comments?
STAFF DEVELOPMENT: TRAINING EXERCISES
OPINIONNAIRE (FACILITATORS)

Directions: When completing the multiple choice questions, place a check-mark on the line next to the statement that most appropriately answers the question or completes the sentence. When answering the open-ended questions, write your answers in as brief a form as possible.

1. I found that as a result of my participation in the audio modular presentation, I was:
   ___ a. very well prepared to act as facilitator.
   ___ b. well prepared to act as facilitator.
   ___ c. adequately prepared to act as facilitator.
   ___ d. poorly prepared to act as facilitator.
   ___ e. unprepared to act as facilitator.

2. What were the major strengths of the two audio modular instructional units in providing you with the skills and knowledge necessary to conduct these exercises?
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________

3. What were the major weaknesses of the two audio modular instructional units in providing you with the skills and knowledge necessary to conduct these exercises?
   __________________________________________________________________
   __________________________________________________________________
   __________________________________________________________________


4. Suppose you were given the choice to participate in the following in-service educational programs in order to prepare yourself as facilitator in staff development training exercises, rank the following 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 book and read it.
   ___ d. visit a neighboring school district.
   ___ e. participate in an audio instructional unit.
   ___ f. have a discussion group session with other administrators from your district.

   Any others you may wish to suggest:

5. In order for an administrator to be better prepared to act as facilitator in the suggested staff development exercises, what changes would you suggest be made in the two audio modular units?
6. What changes would you make in the audio modular instructional approach in order to better provide administrators with assistance to conduct staff development training exercises?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

7. What kinds of skills and knowledges do you think could be learned or improved through the use of audio modular instruction for the purpose of training practicing school administrators to conduct training exercises with their instructional staff.

____________________________________________________________________

____________________________________________________________________

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8. Please complete the following statement:

If I had not participated in the audio modular instructional presentation and was asked to facilitate the exercises I would:

____________________________________________________________________

____________________________________________________________________

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BIBLIOGRAPHY


Wynn, R. "Organization and Administration of the Professional Program," *Administrative Behavior in Education*. 