THE EFFECTS OF A PARENT PROGRAM FOCUSED UPON ENHANCING SOCIAL-EMOTIONAL DEVELOPMENT OF YOUNG CHILDREN THROUGH PARENT INSTRUCTION IN AFFECTIVE-INTERPERSONAL FACILITATION

THESIS

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Lea Anna Wawrykow

Denton, Texas

December, 1974

Wawrykow, Lea Anna, The Effects of a Parent Program Focused Upon Enhancing Social-Emotional Development of Young Children Through Parent Instruction in Affective-Interpersonal Facilitation. Master of Science (Early Childhood Education), December, 1974, 84 pp., 3 tables, bibliography, 31 titles.

Twenty-seven parents with young children were randomly assigned to an experimental group which underwent an affective skill-building program, or one of two control groups. Pre and postassessments measured levels of communication, discrimination, and child vocalization for each parent. Multilinear regression analysis indicated that final communication skills among the three groups were significantly different. Final communication skills of the experimental group were significantly greater than those of the Hawthorne control group. Final discrimination skills for the three groups showed a trend toward being significantly different. Levels of child vocalization did not show significant changes. The experimental program was successful in improving accurate parent-child communication in the affective realm.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

The importance of early education has been recognized and brought to the forefront of educational thinking in the last decade. The writing of such men as Bloom (1965) and Hunt (1961) has served to underscore the vital nature of experience in early childhood.

The attention of our nation was caught by the first federally funded effort at comprehensive early education, Head Start. From the beginning, parents have been involved in Head Start. The degree and nature of this involvement has varied from program to program. Although Head Start was conceived as a comprehensive or total program for the young, most of the published research has been concerned with its impace on intellectual development or academic preparation. Accordingly, many other experimental early childhood programs have been described in the literature with a cognitive or compensatory orientation. Abundant evidence of parent involvement in this type of early childhood programming can be found (Kremer, 1971).

There is a scarcity, however, of published research dealing with parents who are involved in promoting emotional and interpersonal growth of their children. The enhancement of emotional development and the building

of a positive self-concept are subjects recognized for some time by educators as important, but subjects all too rarely dealt with in research.

The present study has been an effort to provide such an experimental program for parents of young children. An attempt has been made to help parents gain responsive skills, thus enhancing the social-emotional growth of their children. The experimental program has aimed at improving the quality of the parent-child affective relationship.

Statement of the Problem

This study investigated the effects of a parent program focused upon enhancing the social-emotional development of young children, through parent instruction in affective-interpersonal facilitation.

Purpose of the Study

The purposes of the study were

1. To ascertain the effectiveness of a parent program for enhancing emotional-interpersonal development of young children through instruction in affective-interpersonal facilitation.

2. To enhance the level of parent-child affective relationship, thus helping the parent to interact more effectively with his child.

3. To determine whether or not the enhancement of emotional-interpersonal development would increase the

amount of verbalization of the children while interacting with their parents.

4. To analyze the implications of such a parent program oriented toward emotional development of young children for future trends in parental involvement and early childhood programming.

Hypotheses

To carry out the purposes of this study the following hypotheses have been formulated:

Adjusting for initial levels,

1. In measures of the adult subjects' ability to
   (a) communicate accurately in the affective domain,
   (b) discriminate accurately the communication of other adults in the affective domain,

there will be significant differences in the final levels among the three groups, experimental, Hawthorne-effect control, and no-treatment control.

2. Final levels of these two measures for the experimental group will be significantly greater than final levels of these two measures for the Hawthorne-effect control group.

3. Final levels of these two measures for the Hawthorne-effect control group will be significantly greater than final levels of these two measures for the no-treatment control group.

4. Final levels of vocalization will be significantly greater for children of subjects in the experimental group than for those in the Hawthorne-effect control group.

5. Final levels of vocalization will be significantly greater for children of subjects in the Hawthorne-effect control group than for those in the no-treatment control group.

Background and Significance of the Study

The role of the parent in the process of early education is important. Parents have been identified as the most potent of models for their children (Bronfenbrenner, 1968). In her overview of early childhood programs, Weber (1970) calls on parents to be true partners in the educative process and lauds such programs as Bank Street and Nurseries in Cross-Cultural Education for their progress in parent involvement.

Most research dealing with or including parent involvement has been concerned with the low-income or culturally-different child, in an intervention or compensatory approach (Gordon, 1967; Gordon, 1970; Weikart & Lambie, 1968; Weikart, Deloria, Lawser, & Weigerink, 1970; Gray, Klaus, Miller, & Forester, 1966; Schaeffer & Aaronson, 1972; McCarthy, 1968; Karnes, Teska, Hodgins, & Badger, 1970). Hunt (1961) in his review and synthesis of the literature has concluded that early education is vital in breaking the cycle of poverty; Hunt believes that parents can become effective educators of the young, thereby combatting the relationship between poverty and incompetence.

In recent years, educators have begun to move beyond the concept of the disadvantaged child and toward a new appreciation

of those who are culturally or economically different. For some, the compensatory thrust initiated by Head Start, has been giving away to attempts at developing facilitative skills for the young child and his family. The work of Nimnicht (1973) is an outstanding example. The implications for parent education lie in learning to enhance the strengths of a parent-child relationship, rather than merely trying to "fill-in" supposed deficiencies of the parent. In this context, the low-income or culturally-different groups become much less of a separate category, and the idea of educational parent involvement is relevant for a much broader population.

Aside from these recent developments, a great deal of major research to date has had a compensatory or cognitive orientation, and the type of parent-involvement related to these projects has emphasized helping parents to advance the intellectual capabilities of their young children.

In contrast, the present study has emphasized having parents involved in developing the social-emotional capabilities of their children. The emotions of child or adult are potent components of the total being. Development and understanding of affective domains and interpersonal processes are vital to the comprehensive early childhood program which includes parent participation. Hess (1969), based on an extensive review of research dealing with children, has identified the affective relationship between parent and child as a very important ingredient in total intellectual development.

Helping parents to guide their child toward exploring, understanding, and acting effectively upon emotionality can only add to a child's opportunities for developmental progress.

What is an effective starting point to assist parents in building the affective interpersonal skills which will benefit their young children? A basic skill for dealing effectively with the young child has been suggested repeatedly, though in varying terminology, throughout the literature. This skill has been referred to by Hunt (1961) as learning to make a *match* between the developmental level of the child and the particular task or situation at hand. One might say that the art of making an accurate match for the young child could be viewed as learning to meet that child where he is at that particular moment. Accordingly, the need for making an accurate match could be applied to any realm of the child's development. For example, the art of making a cognitive match for a young child has grown in part from the developmental sequence provided by Piaget. This art of making the cognitive match has been extended and refined by such investigators as Kamii (1972), Lavatelli (1970), Weikart (1967, 1968, 1970), and Elkind (1969).

Accordingly, such investigators as Cratty (1970), Gesell and Ilg (1946), and Halverson (1973) have been involved with the process of learning to make an accurate physical matchwith the child's activities and challenges.

In the realm of emotional and interpersonal development, the human resource development theory of Carkhuff (1971) has provided a technology for learning to make an accurate match on an affective level for the child. Through the theory of Carkhuff, we can learn to meet a child where he is affectively, by making an interchangeable response. Through skillful responding, we can help the child explore his affect and guide him toward understanding his emotional-interpersonal capabilities. Accurate understanding will prepare the child for effective action. His feelings need no longer be confusing or a hindrance , but an asset in attaining the goal at hand. Repeated skillful and empathic response to the child will provide a basis for helping that child move forward . . . to where he wants and needs to be. This paradigm for making an affective match through facilitating exploration, understanding, and action in the young child, is dealt with in depth by Wawrykow (1974). Human resource development, as applied to early childhood, was the underlying principle in this study. My aim has been to assist parents in learning to offer skillful and helpful responses to the affective expressions of their children.

Definition of Terms

For the purposes of this study the following definitions have been formulated:

Early Childhood

This term refers to the span of years from birth to age 8.

Modified Carkhuff Rating Scale

This is a five point Likert-type scale. It is used to measure the degree of facilitation by the second person (i.e., parent) of the first person (i.e., child) in an affective-interpersonal situation (i.e., parent-child interaction) (Appendix A).

Level of Facilitation by Parent

This term refers to the affective-interpersonal interaction between parent and child. The level of facilitation was assessed by three different measures: communication, discrimination, and child verbalization. Communication was measured by a one-to-five rating on the Modified Carkhuff Rating Scale. This scale measures the ability of the parent to respond effectively to a child's feelings and concerns. As explained in Appendix A, level three on the scale is considered to be minimally facilitative. Discrimination was measured by a tape-recorded procedure described in chapter III.

Level of Vocalization of the Child

This refers to the number of separate instances a child spoke, and was measured by a frequency count of the number of times the child verbalized during the ten-minute assessment period.

Hawthorne-effect Control Group

The second group of subjects were told that they were participating in a study. They met with a different leader

and followed a program organized by that leader, independently of the researcher.

Limitations

Subjects were limited to parents (mothers and fathers) who volunteered for a parent education program and a concurring opportunity to do volunteer work in the classroom. All parent-subjects had children between the ages of 3 and 5, who were enrolled in a local child development center. The sample used was representative of middle-class families in a suburban setting.

Basic Assumptions

It was assumed that the sample was representative of the population studied because over forty percent of the parents enrolled volunteered. Maturation was not considered a problem as the study was only two months in length. Situation factors were assumed to be minimal, as the regular classrooms were used. The level of facilitation by the parent initially assessed in this study was assumed to be representative of the normal parent-child interaction.

Instruments

The modified Carkhuff rating scale was derived from a set of Likert-type scales devised by R. R. Carkhuff, which are described in detail in the texts *Helping and Human Relations* (1969a, pp. 174-195; 1969b, pp. 223-244). The

derivation, development, and former use of this scale are dealt with in the next chapter. The scale is outlined in Appendix A.

Procedures

Raters

Two trained raters recorded parent communication levels during the ten-minute play assessments. A second set of raters recorded the level of child vocalization during the ten-minute play assessments. The experimental design was not known to any rater.

Subjects

Twenty-seven parents with children between the ages of 3 and 5, who were enrolled in a local child development center, volunteered for this study. The parents were randomly assigned to one of three groups: experimental, Hawthorne-effect control, or no-treatment control.

Methods

An initial assessment was carried out with all parents and children. The level of communication was measured during a ten-minute play session. Discrimination ability was assessed by means of a tape-recorded exercise to which the parents were to respond. Child vocalization was measured during the ten-minute play session.

Following the initial assessment, the experimental group embarked upon the parent program (Appendix E). The Hawthorne-effect control group participated in a program organized by

the coordinator of the center (Appendix F). The no-treatment control group was not contacted until the final assessment.

The final, or postassessment, was identical to the initial assessment and was carried out upon completion of the parent program. Individual scores for the preassessment and the postassessment were then punched on computer cards for analysis.

Analysis of Data

To test the effects of the parent program upon the level of facilitation by the parent, the data was analyzed, using multilinear regression analysis (Ward & Jennings, 1973). All analyses were done on the IBM 360 computer at North Texas State University computing center.

CHAPTER II

REVIEW OF RELATED LITERATURE

Educational parent involvement is by no means a new idea. As early as 1888, the Child Study Association of America was formed with the aim of organizing a continuous parent education program (Auerbach, 1968). The interest in authentic parent education projects has increased over the years (Brim, 1965), and today the abundant literature available on this topic testifies to its continuing importance.

An investigation of the major research in this area will reveal a consistent progression in the nature of parent involvement. The following is not an exhaustive nor a chronological account of this trend, but rather an attempt to point out significant steps in a definite direction. Projects involving parents will be traced through

1. the "home-tutor" concept, in which a cognitive and language stimulation orientation prevaled,

2. programs with a broader scope that presented a more comprehensive picture of child development,

3. programs that focused, once more, on the emotional-interpersonal aspects of child development.

The final section of this chapter will deal with Human Resource Development as a type of emotional-interpersonal program for parents with young children.

The Home Tutoring Movement

As noted before, initial steps were often taken within the domain of cognitive development, especially language stimulation. Kirk (1958) investigated the effects of early education with disadvantaged infants. He worked in the home with professional tutors instructing the child. A gain of seven I.Q. points on the Stanford-Binet was made by his experimental group, as compared to the control infants. The research of Levenstein (1970) involved "cognitive intervention" among preschoolers in low-income families. Rather than professional tutors, Levenstein employed social workers who went into the homes. The workers provided a set of educational toys for the experimental child, age 2 at the beginning of the study, and also provided a working model for the mother in educational adult-child interactions. Emphasis was upon verbal interactions. Levenstein's study showed a mean gain of 17 I.Q. points for the experimental child.

The research of Schaefer and Aaronson (1972) contributed another significant step in the parent-involvement area. They set out to increase intellectual functioning, again with particular emphasis on language development, of 2-and 3-year-olds in low-income areas, through a program of home tutoring.

Tutors were college graduates, thoroughly trained in working within ghetto areas, who interacted with parents and siblings as well as with the experimental child. These authors also produced a significant increase in I.Q. for the experimental children; the results indicated, as well, the extreme importance of a sound relationship between mother and child for maximum intellectual gain to occur.

The admirable work of Merle B. Karnes et al. in training mothers (1968, 1970) to work with their children in an educational intervention program bears review. In the 1968 pilot project, Karnes established the efficacy of training economically disadvantaged mothers in the stimulation of intellectual and linguistic development with their 3- and 4-year-old children. After a three month treatment period, in which experimental group mothers attended instructional meetings and worked in their own homes with their children, a significant gain was evidenced by the children in I.Q., as measured by the Stanford-Binet, and "language age", as measured by the Illinois Test of Psycholinguist Abilities. In subsequent, more extensive projects, Karnes (1971) successfully aided mothers in acquiring new competency for teaching their children; perhaps more importantly, she established the precedent of having mothers with advanced training function as para-professionals in teaching other mothers improved educational skills for working with their children. In other words, Karnes not only set up a successful parent-

involvement program; but also assured that program of its own in-service training capabilities.

Current extensions of the Karnes model for parent involvement include such programs as Avance', now operating in a Dallas community and expanding to Houston at the time of writing. Avance' combines the original home-tutoring and mothers' meetings paradigm with extension into the community. Not only are parents involved in the advancement of the young children, but also older siblings, young adults indigenous to the area, and the local elementary schools.

The home-tutoring concept has also been used to advantage in the Perry Pre-school project (Weikart, 1967, 1970). This project was designed to test the effect of a two-year compensatory education program upon a population identified as Negro, functionally retarded, and culturally deprived. Weekly home tutorial sessions and parental group meetings were carried out in combination with a daily morning school program. Assessments during the project, as well as follow-up data, revealed significant gains on such measures as the Stanford-Binet, Peabody Picture Vocabulary, and the Illinois Test of Psycholinguistic Abilities.

The Florida model developed by Ira Gordon (1967) was also a significant contribution to parent involvement through home tutoring. This large scale project was aimed at breaking the poverty cycle through early intervention. The intervention technique was identified as the use of disadvantaged women in

teaching mothers how to stimulate their infants intellectually. The positive results of this project encouraged the sponsoring of the Follow-Through program by the Institute for the Development of Human Resources in Florida.

A Broader Scope for Parent Involvement

Some recent parent programs have endeavored to give a more comprehensive knowledge of child development to parents. One example is the study done by White (1974). The purpose of this study was to determine the effects of a parent-education program focused upon the learning of child development principles. A second purpose was to investigate whether or not there was a relationship between knowledge of child development and the parent-child relationship. Twenty-eight parents of young children participated in an eight-week program which dealt with aspects of physical, cognitive, and emotional-interpersonal development. The subjects exhibited a significant gain in child development principles. However, this gain in knowledge of child development did not appear to effect parent attitudes toward their relationships with their children. The results of this study imply that this type of training for parents is not a particularly effective means of improving the parent-child relationship. Training opportunities that involve actual practice in parent-child interaction may be more effective.

A comprehensive program should aid in the development of the whole child--intellectually, emotionally, and physically. Robert R. Carkhuff (1971) states that we can facilitate the emergence of the whole child by increasing the *quantity* and *quality* of responses in a child's repertoire, within these three dimensions.

> *"In short, the level of functioning and the response repertoire of an individual in the physical, emotional-interpersonal, and intellectual spheres determine his health, his creativity, his wholeness--indeed his life."* (Carkhuff, 1971 p. 157)

Kratochvil, Carkhuff, and Berenson (1969) investigated the effects of parents and teachers offering facilitative conditions to their children. Student physical, emotional, and intellectual functioning were hopefully to be improved. The researchers offered a human resource development training program to parents and teachers of eighty fifth-grade students. The results of this study led the researchers to many implications for further parent-child research. The authors suggested that in order for parents to effectively participate in the development of the whole child, a training program must be set up which involves not only the variables already found to be successful, but also sufficient child practice.

A Focus on Emotional-Interpersonal Development

There appears to be less research focused upon the enhancement of emotional-interpersonal development by means

of parental participation projects. A search through current ERIC volumes produced a single study on this topic. Milton and Gadlin (1974) researched a group of parents in a New York "self-help clinic." By means of T-group technique, they attempted to help change the authoritarian nature of troubled parent-child relationships. Their aim was to help parents in promoting the self-control and motivation of their children. Their results, however, were not statistically significant.

In psychological literature, Guerney (1969) has done extensive work with parents as psychotherapeutic agents. Guerney, in a technique called filial therapy, has trained parents to carry out treatment with their own emotionally disturbed children. Filial therapy has been modeled after client-centered play therapy with young children. Research evidence from two filial therapy groups conducted under Guerney's guidance (1964) suggested that this method is an effective means of supplementing professional resources, as well as a tool for gaining further insight into parent-child relationships.

Carkhuff and Bierman (1970) attempted to treat emotionally disturbed children by training their parents in the same emotional-interpersoanl skills used in the present study. Involving the parents in such a program led to significant improvement in affective-interpersonal skills *between parents*. The effects of the training did not, however, transfer to the parent-child relationship (as

assessed during a play situation). This parent project suggested that there is only a limited transfer from an adult-adult training program to an actual adult-child situation.

Treating emotionally disturbed children through parent involvement has been a current trend. The techniques learned in this type of treatment can be applied to the more "normal" situation in early childhood. Parent education can be employed as a highly effective source of "primary prevention," allowing us to avoid mental and social maladjustment in children (Auerbach, 1968). Carkhuff and Griffin (1971) have applied this type of affective-interpersonal training to a parent-involvement program in Head Start. Their purpose was to discover if parents of inner-city preschool children could be successfully selected and trained to be "functional professionals" (i.e., parent-helpers) for the Head Start Program. In a preliminary stage, 23 parents were trained in the communication and discrimination of empathic understanding. Candidates who reached the highest levels of this variable then entered advanced training. These parents were taught advanced skills for interpersonal facilitation. Instruction and practice were also given for training other parents. The six candidates who received this advanced training significantly improved their levels of communication and the authors concluded that the training procedures employed were

effective for the development of lay personnel (i.e., parents) as functional professionals in the Head Start Program. This study shows that successful parent programs have been set up to train interpersonal skills for working with children, and moreover, these parents could successfully maintain their own in-service training.

Background Information About Human Resource Development

The theories of human resource development (HRD) which are the basis of the Carkhuff research quoted here (1970, 1971) can be traced through a decade of development. Through extensive trial and improvement, the HRD approach has evolved as a human technology, systematically combining human values and scientific processes (Carkhuff, 1969a, 1969b, 1971). HRD technology for human achievement is focused upon the facilitation of physical, intellectual, and emotional health. The art of developing affective-interpersonal skills is the core of the HRD approach.

The origins of HRD can be found in the field of psychology. A large body of evidence based in the areas of counseling and psychotherapy have shown that all human interactions can be "for better" or "for worse" (Berenson & Carkhuff, 1967; Carkhuff & Berenson, 1967; Rogers, 1957). There is extensive evidence to indicate that facilitating or retarding interactions can be accounted for by a core of interpersonal skills (Rogers, 1967). These interpersonal skills involve learning to respond accurately and learning

to initiate accurately. Through the HRD appraoch, developing effective interpersonal skills has become an art (Carkhuff, 1973a).

The art of helping others through interpersonal skills, through problem solving, and through program development constitute the HRD technology for human achievement. (Carkhuff, 1973a, 1973b, 1974). Other facets of human resource development involve technologies for educational achievement and for career achievement. The present study has concentrated upon human achievement skills.

In the field of education, use of affective interpersonal skills has been beneficial to students. For example, Aspy (1969) found that teacher understanding, warmth, and genuineness (responsive interpersonal skills) in third-grade learning situations were highly and positively correlated with the students' gains on achievement tests. Aspy and Hadlock (1967) reported a positive relationship between teacher interpersonal skills and student attendance. Aspy and Roebuck (1972) discovered a positive relationship between teacher interpersonal skills and student cognitive functioning, as measured by Bloom's Taxonomy of Educational Objectives. Accordingly, Hefele (1971) and Berenson (1971) found that training of teachers in interpersonal skills led to significant gains in student achievement.

Truax and Tatum (1966) have demonstrated that these same interpersonal dimensions can facilitate the development of very young children. These authors found that preschool

children receiving high levels of interpersonal skills from their nursery teacher showed greater positive adjustment to teacher, nursery shcool, and peers.

Summary

Interest in educational parent involvement has existed in America for a great period of time. Initial steps in researching parent involvement projects were often taken within the domain of cognitive development, especially language stimulation. Most of the "home-tutoring" programs were mainly classified in this category. Some of the more recent research in educational parent involement has been carried out with a more comprehensive approach to child development. In addition, there have also been parent programs that focused on emotional-interpersonal aspects of child development. Several of these projects have been based upon the theory and technology of human resource development (HRD). Human resource development has developed over the past decade as a human technology combining human values and scientific processes. It is concerned with aiding physical, emotional, and intellectual health. The parent program reported in this research is based upon HRD theory.

CHAPTER III

PROCEDURES FOR COLLECTION AND TREATMENT OF DATA

The data was analyzed according to a multilinear regression analysis for a two-attribute model with one attribute ordered (Ward & Jennings, 1973, p. 138), rather than a traditional one-way analysis of covariance with three groups (Kirk, 1968, p. 455).

The set of vectors for the full model is illustrated below:

$$\begin{array}{cccccccc} Y & & C & & x & & x & x & +E \\ Y_1 & & C_1 & & 1 & & 0 & 0 & \\ \vdots & & \vdots & & & & & & \\ \vdots & = c & \vdots & +a_1 & 0 & +a_2 & 1 & +a_3\ 0 & \\ \vdots & & \vdots & & & & & & \\ Y_{27} & & C_{27} & & 0 & & 0 & 1 & \end{array}$$

Y = criterion (postscores)
C = covariate (prescores)
x_1 = Experimental group
x_2 = Hawthorne-effect control group
x_3 = No-treatment control group
E = Error

c = regression coefficient for covariate
a_1 = regression coefficient for x_1
a_2 = regression coefficient for x_2
a_3 = regression coefficient for x_3

Twenty-seven subjects were randomly assigned to one of three groups. These were the experimental treatment group, (x_1), the Hawthorne-effect control group, (x_2), and a no-treatment control group, (x_3). Preassessment measures for all three groups were carried out for the variables of

communication, discrimination, and child vocalization. These preassessment scores were identified as the initial level of facilitation by the parent, and comprised the covariate measures. At the conclusion of the study, identical postassessment measures for all three groups were administered. This final level of facilitation by the parent comprised the criterion measure for the multilinear regression analysis.

Selection of Subjects

Parents who responded to an announcement for a "parent program dealing with the development of the young child" comprised the subjects of this experiment. These parents had children who were enrolled in a child development center and who were between the ages of 3 and 5. One subject was a single aide who worked part-time at the child development center. Twenty-seven subjects were enrolled in the order in which they volunteered and after enrollment were randomly assigned to one of the three groups. The parent-subjects had children from all five of the child development center classrooms.

Assessment Procedures

The assessment procedure consisted of three separate measures: communication, discrimination, and child vocalization. These three measures were identified as the level of facilitation by the parent. Identical assessment procedures were carried out prior to and upon completion of the study.

Communication procedure. Level of communication was measured during a ten-minute play session between parent and child, which took place in one of the classrooms in the center. Each parent and child were greeted, seated, and the instructions in Appendix B were read to both. During the play session which followed, two trained raters rated the affective responses made by the parent to their child, on the modified Carkhuff rating scale. (This scale is described under the section on Instruments.) At the end of the ten minutes, the modal rating was recorded as the communication for the parent.

Child vocalization. During the same ten-minute play session, a second set of raters made a count of each vocalization (of recognizable words) made by the child. The total number of vocalizations was recorded.

Discrimination procedure. Following the play session, the child was taken to a second supervised playroom and the parent continued the assessment procedure in a small office. The discrimination procedure, including all instructions (Appendix C), was played to the parent on a tape recorder. The discrimination procedure consisted of having the subject listen to two situations in which an adult attempted to help a young child with a problem (Appendix D). The subject was to rate and record on a five-point scale, four responses given by the helping adult. Subject ratings for the four

responses were subtracted from the "expert" or correct ratings; this yielded a discrepancy score and an average of the two discrepancy scores for each parent comprised the mean discrimination score. This type of discrimination procedure has been used extensively in previous research (Carkhuff, 1969a, 1969b, 1971).

Instruments

The modified Carkhuff rating scale (Appendix A) was derived from a set of Likert-type scales devised by R. R. Carkhuff which are described in detail in the texts *Helping and Human Relations* (1969a, pp. 174-195; 1969b, pp. 223-244).

The main scale from which the present one was derived is "Empathic Understanding in Interpersonal Processes." This in turn was developed in part from "A Scale for the Measurement of Accurate Empathy" by the late C. B. Truax, which has been validated in extensive process and outcome research on counseling and psychotherapy summarized in Truax and Carkhuff (1967). The empathy scale and the other accompanying scales were partially developed from earlier versions which had been validated in extensive process and outcome research, summarized in Carkhuff and Berenson (1967). The composite form of this five-point scale was used extensively at the Human Resource Development Institute in Amherst, Massachusetts, 1973, and the American Personnel and Guidance Association Preconvention Workshop by Carkhuff Associates in New Orleans, 1974.

Previous studies using this scale are reported in *The Development of Human Resources* (Carkhuff, 1971). Inter-rater reliabilities, reported in these studies, varied from .70 to .99. Special training was needed in order for the raters to use this scale independently, during the pre- and postassessments. Raters in this study were familiar with Carkhuff's scales, and were trained in accurate use of the scales prior to the study.

The Experimental Treatment

Following the completion of the preassessment measures, the experimental group (X_1) participated in the parent program (Appendix E). This program was printed by permission of the author, Wawrykow (1973). The first session gave a general overview of the program and its purposes. The second session was a combination of more detailed didactics and the discussion of the basic concepts involved in interpersonal relationships. By the third session, learning centers or stations were set up with progressive steps laid out for individuals to follow. The parents proceeded through the centers at their own rate, as they mastered each progressive step in the learning process. The centers progressed from giving practice in writing responses, to verbal responses, and to interaction with a child "actor" (a twelve-year-old who was trained to role play as a young child). They received individual tutoring when necessary.

The final learning center was, in effect, the playroom itself, where the subject interacted with his own child, thus gaining practice in his new found skills. For all sessions, child care was provided in an adjacent playroom. All sessions were scheduled early enough to avoid child fatigue. The last part of each session included a "coffee time" for relaxed discussion between parents, children, leader, and research assistants.

"Homework" for each parent in the experimental group was assigned after session two, in the form of taped parent-child interactions; excerpts of these "homework" tapes were played, rated, and discussed in class sessions or individually. The final session was a summary overview of the program.

The Control Groups

The no-treatment control group (x_3) did not meet during the parent program sessions. The subjects were not contacted again until the postassessment period, at which time they were administered the routine assessment. Following the final assessment, control group members were informed of the general purpose of the study and of their role in the research design.

The Hawthorne-effect control group (x_2) attended a program organized and carried out by the coordinator of the child development center; the format and material for this program

was planned by the coordinator (Appendix F). The subjects in this group were aware only that an experiment was in progress. Following the routine postassessment, they were given a more detailed explanation.

Statistical Procedures

As stated previously, the data was analyzed according to a multilinear regression analysis for a two-attribute model with one-attribute ordered (Ward & Jennings, 1973, p. 138). The regression analysis method was chosen because it presented a straight forward approach to the problem. Rather than testing for main effects, simple effects, and comparison of means, the hypothesis was formulated and restrictions suggested by the hypothesis were tested directly. The .05 level of significance was established for acceptance of the research hypothesis.

The same full models were used to test each of the hypotheses. It was assumed that there was no interaction between covariate and group variables. The unit vector is assumed and not repeated in the models shown by Ward and Jennings (1973). The same format has been followed in this program.

Hypothesis one. Adjusting for initial levels in measures of the subjects' ability to

(a) communicate accurately in the affective domain and

(b) discriminate accurately in the communication of other adults in the affective domain

there will be significant differences in the final levels among the three groups.

The null hypothesis for this becomes:
There will be no significant differences in final levels among the three groups for measures of communication and discrimination.

(a) *Communication.* The full model for testing hypothesis 1a included the postassessment scores for communication as the criterion. The predictors included the preassessment scores for communication as the covariate and group categoricals for each of the three groups. The model for the null hypothesis then becomes:

$$\underset{\substack{\text{Criterion (Postscores for Communication)}}}{Y} = \underset{\text{Covariate}}{cC} + a_1x_1 + \underbrace{a_2x_2 + a_3x_3}_{\text{group categoricals}} + \underset{\text{Error}}{E}$$

Predictors

C - Covariate (Prescores for Communication)

x_1 - Experimental treatment group

x_2 - Hawthorne-effect control group

x_3 - No-treatment control group

Regression Coefficients

c - Regression coefficient for Prescores for communication

a_1 - Regression coefficient for Experimental treatment group

a_2 - Regression coefficient for Hawthorne-effect control group

a_3 - Regression coefficient for No-treatment control group

In the context of the null hypothesis, expected values would be considered to be equal.

$$E(j, a_1) = E(j, a_2) = E(j, a_3)$$

where E = expected value
j = any covariate score

It may be implied then, that $a_1 = a_2 = a_3 = a$

The restricted model to test the null hypothesis included the criterion and as a predictor, the covariate.

$$Y = cC + E$$

Criterion = Adjusted Covariate + Error
(Post Scores
for Communication)

The complete algebra for derivation of restricted models is in Appendix H.

(b) *Discrimination.* The full model for testing hypothesis 1b included the postassessment scores for discrimination as the criterion. The predictors included the preassessment scores for discrimination as the covariate and group categoricals for each of the three groups. The equation for the null hypothesis is identical to that for null hypothesis 1a except that discrimination scores are substituted for communication scores. The same is true for the restricted model shown for hypothesis 1a.

Hypothesis two. Adjusting for initial levels, final levels of these two measures (communication and discrimination) for the experimental group will be significantly greater than final levels of these two measures for the Hawthorne-effect control group.

The null hypothesis for this becomes:
Adjusting for initial levels, there will be no significant differences between final levels of the experimental treatment group and the Hawthorne-effect control group.

H_{o_2} $a_1 = a_2$

The test for this hypothesis was analgous to a traditional comparison of means between the experimental and Hawthorne-effect control group.

The restricted model to test the null hypothesis included the criterion and as predictors the covariate, a new vector formed by combining group categoricals 1 and 2, and the vector for group 3.

$$Y = cC + a_2(x_1 + x_2) + a_3x_3 + E$$

Y: Criterion (Postscores for (a) Communication (b) Discrimination)
C: Covariate
E: Error

The key given for hypothesis one also applies to this model. Also as for hypothesis one, two tests were made, one for the communication criterion and one for the criterion of discrimination.

Hypothesis three. Adjusting for initial levels, final levels of these two measures for the Hawthorne-effect control group will be significantly greater than final levels of these two measures for the no-treatment control group.

The null hypothesis becomes:

Adjusting for initial levels, there will be no significant differences between final levels of the Hawthorne-effect control group and final levels of the no-treatment control group.

H_{o3} $\quad a_2 = a_3$

The test for hypothesis three was anlagous to a traditional comparison of means. The restricted model included the criterion and as predictors, the covariate, a new vector formed by combining group categoricals 2 and 3, and the vector for group 1.

$$Y = cC + a_2(x_2 + x_3) + a_1x_1 + E$$

Y: Criterion (Postscores
(a) Communication
(b) Discrimination)

C: Covariate

E: Error

As for hypothesis one and two, two tests were made. One test was made for the communication criterion and one for the discrimination criterion. The key from hypothesis one is also applicable.

Hypothesis four. Adjusting for initial levels, final levels of vocalization will be significantly greater for children of subjects in the experimental group than for children of subjects in the Hawthorne-effect control group.

The null hypothesis becomes:
Adjusting for initial levesl, there will be no significant differences between final levels of vocalization for

children of Hawthorne-effect control subjects.

H_{o4} $a_1 = a_2$

The restricted model to test the null hypothesis included the criterion (postscores for vocalization) and as predictors, the covariate (prescores for vocalization), the vector formed by combining group categoricals 1 and 2, and the vector for group 3.

$$\underset{\substack{\text{Criterion}\\(\text{Postscores}\\\text{for Vocalization})}}{Y} = \underset{\substack{\text{Covariates}\\(\text{Prescores}\\\text{for Vocalization})}}{cC} + a_2(x_1 + x_2) + a_3x_3 + \underset{\text{Error}}{E}$$

Hypothesis five. Adjusting for initial levels, final levels of vocalization will be significantly greater for children of subjects in the Hawthorne-effect control group than for those in the no-treatment control group.

The null hypothesis becomes:
Adjusting for initial levels, there will be no significant differences between final levels of vocalization for children of Hawthorne-effect control subjects and final levels of vocalization for children of no-treatment control studies.

H_{o5} $a_2 = a_3$

The restricted model to test the null hypothesis included the criterion (postscores for vocalization) and as predicators, the covariate (prescores for vocalization), the vector formed

by combining group categoricals 2 and 3, and the vector for group 1.

$$\underset{\substack{\text{Criterion}\\(\text{Postscores}\\\text{for Vocalization})}}{Y} = \underset{\substack{\text{Covariate}\\(\text{Prescores for}\\\text{Vocalization})}}{cC} + a_2(x_2 + x_3) + a_1x_1 + \underset{\text{Error}}{E}$$

CHAPTER IV

RESULTS OF DATA ANALYSIS

The results of the data analysis are presented according to the three criteria of communication, discrimination, and child vocalization. Tables I, II, III are also organized according to these criteria. Additional data have been briefly reported in this chapter, followed by an extended discussion of the results of the entire analysis.

The Criterion of Communication

Hypothesis 1a stated that after adjusting for initial levels, there were to be significant differences in the final levels of communication among the three groups. This hypothesis was accepted as shown in Table I, part i ($p=.0001$).

Hypothesis 2a stated that after adjusting for initial levels, the final levels of communication for the experimental group were to be significantly greater than final levels of communication for the Hawthorne-effect control group. This hypothesis was accepted as shown in Table I, part ii ($p = .0001$).

Hypothesis 3a stated that after adjusting for initial levels, the final levels of communication for the Hawthorne-effect control group would be significantly greater than final levels of communication for the no-treatment control group. This hypothesis was not substantiated, as shown in Table I, part iii ($p = .8992$).

TABLE I

Models, F Ratios, and r^2 for Predicting Communication Postassessment Scores

Models and Explanations	Models	r^2	df Num	df Den	F Ratios	P
i. Hypothesis 1a: Differences in final levels of three groups (x_1, x_2, x_3) after adjusting for initial levels						
Model 1: $Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$	1-Full	.6387	2.			
Model 2: $Y = cC + E$	2-Restricted	.0376		23.	19.13	.0001 **
ii. Hypothesis 2a: Final levels of experimental group (x_1) greater than final levels of Hawthorne group (x_2) after adjusting for initial levels						
Model 1: $Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$	1-Full	.6387	1.			
Model 3: $Y = cC + a_1(x_1 + x_2) + a_3x_3 + E$	3-Restricted	.1649		23.	30.16	.0001 **
iii. Hypothesis 3a: Final levels of Hawthorne group (x_2) will be greater than final levels of no-treatment group (x_3) after adjusting for initial levels'						
Model 1: $Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$	1-Full	.6387	1.			
Model 4: $Y = cC + a_2(x_2 + x_3) + a_1x_1 + E$	4-Restricted	.6384		23.	.02	.8992

The Criterion of Discrimination

Hypothesis 1b was identical to 1a in statement, except that level of discrimination was to be measured, rather than communication. A trend toward significance was noted for this hypothesis, as shown in Table II, part i ($p = .1846$).

Hypothesis 2b was identical to 2a in statement, except that level of discrimination was being measured rather than communication. A trend toward significance was found for this hypothesis, as shown in Table II, part ii ($p = .1641$).

Hypothesis 3b was identical to 3a, with the substitution of the discrimination level rather than the communication level. This hypothesis was not substantiated, as shown in Table 2, part iii ($p = .7089$).

The Criterion of Child Vocalization

Hypothesis 4 stated that after adjusting for initial levels, the final levels of child vocalization for the experimental group would be significantly greater than final levels of child vocalization for the Hawthorne-effect control group. As shown in Table III, part i, no support was found for this hypothesis ($p = .8815$).

Hypothesis 5 stated that after adjusting for initial levels, the final levels of child vocalization for the Hawthorne-effect control group would be significantly greater than final levels of the no-treatment control group. This hypothesis was not supported by the data, as can be seen in Table III, part ii ($p = .9358$).

TABLE II

Models, F Ratios, and r^2 for Predicting Discrimination Postassessment Scores

	Models and Explanations	Models	r^2	df		F Ratios	P
				Num	Den		
i.	Hypothesis 1b: Differences in final levels of three groups (x_1, x_2, x_3) after adjusting for initial levels						
	Model 1: $Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$	1-Full	.1919	2.			
	Model 2: $Y = cC + E$	2-Restricted	.0646		23.	1.81	.1846
ii.	Hypothesis 2b: Final levels of experimental group (x_1) greater than final levels of Hawthorne group (x_2) after adjusting for initial levels						
	Model 1: $Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$	1-Full	.1919	1.			
	Model 3: $Y = cC + a_1(x_1 + x_2) + a_3x_3 + E$	3-Restricted	.1204		23.	2.04	.1641
iii.	Hypothesis 3b: Final levels of Hawthorne group (x_2) will be greater than final levels of no-treatment group (x_3) after adjusting for initial levels						
	Model 1: $Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$	1-Full	.1919	1.			
	Model 4: $Y = cC + a_2(x_2 + x_3) + a_1x_1 + E$	4-Restricted	.1869		23.	.14	.7089

TABLE III

Models, F Ratios, and r^2 for Predicting Vocalization Postassessment Scores

	Models and Explanations	Models	r^2	df		F Ratios	P
				Num	Den		
i.	Hypothesis 4: Final vocalization levels for experimental group (x_1) greater than final levels for the Hawthorne group (x_2) after adjusting for initial levels						
	Model 1: $Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$	1-Full	.4595	1.			
	Model 3: $Y = cC + a_1(x_1 + x_2) + a_3x_3 + E$	3-Restricted	.4590		23.	.02	.8815
ii.	Hypothesis 5: Final vocalization levels for Hawthorne group (x_2) greater than final levels for no-treatment group (x_3) after adjusting for initial levels						
	Model 1: $Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$	1-Full	.4595	1.			
	Model 4: $Y = cC + a_2(x_2 + x_3) + a_1x_1 + E$	4-Restricted	.4594		23.	.01	.9358

Additional Data

The possibility of sex effects was also analyzed. Categoricals for the sex of the parent and for the sex of the child were included in an extended version of the full model. The variance accounted for by these two sex variables was not significant ($p = .6014$, $p = .9955$, $p = .9955$). Also there was no significant interaction effect between the sex of the parent and the sex of the child (Appendix I).

It is interesting to note that the criterion of communication, as used in Hypothesis 1a and Hypothesis 2a still accounted for a highly significant proportion of the variance ($p = .0003$) even within the context of this extended full model.

Explanation and Discussion of the Results of the Data

Communication. The criterion of communication was most significant in this study. There were marked differences among the experimental, the Hawthorne-effect control, and the no-treatment control groups in final levels of communication, as indicated by Hypothesis 1a. In other words, the parents did relate differently to their chidlren during the ten-minute play session which took place after the "parent program" was completed. More specifically, the parents in the three groups responded differently to their children's affective expressions.

Hypothesis 2a has shown that the parents in the experimental group communicated on an affective level to their children

in a manner which was significantly more accurate than the parents of the control groups. In other words, parents of the experimental group were functioning at a higher level according to the modified Carkhuff rating scale. Apparently the training and practice these parents received in the experimental program was effective.

Hypothesis 3a indicated that there was not a great deal of difference in the communication levels of the two control groups. They did not change markedly in their manner of responding to the children's affective expressions during the final play session. The parent program organized by the center coordinator did not appear to change the level of communication between parent and child in the Hawthorne-effect control group. Also, knowing that they were participating in a research study did not effect the communication level of these parents. The no-treatment control group was not expected to change to any significant degree.

Discrimination. The evidence of changes in ability to discriminate levels of adult-child communication was supported only by trends to significance. Hypothesis 1b indicated that the differences among the three groups in final levels of discrimination ability approached significance. A similar trend was found for Hypothesis 2b which stated that the parents of the experimental group would have a greater ability to discriminate or rate adult-child interactions than the control group.

The discrimination procedure measured the parents' ability to identify the communication level of another adult. This ability was not stressed during the experimental program. Rather the emphasis was upon teaching the parent to increase his own level of communication with his child. In addition, the parents experienced some difficulty in using the rating form and in mastering the mathematics of the rating procedure within the short assessment period. Probably with the inclusion of discrimination or rating practice in the experimental program, the trends would be intensified to produce true significance.

Vocalization. Hypothesis 4 and 5 indicated that the criterion of child vocalization did not account for a significant proportion of the variance in this research study. According to the hypotheses, a count was made of each recognizable communication by the child during the ten-minute play session. It was hypothesized that the experimental group children would produce the highest levels of vocalization. It became apparent after the beginning of the preassessments that the vocalization measures were inadequate.

Some children did indeed increase their vocalization level. One child spoke only a few words during the pre-assessment play session, yet communicated twenty-two times during the final assessment. This particular child had been new to the school at the onset of the study, and very shy. By the time of the final assessment, she was familiar with

the room (her own classroom) and the experimenter (her teacher). The differences here could not be accounted for by the experimental variables. Moreover, the child was a subject in the control group.

In addition, there were some children who verbalized excessively. Five children spoke over one hundred times and three others, over eighty times during the initial ten-minute play assessment. These children were often "chattering" nerviously, not allowing time for effective parent response. A realistic improvement in vocalization for these children would have been a reduction in talking, not an increase.

Perhaps more importantly, it became apparent that a measure of *quality* not quantity of child vocalization was needed. In this context, the children of the experimental group should be expected to communicate in a more aware and open manner.

Additional data. The experimenter felt that a mother might interact differently with her child than a father, especially on the affective level. Moreover, a boy might communicate to a parent in a different manner than a girl, on an affective level. The fact that the mother-father variable did not produce any significance is not surprising, as there were only two fathers in the study. One other father dropped out of the experimental program after session two and was not given a postassessment.

The boy-girl difference in manner of communicating was not substantiated. Some interesting implications are raised in the context of sex-role behavior. Does the young child express his emotions according to current masculine-feminine identification? Is there a true difference in masculine-feminine expression of emotionality?

One important variable which may have contributed significant variance in this study was not analyzed. That variable was the rate of attendance. It is interesting to note that the one parent in the experimental group who improved the most markedly in communication level was the one parent who attended most sessions. This mother improved from an average level of 1.5 in communication to a final average of 4.5, as measured by the modified Carkhuff rating scale. Accordingly, a second parent in the experimental group who attended least sessions moved from an average of 1.5 to a final average level of 2.0 in communication.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to determine the effect of a parent program for enhancing emotional-interpersonal development of young children, through instruction in interpersonal facilitation. The subjects of this study were 27 parents with children between the ages of 3 and 5, who were enrolled in a local child development center. These parents volunteered for a parent program associated with the center, and were randomly assigned to an (a) experimental group, (b) Hawthorne-effect control group, or (c) no-treatment control group.

Three measures of the level of facilitation by the parent were made both prior to and after the experimental program. These measures were (a) level of communication, (b) level of discrimination, and (c) level of child vocalization. Upon completion of the preassessments, the experimental group participated in a program focused upon training in interpersonal-affective skills and upon parent-child interaction. The Hawthorne-effect control group participated in an independent program organized by the center coordinator. The no-treatment control group was not contacted again until the postassessment.

Five hypotheses were investigated in an effort to establish the effectiveness of the experimental program upon the level

of facilitation by the parent of his child's affective-interpersonal interaction. The .05 level of significance was established for acceptance of the research hypotheses. Multilinear regression analysis was used to analyze the data.

Hypothesis 1 stated that, after adjusting for initial levels, there would be significant differences among the three groups in the final levels of (a) communication and (b) discrimination. Analysis determined these differences to be significant for the communication criterion ($p = .0001$). A trend toward significance was found for the differences in final levels of discrimination among the three groups ($p = .1846$).

Hypothesis 2 stated that, after adjusting for initial levels, the final levels of the experimental group would be significantly greater than final levels of the Hawthorne-effect control group, for measures of (a) communication and (b) discrimination. Hypothesis 2a was shown to be significant ($p = .0001$), while Hypothesis 2b showed only a trend toward significance ($p = .1641$).

Hypothesis 3 stated that, after adjusting for initial levels, the final levels of the Hawthorne-effect control group would be significantly greater than final levels of the no-treatment control group for (a) communication and (b) discrimination. The data did not support either (a) or (b) of this hypothesis ($p = .8992$, $p = .7089$).

Hypothesis 4 and 5 were concerned with the criterion of child vocalization. Hypothesis 4 replicated 2, except that

child vocalization was substituted as the criterion variable. Similarily, Hypothesis 5 replicated 3, except for the substitution of vocalization. These hypotheses were not substantiated ($p = .8815$, $p = .9358$). Examination of the data suggested that the criterion of verbalization should be centered around a measure of quality, rather than quantity.

Investigation of possible sex differences in parent-child interactions did not yield significance. The ability to discriminate levels of communication of other adults was not stressed in the experimental program and this perhaps led to the meager evidence supporting the discrimination variable. The criterion of communication has been revealed as the most significant variable in this study. The experimental program significantly improved the level of communication between parent and child.

Recommendations

In replicating this study, support could be found for the discrimination variable if more emphasis and practice was given to discrimination skills during the experimental program. Carkhuff has demonstrated numerous instances of the relevance of the discrimination procedure to the measuring of interpersonal skills (1969a, 1969b, 1971).

Accordingly, a revision of the vocalization variable is needed in order to obtain this potentially valuable information. As a result of the experimental program, the

child should be more aware of his affect and better able to cope with it. Perhaps a measure of "feeling words" used by the child would be more appropriate.

Additional investigation is needed in the context of attendance. A major tenet of the experimental program was that actual parent-child practice would lead to significant improvements. A measure of the number of sessions attended, of taped interactions with the child, and of time spent in supervised practicuum should be made for each experimental subject.

The material included in the experimental parent program should probably be presented over a greater period of time. The grasp of theory and the interpersonal skills required of the parent are extensive. A long-term program would perhaps lead to greater internalization of the learning as well as provide more opportunity for acutal parent-child interaction.

Two essential elements must not be overlooked in the replication of this study. First of all, a competent leader is needed for the parent program. This leader should possess intensive knowledge of human resource development, as well as a sound foundation in child development principles. The second important factor is the element of practice between parent and child. Every opportunity should be made for the testing out and improving of newly found skills within an actual parent-child interaciton. The experimental program could not be successful without these two elements.

According to the results of this study, the parent program dealing with instruction in affective-interpersonal skills has been moderately successful. The total relationship between parent and child may well have been enhanced by the parents' ability to respond more accurately to his child. One must keep in mind that the parent population under study was typically "middle-class;" they probably were highly motivated toward education and child-related activities. This program, however, can lend itself to adaption in language and presentation style in order to be made appealing to differing parent population.

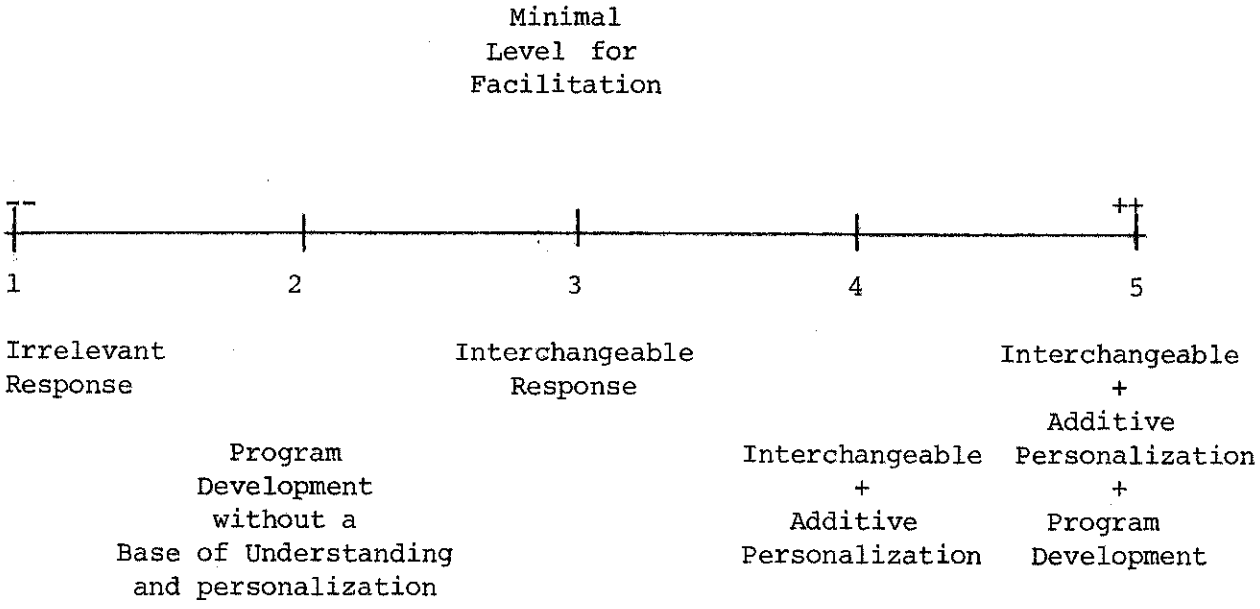
The implications of this study are numerous for the fields of early childhood development and parent involvement. The facilitation of social-emotional development in young children is being recognized as a vital component of early childhood programs. The concept of the parent as a partner in a continuing process of mutual education has also been recognized. A program such as the one carried out in this study can combine the greatest benefits of both of these concepts.

APPENDIX A

The Modified Carkhuff Rating Scale

(as introduced at the Human Resource Development Institute, Amherst, Massachusetts, 1973)

In the interest of space, this is a highly condensed and abbreviated explanation.



Interchangeable Response: (level 3 on the rating scale) the first person (parent) interprets the meaning and the feeling expressed by the second person (child) and responds to him in a way that reflects that meaning and feeling.

Eg. A new student in a kindergarten class is sitting by herself, in the middle of the room, crying.

Parent: "You feel lonely because you don't know anybody here."

ie. Parent helps the child by meeting him where he

is at that moment. Parent helps the child explore how he is feeling.

Additive Personalization: (level 4 on the rating scale) the parent interprets the meaning and feeling expressed by the child and proceeds to add up all cues given by the child, responding in a way that personalizes the experience for that child.

Eg. "You feel lonely because you don't know anybody here. You're not happy at all right now. Everyone seems like a stranger. It's all new and strange to you, and you really need to feel like you belong."

ie. Parent helps child *understand* where he is (what he is feeling, and why he has those feelings).

Program Development: (level 5 on the rating scale) the parent not only adds up and personalizes all the feelings and meanings expressed by the child, but he *helps the child move* in the desired direction. He gives the child a workable program for acting upon.

Eg. "You feel lonely because you don't know anybody here. It's all new and strange to you, and you really need to feel like you belong. C'mon, let's go see if we can find a little friend who would like to play with you."

ie. Parent helps the child to act upon his new understanding and to move toward where he needs and wants to be.

APPENDIX B

Instructions for Assessment of Level of Communication

Please come in and sit down. I'm so glad you could come today. (etc.)

You are probably wondering what this is all about. Let me explain, O.K.? The program you have enrolled for is a research study concerning parents and their young children. I am going to ask you to carry out a 10-minute individual session with (name) now, and when we are through, I will explain about it in more detail.

These people are here to observe how you and your child interact. I know they are a little distracting, but I hope you won't let them bother you too much. The idea is for you to relax and play with (name) for the next 10-minutes. Act in a manner you think will be most helpful to your child, particularly when his (her) feelings are involved. Your attention should be focused on (name) and on his (her) concerns.

There are a number of ways that parents try to be helpful:

1. by repeatedly asking questions.
2. by giving advise.
3. by offering explanations.
4. by reflecting back how the child seems to be feeling when he (she) expresses himself (herself).

5. by bringing in one's own similar feelings.
6. by being quiet at times and really trying to know and feel what your child is trying to talk about.

It is our belief that while the first three kinds of responses are given more often, the last three kinds are much more effective.

We are asking that you try to emphasize:

- reflecting the child's feelings and meanings back to him (her).
- after you have laid this base of understanding, adding up all the feelings and meanings that you child is expressing and making them personal or special to him (her) and her needs.
- after you have laid a solid base of understanding, and have tried to personalize the experience for your child, try to develop a program that will help your child move toward where he wants and needs to be, in that particular situation.

Now, do you have any questions? . . . I know the instructions sound a little confusing. Please don't worry about them. The idea is just for you to relax and play with (name) for the next few minites, trying to be as helpful as you can. Good, you may begin now and we will let you know when the 10 minutes is up.

APPENDIX C

Instructions for Discrimination Exercise

(as transcribed from tape recorder)

Please sit down and relax. See the paper in front of you with the two charts on it and the pencil. I will explain to you how to use these charts. We have one more exercise for you to do this evening. We would like you to rate some adult-child situations for us. I will read a situation and after that I will read four adult responses to that situation. I will repeat them twice and the second time I would like you to rate each response on a scale from one to five, with five as the best possible rating. The chart in front of you is for you to record the ratings. Your ratings go in the column marked "My Rating."

Let me give you an example: For response one you may decide that it deserves a rating of three, and so you would put the number 3 in the column beside response one. You may decide the second response deserves a rating of five, so you would put the number 5 in the column beside response two. Do you understand? If you have any problems, please feel free to ask the person in the room.

I will show you how to fill in the rest of the chart when we are done, alright? Good.

APPENDIX D

1. The Discrimination Procedure

Now I will read the first situation.

This is the end of the first week of class. Jeniffer, a five year old, is sitting by the door crying pitifully. Assuming that the teacher has already taken time to understand and get to know Jeniffer, please rate the following responses that she could make to her:

Response 1. "Jeniffer, the floor is dirty; now young ladies should not sit on the floor. You should be in that group over there."

Response 2. Kneeling beside her, the teacher says, "You really feel alone here because everyone you know is at home . . . (pause) . . . You need a friend.

Response 3. "You're really afraid here because everything is new."

Response 4: "Come here, Jeniffer; I want to show you your new friends. These children would like to know you."

Now let's continue. Please move down to the second chart on your paper and I will read the second situation.

Freddy was just told that his paper would not be dry to take home today. All his classmates got to take theirs home, but Freddy had started late and his paper was still very wet and dripping. Freddy got very upset. He sat down in the

nearest chair and said he wasn't going home until he got to take that picture.

Response 1. "You're really angry with me 'cause I won't give you your picture."

Response 2. "Chin up, you can take it home tomorrow."

Response 3. The teacher squares up to Freddy, both kneeling on the floor and says, "You're really mad right now. You don't like me very much 'cause you don't have a picture to take home to Mommy and Daddy like everyone else does. You need one so you can feel proud too. Let's see, you can take the one home that you made yesterday."

Response 4. "Look the sun is shining. It's such a nice day. You don't want to spoil a nice day do you?"

2. The Rating Sheet for Discrimination

NAME _____

DATE _____

SITUATION A

RESPONSE	MY RATING	CORRECT RATING	DISCREPANCY
1			
2			
3			
4			

SUM = _____

AVERAGE = _____

SITUATION B

RESPONSE	MY RATING	CORRECT RATING	DISCREPANCY
1			
2			
3			
4			

SUM = _____

AVERAGE = _____

APPENDIX E

A Parent Program

(as adapted from the original by author, G. M. Wawrykow)

Session I - Part I
(30 minutes)

Overview of Early Childhood Emotional Development

A. EXPLORATION: The leader asks the parents what conditions must be present before any one of them could attend to, understand, and respond to another person's feelings.

(parent response)

B. UNDERSTANDING: By summarizing the above comments the leader is able to show that a person--whether child or adult--must first learn systematically to response to his own feelings and emotions to understand them and act on them before he can systematically learn to receive, understand, and respond to the feelings and emotions of a child or another adult. Thus, intrapersonal development is a precursor to meaningful interpersonal development.

C. ACTION: The parents are to indicate in each of the following which is the intra- and which is the interpersonal aspect.

Both-
More Intra 1. Johnny cries when he is not picked to be leader.

Inter 2. Mary gets angry when Bobby hits her and screams at him.

Inter	3.	Karen sees Jeffry having difficulty with his blocks and goes over to him and says, "that's hard, but if I help we can do it."
Inter	4.	Jessie sees Marie crying, goes over, puts his arm around her and says, "I'm sorry!"
Intra	5.	Billy says, "I don't feel like a big boy, I feel like a baby!" (as he sucks his thumb)
Both	6.	Joanie fell and hurt her head and comes running to Miss Rehcaet wanting to be picked up and held.

D. EXPLORATION: The parents are asked what the process components of intrapersonal-emotional functioning are.

(parent response)

E. UNDERSTANDING: The leader concretizes understanding by stating:

1. Exploration: is of feelings and the meaning of these feelings to a person at one moment in time. Example: A pupil is upset because he hurt his head.
2. Understanding: is of what the same person's immediate needs are. Example: The child needs to be held to feel secure.
3. Action: involves getting from the place where a person is to where that person needs to be. (i.e. doing something about it!) Example: The child needs to learn to ask to be held to fulfil his needs.

F. ACTION: The parents are to identify which of the following are examples of intrapersonal Exploration, Understanding, or Action.

Un 1. "I'm sad because my Grandmother went away on an airplane."

Ex 2. "I have 'ta have someone new to love me."

Ac 3. Joanie fell and hurt her head and comes running to Miss Rehcaet wanting to be picked up and held.

G. REVIEW: The parents complete the following:

1. The emotional skills are comprised of both (inter)-personal and (intra)-personal.
2. The intrapersonal involves
   a. (Exploring) the problem and the feelings and meaning of the feelings.
   b. (Understanding) the problem and also the flip side--i.e. the goal or objective.
   c. What (actions) will help you get closer to your objective.

H. EXPLORATION: The parents are asked what the emotional interpersonal process skills might be.

(parent response)

I. UNDERSTANDING: The intrapersonal skills, it is pointed out, help *problem solving* by helping a child explore, understand and act on his feelings and the meaning of those feelings for him.

The interpersonal skills involve responding to others, *helping* them explore and to understand their situation and to develop their own program by exploring, understanding, and acting.

1. To facilitate exploration, a child must learn to attend and respond interchangeably.
2. To help another add things up, the child must learn to make additive personalizations.
3. To help a child help another to make use of these understandings, he needs to learn how to develop and use a program.

(parent response)

J. ACTION: The students are asked to identify each of the following as Interchangeable Response and Additive Personalization, or Program Development.

IR 1. You feel sad because you didn't get to be leader.

PD 2. Put your coat on now. We are going outside.

AP 3. You really want to be the leader. It makes you feel good to be first!

IR 4. You're upset 'cause you lost that wrestling match with Johnny.

AP 5. You need to feel big and strong.

PD 6. You'll have to work hard in gym and eat lots to get strong.

K. REVIEW: Same as G plus the following.

3. The interpersonal skills involve

a. An (interchangeable) response to promote exploration.

b. An (additive) statement to add things up and bring understanding.

c. (Program Development) to teach or help a child learn how to get from where he is to where he needs to be.

L. LECTURE: The leader points out that the responsive skill of an interchangeable response can be broken down into three subskills: empathy, respect, and specificity of expression.

He further points out that the initiative skills dimension can be broken down into four interpersonal skills: facilitative genuineness, confrontation, immediacy, and self-disclosure.

- 5 minute break -

Session I - Part II
(30 minutes)

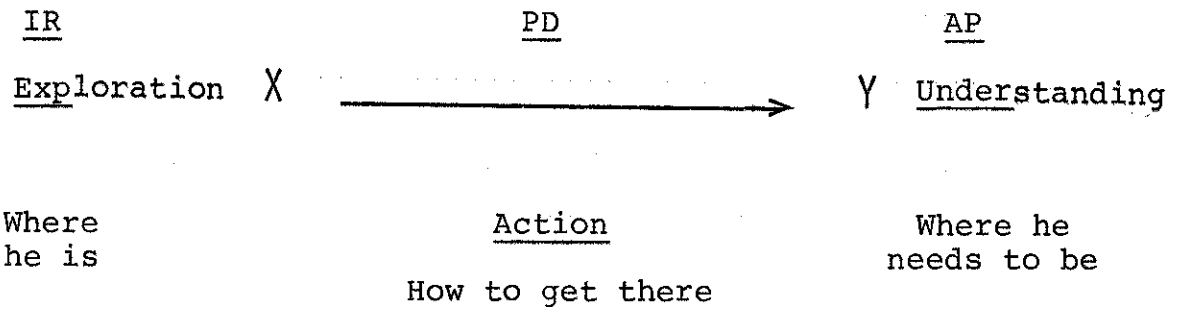
Responding to Another

A. EXPLORATION: The leader asks the parents what they must do first to respond to another person.

(parent response)

B. UNDERSTANDING: The leader encourages their giving the

conceptualization for figure below. In this paradigm you must first help the other person see where he is. You must then let him know that you understand where he is. This comes through giving him an interchageable response (IR).



C. ACTION: The parents are to identify which of the following would be IR's.

Parent: "I just don't see why Johnny's not doing better. He's smart at home. He talked when he was only two an a half!"

*1. "You're upset because Johnny's not doing well."

*2. "You're mad at me because you don't think I am teaching him or he'd learn."

3. "You're being defensive Mrs. Tnerap!"

4. "Maybe you don't help him at home."

5. "Well, if you were at home more to help him!"

Team Co-Teacher: "I'm down today; those kids really tired me out. I gave them everything and nothing happened!"

1. "Well, you never pull your weight on this team."

*2. "You feel tired and exhausted. You're upset too because you gave them everything and they didn't respond."

3. "Aw, have a cup of coffee; you'll get over it."

4. "Why don't you put them in their place next time."

*5. "You're hurt, angry, and tired. Those kids played you out."

D. EXPLORATION: The leader asks what the parents see an IR being comprised of.

(parent discussion)

The leader lists the components as given by the parents.

E. UNDERSTANDING: For understanding, the leader lists the components in order. (1) Listening to the message in the order it was given (verbatim), (2) Identifying the feeling, (3) Formulating a reflection of feeling ("You feel _____!"), (4) Identifying the content, (5) Completing the reflection by adding the meaning for the feeling. ("You feel _____ because _____!").

F. ACTION: (1) Each of the "reflections" in C are analyzed for steps 1-5. (2) The parents each formulate their own IR to each of the stimulus statements in C.

G. EXPLORATION: The class discusses how a response can be judged as being interchangeable or not.

(parent discussion)

H. UNDERSTANDING: The leader quotes the following (Carkhuff, 1971, p. 188):

> "Judgment of level 3 is made on the basis of whether the helper could have said what the helpee said in terms of feeling (and meaning)."

- Coffee Time -

Homework Assignment - 10 minute taped interaction between parent and child.

Session II - Part I

Excerpts from tapes are played and discussed (30-45 minutes)

Attending Behavior and the IR
(20 minutes)

A. To begin, the leader outlines the following hierarchy for learning to make an IR.

1. Goal: Learn to *attend* to written stimulus statements.
2. Make a written one sentence IR to a written stimulus.

Learning Center I

---

3. Goal: Learn to attend to audio stimuli.
4. Make a written one sentence IR to an audio tape recorded stimulus.

Learning Center II

---

5. Goal: Learn to give expression when saying IR. 6. Make a spoken IR to an audio tape recorded stimulus.	Learning Center III
7. Goal: Learn to attend to visual stimuli. 8. Make a spoken one sentence IR to actor.	Learning Center IV
9. Goal: Learn to put visual cues, auditory cues and content cues together when attending. 10. Respond to actor.	Learning Center V
11. Goal: Apply learning to responding to own child. 12. Carry out prolonged interaction with child.	Learning Center VI

B. The parents are told that during the next three class sessions and for homework sessions learning centers will be set up. The parents are to progress from learning center to learning center in the above hierarchy. Each parent is to progress at his own pace; but, by the beginning of class period 5 in this course all parents should have mastered attending and the IR.

The leader indicates that he will serve as consultant to persons at each of the learning centers.

- Coffee Time -

Sessions III, IV, & V

Part I - Learning Centers
(30 minutes)

- 5 minute break -

Part II - Tape Reviews
(30 mintues)

- Coffee Time -

Learning Center I.

The instructions are written on a large poster and posted to the wall. Ten cards with child situations are present. Paper and pencils are provided.

Attending to Written Content

1. Read verbatim what is written on a card.
2. Identify feeling (use your own past experience to help identify what that feeling might be).
   (Answer question "What would I feel if that happened to me?")
3. Formulate reflection of feeling.
   "You feel _____!"
4. Identify content.
   (Answer question, "What happened to make this child feel this way?")
5. Formulate IR in reflective mode.
   "You feel _____ because _____."

6. Practice this with each of the 10 cards. Go through the 5 steps each time. Go back and formulate a written IR directly from reading the stimulus card. 10 stimuli such as these examples are written on cards.

   eg. "I'm really happy; my kids all enjoyed themselves at the zoo, and nobody got hurt or lost."

   eg. "Gee, I was s'posed to be star of the class play, but I got sick and couldn't make it."

The stimulus cards vary in difficulty and are marked so that parents can choose the level they wish to work on.

Learning Center II:

Written on poster:

1. Quickly review instructions for Center 1.
2. Listen to first situation on tape recorder (Press play).
3. Focus on Listening Skills

   Listen to TONE - harsh tones probably indicate anger

   - soft tones - pleasure? shyness?. . .

   Listen to INTENSITY - loud voice probably indicates excitement

   - quiet voice probably relaxation or . . . ?

   Listen to PACING - quick talking

   - slow talking

4. Analyze the recorded situation in terms of the audio stimuli mentioned above.

5. Make a written IR to the recorded situation.
6. Repeat for each of the 10 situations.
7. (When situation 10 is reached, please rewind tape - Press Review.)

If parent has trouble with written IR's he is rerouted back to Learning Center I to review rules for a written response.

Learning Center III.

Written on poster:

- Practice in Expression
- Listen to the first taped situation
- Mentally review steps from Center 1 and 2
- Say your response - Record it when ready
- Get feedback by listening to your own response - listen for tone, intensity, pacing, etc. Is your reply interchangeable? Can you "step it up" to the next level?
- Repeat for each taped situation until you feel you are responding with good verbal expression.

Learning Center IV.

This center is set up in a private room. One or two parents proceed through the center at a time.

Attending to Visual Cues

You are watching for:

- Body posture - leaning towards you = interest
  - leaning away = reticence
- Hand gestures - meaningful? disjointed? none?

- Is eye contact kept?
- Mannerisms - facial expressions

- Children are often not very verbal. Visual cues are important. List some nonverbal "language" children use. Be aware of the n.v. "language" your child uses. Be aware of <u>your</u> nonverbal language!

- When you are ready - ask for example no. 1, 2, 3, or 4. It does not have to be in order and you may repeat whenever you wish. The actor will sit with back turned until asked to perform. Prolonged verbal exchanges with actor will come in next center. Write out observations for points above for each example given you by the actor.

  Formulate an IR - if possible a base of IR, IR & Level 4 (Additive Personalization)

  (A 12 year old boy, skilled in acting as a young child is presenting 10 brief situations, which vary in mood and emotion.)

Learning Center V.

This is also a private center. Usually one parent at a time is present.

Written on Poster:

<u>Putting it all Together</u>
- auditory or spoken cues
- visual or nonverbal cues
- meaning and feeling

- Spoken, non-verbal, and meaning cues should match in their intensity and in their presentation

  Eg. "I am so angry." if said in a quiet monotone and with body slumped and listless - does not add up!

- If one set of cues contradicts another ask yourself - "What is this person/child really trying to say?"

  Eg. Child says, "Nothing's wrong." but eyes are large and bright with tears and a piece of kleenex is being twisted round and round in child's hands.

- Can children ususally "match" all their cues easily?
- Does your child?
- Practice putting all your different channels together when responding

  Use words - use expression - use your body - i.e. gestures, touching, holding, etc.

- Make your full response to the actor - putting it all together.

  1. Ask actor to perform example 1, 2, 3, or 4, 5, & 6 - does not have to be in order - you may repeat whenever you wish.
  2. After example - pause for a moment - then Respond - aim for level 3 - once that is laid thoroughly you may try 4 & 5.

(A second 12 year old actor is presenting six more complex child situations.)

Learning Center VI.

This will not be a formal learning center. Instead, the parent is to practice making IR's by interacting with his child in the playroom or in a private "corner" where they can play undisturbed.

In each learning center, there will be the described basic materials. Parents will be encouraged to "re-route" if they feel they need more practice. The leader will act as a floating consultant and advanced parents may also give help to those working in earlier centers.

Session VII

- An Overview and Summary
- Evaluations and Suggestions

(20-30 minutes)

APPENDIX F

Parent Program for Hawthorne Control Group

The following sheet was sent out to parents of this group:

Possible program topics-

(Please rate 1 - 2 - 3 in order of preference.)

-Language Development: How a child's language develops; How parents can enhance their child's language development.

-Development of Reasoning/Intelligence: How do children learn; what are the stages in the development of learning; what should I do as a parent?

-Analyzing Children's Art: What does children's art work tell us; stages of children's art, what art materials should parents furnish for their children; what can parents do at home to encourage artistic development.

-A Guide to Discipline: Improving parent-child relations.

-Creative Play: How to turn the home situation into a learning situation; ideas for homemade play equipment.

-Cooking and the Child: Recipes; encouraging subsequent learning situations.

-The Open Classroom: How it works, the use of learning centers; why we use it at the Christian Child Development Center, basic philosophy of the school; comparison with the Motessori method of teaching.

-Other

Field trips will also be scheduled - Attend according to your interest and time.

The parents and center coordinator met to discuss three of the topics offered above. A field trip to a local early childhood program was also taken.

APPENDIX G

Rating Forms

1. Rating Form for Modified Carkhuff Scale

Pre
Post Assessment

Subject _____
Rater _____

	Level						
Non-Affective	1.0	1.5	2.0	2.5	3.0	3.5	4.0
	Time						
	0-1						
	1-2						
	2-3						
	3-4						
	4-5						
	5-6						
	6-7						
	7-8						
	8-9						
	9-10						

2. Rating Form for Vocalization

Pre
Post Assessment

Subject _____
Rater _____

Time (in minutes)			
	0-1	4-5	8-9
	1-2	5-6	9-10
	2-3	6-7	Total
	3-4	7-8	

APPENDIX H

Algebra for Multi-Linear Regression Analysis; Derivation of Restricted Models

1. FULL MODEL $\quad Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$

Y = criterion (postscores)
C = covariate (prescores)
x_1 = experimental group
x_2 = Hawthorne-effect control group
x_3 = no-treatment control group
E = error

c = regression coefficient for covariate
a_1 = regression coefficient for x_1
a_2 = regression coefficient for x_2
a_3 = regression coefficient for x_3

2. For comparison of means, with communication and discrimination as criteria:

$H_{E_2} \quad a_1 \neq a_2$

$H_{o_2} \quad a_1 = a_2$

Substituting into full model, Restricted model is

$$Y = cC_1 + a_2x_1 + a_2x_2 + a_3x_3 + E$$
$$= cC + a_2(x_1+x_2) + a_3x_3 + E$$

3. $H_{E_3} \quad a_2 \neq a_3$

$H_{o_3} \quad a_2 = a_3$

Substituting, Restricted model becomes

$$Y = cC + a_1x_1 + a_2x_2 + a_3x_3 + E$$
$$= cC + a_1x_1 + a_2(x_2 + x_3) + E$$

4. With Vocalization as the criterion

$H_{4_E} \quad a_1 \neq a_2$

$H_{4_o} \quad a_1 = a_2$

Substituting into full model, restricted model is same as #2.

5. With Vocalization as the criterion

H_{5_E} $a_2 \neq a_3$

H_{5_O} $a_2 = a_3$

Substituting into full model, restricted model is same as #3.

APPENDIX I

Table for Sex Effects Analysis

Sex Variable		With Communication As Criterion		With Vocalization As Criterion		With Discrimination As Criterion	
Sex of Parent	Full Model	df=1	r^2=.6445	df=1	r^2=.4714	df=1	r^2=.2239
	Restricted Model	df=20 F Ratio = .29	r^2=.6393 p=.6014	df=20 F Ratio=.45	r^2=.4595 p=.5166	df=20 F Ratio=.42	r^2=.2078 p=.5329
Sex of Child	Full Model	df=1	r^2=.6445	df=1	r^2=.4714	df=1	r^2=.2239
	Restricted Model	df=20 F Ratio = 0	r^2=.6445 p=.9955	df=20 F Ratio=0	r^2=.4714 p=1.0	df=20 F Ratio=0	r^2=.2239 p=1.0
Interaction (SxS)	Full Model	df=1	r^2=.6445	df=1	r^2=.4714	df=1	r^2=.2239
	Restricted Model	df=20 F Ratio=0	r^2=.6445 p=.9955	df=20 F Ratio=0	r^2=.4714 p=1.0	df=20 F Ratio=0	r^2=.2239 p=1.0

BIBLIOGRAPHY

1. Aspy, D. The effects of the level of facilitative conditions offered by teachers upon student achievement indices, Florida Journal of Educational Research, 1969, 11, 39-48.

2. Aspy, D. N., & Hadlock, W. The effects of high and low functioning teachers upon student performance. Unpublished manuscript, University of Florida, 1967.

3. Aspy, D. N., & Roebuck, F. N. An investigation of the relationship between student levels of cognitive functioning and the teachers classroom behavior, Journal of Educational Research, 1972, 65, 365-368.

4. Auerbach, A. B., Parents learn through discussion. New York: John Wiley & Sons, 1968.

5. Berenson, D. H. The effects of systematic human relations training upon classroom performance of elementary school teachers, Journal of Research and Development in Education, 1971, 4, 2, 70-86.

6. Bloom, B. S. Early learning in the home, Los Angeles: University of California, 1965.

7. Brim, O. G., Jr. Education for child rearing. New York: The Free Press, 1965.

8. Bronfenbrenner, U. Implications of follow through programs for the american school system. Poverty and Human Resources Abstracts, 1968, 3.

9. Carkhuff, R. R. The development of human resources. New York: Holt, Rhinehart, & Winston, 1971.

10. Carkhuff, R. R. Helping and human relations. A primer for lay and professional helpers. Volume I: selection and training. New York: Holt, Rhinehart, & Winston, 1969a.

11. Carkhuff, R. R. Helping and human relations. A primer for lay and professional helpers. Volume II: practice and research. New York: Holt, Rhinehart, & Winston, 1969b.

12. Carkhuff, R. R., & Bierman, R. Training as a preferred mode of treatment of parents of emotionally disturbed children. Journal of Counselling Psychology, 1970, 17, 157-161.

13. Carkhuff, R. R., & Berenson, G. G. Beyond counselling and psychotherapy. Toronto: Holt, Rhinehart, & Winston, 1967.

14. Carkhuff, R. R., & Griffin, A. H. The selection and training of functional professionals for the inner-city preschool. Journal of Research and Development in Education, 1971, 4, 87-96.

15. Cratty, G. J. Perceptual and motor development in infants and children. London: MacMillian, 1970.

16. Elkind, D. Piagetian and psychometric conceptions of intelligence. Harvard Educational Review, 1969, 319-337.

17. Gesell, A., & Ilg, F. L. The child from five to ten. New York: Harper & Brothers, 1946.

18. Gordon, I. Parent involvement in compensatory education. Champaign, Illinois: University of Illinois Press, 1970.

19. Gordon, I. J. Reaching the child through parent education: The Florida approach. Gainesville: University of Florida, Institution for Development of Human Resources, 1972. (ERIC Document Reproduction Service No. ED 057 880).

20. Gray, S., Klaus, R. A., Miller, J. O., & Forester, B. J. Before first grade: the early training project for culturally disadvantaged children. New York: Teacher's College Press, 1966.

21. Guerney, B. G. (Ed.). Psychotherapeutic agents. New Roles for nonprofessionals, parents, and teachers. New York: Holt, Rhinehart, & Winston, 1969.

22. Halverson, L. E., Robertson, M. A., & Harper, C. J. Current research in motor development, Journal of Research and Development in Education, 1973, 6, 3.

23. Hefele, T. J. The effects of systematic human relations training upon student achievement. Journal of Research and Development in Education, 1971, 4, 2, 52-69.

24. Hess, R. D. Parental behavior and children's school achievement: implications for Head Start, In E. Grotberg (Ed.), Critical issues in research related to disadvantaged children. Princeton: Educational Testing Service, 1969.

25. Hunt, J. McV. Intellegence and experience. New York: Ronald Press, 1961.

26. Kamie, C. An application of Piaget's theory to conceptualization of a pre-school curriculum, In R. K. Parker (Ed.), The preschool in action: exploring early childhood programs. New York: Allyn & Bacon, 1972.

27. Karnes, M. B., Zehrback, R. R., & Teska, J. A. A new professional role in early childhood education. Interchange, 1971, 2, 2.

28. Karnes, M. G., Teska, J. A., Hodgins, A. S., & Badger, E. D. Educational intervention at home by mothers of disadvantaged children. Child Development, 1970, 41, 925-935.

29. Karnes, M. B., Studley, W. M., Wright, W. R., & Hodgins, A. A. An approach for working with mothers of disadvantaged pre-school children. Merrill-Palmer Quarterly, 1968, 14, 174-184.

30. Kirk, S. A. Early education of the mentally retarded: an experimental study. Urbana, Illinois: University of Illinois Press, 1958.

31. Kirk, R. E. Experimental design: procedures for the behavioral sciences. Belmont, California: Brooks/ Cole, 1968.

32. Kremer, B. Parent education: an abstract bibliography. Urbana, Illinois: ERIC Clearinghouse, 1971.

33. Kratochvil, D. W., Carkhuff, R. R., & Berenson, G. G. Cumulative effects of parent and teacher offerred levels of facilitative conditions upon indices of student physical, emotional, and intellectual functioning. The Journal of Educational Research, 1969, 43, 4, 191-194.

34. Lavatelli, C. S. Piaget's theory applied to an early childhood curriculum. Boston: Center for Media Development, 1970.

35. Levenstein, P. Cognitive growth in pre-schoolers through verbal interaction with mothers. American Journal of Orthopsychiatry, 1970, 40, 426-432.

36. McCarthy, J. L. Changing parent attitudes and improving language and intellectual abilities of culturally disadvantaged four-year-old children through parent involvement. Unpublished Doctoral Dissertation, Indiana University, 1968.

37. Milton, T., & Gadlin, W. Modifying parent-child behavior in a low income group. New York: Psychological Service Center, 1971. (ERIC Document Reproduction Service No. ED 086 762).

38. Moore, R. S., Moon, R. D., & Moore, D. R. The California report: early schooling for all? Phi Delta Kappa, 1972, summer.

39. Nimnicht, G. P., & Johnson, J. A., Jr. Beyond compensatory education. San Francisco: Far West Laboratory of Educational Research and Development, 1973.

40. Rogers, C. R. The necessary and sufficient conditions of therapeutic personality change, Journal Consulting Psychology, 1957, 21, 95-103.

41. Rogers, C. R. (Ed.). The therapeutic relationship and its impact: a study of psychotherapy with schizophrenics. Madison: University of Wisconsin Press, 1967.

42. Schaeffer, E. S. Parents as educators: evidence from cross-sectional, longitudinal and intervention research, In U. Bronfenbrenner (Ed.), Influences on Human Development.

43. Schaeffer, E. S., & Aaronson, M. Infant education research project: implementation and implications of a home tutoring program, in R. K. Parker (Ed.), The preschool in action: exploring early childhood programs. Boston: Allyn & Bacon, 1972.

44. Truax, C. B. & Carkhuff, R. R. Toward effective counselling and psychotherapy: training and practice. Chicago: Aldine, 1967.

45. Truax, C. B. & Tatum, C. D. An extension from the effective psychotherapeutic model to constructive personality change in preschool children. Childhood Education, 1966, March.

46. Ward, J. H., Jr., & Jennings, E. Introduction to linear models. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.

47. Wawrykow, G. M. Toward effective early childhood resource development. Unpublished manuscript, 1973.

48. Wawrykow, G. M. The effects of employing principles from four models of learning upon the acquisition of interpersonal skills in five year olds. Unpublished manuscript, North Texas State University, 1974.

49. Weber, E. Early childhood education: prospectives on change. Worthington, Ohio: Charles A. Jones, 1970.

50. Weikart, D. P. A preliminary report of the Perry Preschool Project. Ann Arbor: Campus Publishers, 1967. (ERIC Document Reproduction Service No. PS 000 304).

51. Weikart, D. P., Deloria, D., Lawser, S., & Weigerink, R. Longitudinal results of the Yipsilanti Perry Preschool Project. Washington, D.C.: U.S. Department of Health, Education, and Welfare, 1970.

52. Weikart, D. P., & Lambie, D. Z. Preschool Intervention through a home teaching program. Disadvantaged child, Head Start and early intervention, 1968, 2, 435-500.

53. White, J. An assessment of the effect of a short-term parent-education program upon parental knowledge and attitudes toward child development. Unpublished doctoral dissertation, North Texas State University, 1974.