

THE INFLUENCE OF PARENTAL INVOLVEMENT IN
CLASSROOM ACTIVITIES ON THE QUESTIONING
BEHAVIOR OF THE PARENT

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CHAPTER I

INTRODUCTION

McCandless (1967) contends that the arrival of a baby starts a chain of complex interactions between parent and child. He states the relationship between parents and children is reciprocal: parents influence the child, the child influences parents. He continues, "it is commonly assemed . . . that the parents . . . exert the most important social-personal influence on the child" (p. 2). The second important influence on children is the public and private schools they attend.

Stodolosky (1965) supports McCandless in this position. His writing reflects that the home environment contributes a greater influence to the variance in academic performance than does the school. Basic to both the home and formal learning environment is the process of communication which determines the potential for the child's future learning (Gray, 1969).

Due to federal legislation of the late 1950's and then reappropriation in the 1960's, a number of early childhood education projects emerged. A major component of these projects is parent participation. This intervention movement can be clearly identified in terms of three factors. One factor is the fairly elaborate body of research about the influence of the home on young children. This body of research indicates sharp contrasts in parent-child interaction patterns which seem to affect children's learning styles, attitudes about school and general cognitive

development. These contrasts are most vivid among social class lines and generally favor middle-class parents and children (Hess, Block, Costello, Knowles, and Largay, 1971; Schaefer, 1972; Streissguth and Bee, 1972; Nedler, 1973). Another factor is the insights from early efforts in compensatory education. Programs that produce more than temporary desirable effects on children are most likely to have made some provision for parent involvement and education (Klaus and Gray, 1968). The third factor is the federal guidelines for compensatory education projects requiring parental involvement in the educational programs of young children (OEO, 1967; Gordon, 1970). These three factors have helped professional educators realize several important benefits of parental involvement. The literature supports the thesis that minimal effort to involve parents in their children's education can bridge the gap which often exists between home and school. Properly informed and equipped parents can provide home practice opportunities for their children in many school-related activities. Also, as the parent contributes in meaningful ways to his children's development and education, he achieves a sense of self-worth.

A review of the research by Lopate and others (1970) stresses that parent involvement can integrate the child's school and home life and provide him with a model of participation and control in a major area of his life. More recently, Shelton and Dobson (1974, p. 191) stated ". . . that an affective area that shows potential for enhancing the performance of economically deprived children is that improved self-concept resulting from active parent participation in the school experiences of their youngsters." They suggest a Family Involvement Communication System Model which advocates that the elementary school

counselor function as a change agent in facilitating positive home-school communication. Indeed, data have accumulated to evidence the potential impact of parental support upon children's responsivity in formal school settings (McCandless and Evans, 1973).

Basic to both the formal school setting and home environment is the process of communication. Of the various aspects of oral communication is question-asking behavior, and question-asking behavior is a major aspect of parenting intellectual skills (Henderson, 1971).

Justification of the Study

This research study is an attempt to analyze the level of questioning behavior demonstrated between parents who are actively involved in small group work in the formal learning environment and those who are not.

The Tucson Early Education Model, Follow Through Program, sets forth four major goals in the educational component: motivational base, language base, intellectual base, and societal arts and skills. It is within the framework of these goals in the educational program that parents of target families interact with children, and basic to both the formal learning environment and home is the interlacing of language and experience, the basis upon which a child's cognitive development proceeds. Bernstein (1961) takes the position that language determines what and how the child learns and thus sets limits for his future learning. Bruner (1962) supports this notion when he suggests that higher levels of reasoning are dependent upon the awareness of language and that effective use of verbal symbols is a key element in the growth of intelligence.

Hess and Shipman (1965) analyzed language and social structure and found a marked social class difference in ability of the children to

perform. In an earlier study of socioeconomic level and language development, McCarthy (1930) found that question-asking behavior was latent in low socioeconomic status children when compared with higher socioeconomic status children.

Rosenthal and Zimmerman (1970), while conducting an experimental research project on question-asking behavior of young children, found low socioeconomic status children did not respond to adult modeling of question-asking whereas children of middle socioeconomic status did respond. This finding led to more detailed observations of young low socioeconomic Mexican-American children which resulted in finding that these pupils engaged in a very low rate of question-asking. Martin (1970) reported that low socioeconomic black children in Chicago performed at a lower level of question-asking than higher socioeconomic status children. According to these studies, both rate of development and level of question-asking behavior are low within the cognitive structure of children from low socioeconomic status.

Henderson (1971) focused an investigation of intellectual skill learning in the home environment to determine what effect a training program for mothers of low socioeconomic status would have on question-asking behavior of their children. Findings were positive with some indications of horizontal transfer.

Later, Henderson and Garcia (1973) investigated the effects on children whose mothers were trained in question-asking behavior. They observed that although experimental and control groups were drawn from the same population, they appeared to represent two different populations at the termination of the study. Also of important note was that parents who have relatively little formal education could be trained in parenting skills relating to the development of intellectual competencies.

Earlier, Henderson and Merritt (1968) investigated environmental backgrounds of Mexican-American children with different potentials for school success and found preschool environments of high potential children included a greater variety of intellectually stimulating experiences than did environments of low potential groups. The difference was significant beyond the .01 level. Stodolosky (1965) states that home environment contributes a greater influence in variance in academic performance than does school. This statement should cause educators to take note of the importance of parents as influential members of the child's learning environment. Gray (1969) supported this when she wrote that these programs that included the parent in the educational process made greatest impact in terms of cognitive socialization on the young child. Gray (1969) emphasized that unless the living conditions of the child's home can be changed, the original problem will continue to take its toll.

Compatible with this data are observations made by Hunt (1961) and Bloom (1964). Their analysis indicated that the effect of variation in environment on intelligence has a powerful influence on educational achievement of children. Bloom (1964) contends that the home environment is likely to be more powerful than the typical school environment in the early years. Consistent with this is Alexander's study in which he describes the difference between a deprived and a stimulating educational environment. Two of the four major points which set one apart from the other are parental and student values placed on school learning, and the reinforcement of school learning by the home (Alexander, 1968).

In any event if the formal learning environment is to be a proponent of change and significantly affect a child's motivations and values, if

language is basic to the home and school, if language in lower socioeconomic status groups is significantly different from the higher socioeconomic status groups, if parents of children ask significantly fewer questions, if the children of lower socioeconomic status groups ask lower level questions, and if question-asking is recognized as a basic intellectual skill by which a child can elicit information from his environment, it may be of great importance to develop procedures to help parents develop communication skills to facilitate the development of this behavior in their children. Analysis of question-asking skills of parents should reveal the significance of parental involvement in the formal learning environment, and should suggest important avenues by which the educational system may facilitate the child's intellectual skill development. Such a program of parental involvement is worthy of analysis and should be beneficial to teacher educators and practicing administrators.

Statement of the Problem

This study was instituted to determine if parental involvement in the formal learning environment has any influence on questioning behavior of parents.

Answers to the following questions were sought: (1) What intellectual operations are evidenced in the oral language of parents who are actively involved in a school initiated parent involvement program? (2) Is there a difference in the level of questioning behavior demonstrated between parents who are actively involved in small group work in the formal learning environment and those who are not?

Basic Hypotheses

This study proposed to establish a basis for the testing of the following hypotheses:

- I. H_0 . There is no significant difference between the total responses of question-asking behavior of high and low participating low socioeconomic status parents in the formal learning environment.
- II. H_0 . There is no significant difference between the number of perceptual questions asked by high participating and low participating low socioeconomic status parents in the formal learning environment.
- III. H_0 . There is no significant difference between the number of upper level questions asked by high participating and low participating low socioeconomic parents in the formal learning environment.
- IV. H_0 . There is no significant difference between the number of upper level questions asked by high participating and low participating low socioeconomic status parents in the formal learning environment.

Limitations of the Study

When considering the findings of the study, this investigation is limited to some degree by each of the following:

- (1) The elementary schools selected to participate in this study are rural, and they are limited to the model project.
- (2) The experimental group was provided transportation and child care.

- (3) The parent-social worker assisted the project by maintaining a positive attitude toward helping in the classroom by home visits.
- (4) The findings are not generalizable beyond the low-socioeconomic, rural, largely minority population residing in Shawnee and McLoud, Oklahoma.
- (5) The findings may be influenced by dropping 5 of the 25 mothers, although these names were dropped prior to randomizing experimental and control groups.

Definition of Terms

A number of terms will be used in this study which should be defined for clarity of reading. These definitions will be applicable throughout this study:

Follow Through Program (Project) is defined by Section 222 (a) of the Economic Opportunity Act, P.L. 90-22 as "A program . . . focused primarily upon children in kindergarten or elementary school who were previously enrolled in Head Start or similar programs and designed to provide comprehensive services and parent participation activities . . . which the director finds will aid in the continued development of children to their full potential. . ."

Intellectual Kit is an assortment of non-commercial materials which have at least one criterial attribute in common and defines the concept to be developed. It is used in a manner which enables the teacher to build upon the child's response to the material as she operates within the framework of instructional activities in the Tucson Early Education Model, Follow Through Program.

Intellectual Operations Model classifies the basic kind of operation performed. There will be seven major categories of operation identified: Perceptual, Cognition, Memory, Divergent, Convergent, Evaluation, and Other Questions.

Intellectual Skill is defined by the interrogative statement a parent makes during the interaction process.

Question Asking refers to a parent interrogative statement made during the interaction process with a small group of children in the formal learning environment.

Perceptual Questions discriminate aspects of presented stimuli; e.g., shape, size, color.

Cognition Question asks for comprehension or knowledge.

Memory Question asks for recall of information which was received at an earlier point in time.

Divergent Question asks for multiple student responses with regard to the presented stimulus.

Convergent Question asks for single correct response from the child from a field of alternatives.

Evaluation Question asks for student responses concerning the extent to which information matches criteria.

Other Questions are those which cannot be discriminated according to the aforementioned categories.

Low Socioeconomic Scale is used to classify families for eligibility to receive the full range of comprehensive services which are provided by the Follow Through Project. The OEO Index, 1967, was used to determine low socioeconomic status.

Modeler of Language is one who anticipates the language potential of a situation, consciously emitting feedback appropriate to the interaction with the child.

Parent Involvement is defined within the framework of the Follow Through Project, Tucson Early Education Model, by four major areas:

1. policy and decision making activities,
2. participation in the classroom in terms of interacting with small groups of children,
3. homebound activities, and
4. parent educational and community activities which parents have helped develop.

In terms of this study, Parent Involvement will refer to parents' high and low involvement, working with small groups of from three to seven children with an intellectual kit during the course of regularly scheduled classroom activities.

Target Families are those eligible to receive the full range of comprehensive services which are provided by the Follow Through Project. Those families on welfare are considered eligible even though the family income may exceed the poverty line.

High Participating Parent is one who volunteers on hundred or more hours to classroom activities where she is actively engaged with small groups of children.

Low Participating Parent is one who volunteers fewer than fifteen hours to classroom activities where she is actively engaged with small groups of children.

Upper level questioning is limited to the convergent, divergent, and evaluation interrogative statement of the Intellectual Operations Model.

Lower Level Questioning is limited to the memory, cognition, and other questions categories of the Intellectual Operations Model.

Tucson Early Education Model is defined as a comprehensive, innovative educational program for young children developed at the Arizona Center for Early Childhood Education. It is composed of three integrated components: an instructional component, a psychological services component, and a parent involvement component.

Major Assumptions

For the purpose of this study the following assumptions have applied:

- (1) Parents of low socioeconomic status can identify with the formal learning environment.
- (2) Question-asking is a basic intellectual skill by which one elicits information from his environment.
- (3) The Zimmerman-Bergan Question-Asking Model yields a method for classification of interrogative statements made by parents.
- (4) The teachers in the Follow Through classrooms where the parents participated were modeling goal areas of the Tucson Early Education Model.
- (5) Verbal data can be collected in the formal learning environment.
- (6) The use of trained tabulators is a reliable method for collecting data.

Methodology and Design

The data for this study were obtained from parents of students in the Follow Through Project, Tucson Early Education Model, in Shawnee, Oklahoma and McLoud, Oklahoma. These Follow Through classrooms were selected for this study because of the representation of the model for economically and culturally different in grades kindergarten, first, second, and third.

Parents participating in this study were randomly selected from a list of those who were not actively participating in the Follow Through classrooms according to Follow Through records kept by the Director during the fiscal year 1974, and who qualified as a low socioeconomic parent. Twenty-five names were randomly identified. After contacting the twenty-five mothers, five were removed from the list due to job acquisition and due to moving in the near future.

For the purpose of this study two groups of ten mothers each were randomly assigned to the experimental and control groups. The experimental group was told that more parents were needed in the classrooms, participating in small group activities. Babysitters and transportation were provided as the investigator worked closely with the five Follow Through Social Workers.

The teachers made the mothers welcome and continued to model each component of the four major goal areas of the Tucson Early Education Model Classrooms. Each mother of the experimental group contributed more than one hundred hours of parental involvement, while mothers of the control group had less than fifteen hours in parental involvement at the end of this study.

Each mother selected for participation in the study was audio taped for twenty minutes on two separate occasions. The tapes were tabulated by two trained coders independent of each other for the purpose of analysis. Where a difference occurred in tabulation results, the trained coders discussed and agreed on a tabulated code.

Format for Succeeding Chapters

Five chapters will fulfill the requirements of this study. Chapter I is the introductory chapter. Chapter II will be devoted to a review of the literature and related research. Chapter III discusses the instrumentation of the study. Chapter IV presents a statistical treatment of the data. Chapter V summarizes the entire study and gives conclusions drawn from the findings, makes recommendations in keeping with conclusions and suggests areas for further research.

CHAPTER II

REVIEW OF SELECTED RESEARCH AND LITERATURE

This chapter includes a review of selected sources of information pertaining to teaching by modeling, environmental influences on child development, language development and socioeconomic status, intellectual development and environmental influences, and parent participation in intervention programs.

Teaching by Modeling

Studies on modeling have indicated that older significant persons in the life of the child often serve as models whose qualities and behavior the child attempts to emulate. In summarizing research on the influence of such models, Bronfenbrenner (1968) concludes that measurable changes in behavior of a child are facilitated by exposure to models exhibiting desired behavior at an appropriate level of understanding for the child. The effect or influence on such models is enhanced: whenever there is strong emotional involvement present between the child and model; whenever complex patterns of interaction exist; whenever the model is perceived by the child as having high status; and whenever the model represents a group or affiliation of which the child is a member or of which the child is desirous of becoming a member.

A child's parents are in a rare position of possessing all of the above criteria for exerting a very powerful influence on a child's developing behavior patterns through use of the modeling process. Moreover, the phenomenon of modeling represents probably the most important impetus toward involving parents in the educational activities of their children. If parents are given the opportunity, motivation, and exposure to kinds of instructive and enjoyable activities which aid the development of their children, they can contribute greatly to building a firm foundation for their children's formal learning experiences (Bronfenbrenner, 1968).

Supporting the notion that parents contribute greatly to the foundation of a child's formal learning experience is Hayman and Johnson's report on parent participation in which they noted that parent help significantly increased learning (Hayman and Johnson, 1961).

Also of significance are the observations of Jablonsky (1968). He writes that schools have greater success in educating children if their parents are welcome to the formal learning environment.

Environmental Influences on Child Development

Culturally different children lack many of the skills and habits necessary for meeting expectations of the formal learning environment (Taba, 1950). Understanding factors which influence the development of a child may be approached by analyzing the research related to home and social class. It is through the model of a child's significant adults that he acquires his initial framework of learning to learn skills (Appendix A.) Specifically, it is those significant adults who determine the future of the child either by providing a positive or

negative model. It is within the framework of the family that the child begins to understand his relationship to others and to become aware of the world around him. He develops values, attitudes and aspirations necessary to function and be a contributing member in a society. Through language he is able to communicate, express and interpret ideas and develop his problem solving ability--the ability that enables him to function effectively.

Within current society one finds great variation in family forces that influence growth and development of the child. Bernard (1966) estimates that 15 to 25 percent of the children in this country come from homes with little formal education, low family incomes and unstable family structure. Approximately half of these families are fatherless and when the father is present he spends little time at home. In addition, these homes are plagued with numerous family members and little living space. Privacy is practically unknown. With little skill at a trade, employment of parents is haphazard. The security offered the middle class child by the middle class parent is missing in the world of the disadvantaged child. The supportiveness and encouragement to achieve both academically and socially is unknown to him. Deutsch (1967) supports Bernard in these comments as he elaborates that low socioeconomic status children come from homes that are far less verbal than middle class homes.

Language Development and Socioeconomic Status

Bernstein (1960) describes the language of a low socioeconomic group in London as restricted in form, serving to communicate signals and directions with a tendency to confine thinking to a relatively low

level of repetitiveness. The same investigator describes the language of other socioeconomic groups as elaborated in form and serving to communicate ideas, relationships, feelings, and attitudes. These findings suggest that important qualitative differences exist in form and use of language and these differences may have important implications for learning. These differences in linguistic background between the disadvantaged and more privileged are well known. The point to be made about them is that verbal and linguistic experience of the child influence his learning.

Recognizing the pressures influencing the socialization of the child will lead to greater understanding of the cultural milieu from which the child emerges and will aid in providing him with skills and knowledge for fulfillment of his potential. Goldfarb (1963) emphasizes the need for providing the disadvantaged child with skills and knowledge which will enable him to select his future direction rather than being limited by his scope of experiences.

Hunt notes that intellectual inferiority of children from lower class families and slum areas is evident from the first years of school, and are apt to have various linguistic disabilities, such as poor articulation, limited vocabularies, and faulty grammar. Studies of intelligence prior to Hunt by Davis (1952) and Eells (1953) support the contention that the environment and the stimuli it offers have a great impact on the capacity to learn and on development of intelligence. Other studies of intelligence support the notion that intelligence is a product of the individual and environment (Piaget, 1952; Hunt, 1961; and Bloom, 1964).

The degree of very early language experiences provided by a mother are most significant in shaping the way in which a child processes information (Hess, 1966). Lower-class mothers often exhibit serious inadequacies and communication failures in their interactions with their young children (Hess and Shipman, 1966). Limitations specifically in verbal communication between mother and child and its relationship to intellectual and educational deficits in the child is well documented (Bronfenbrenner, 1961; Ausubel and Ausubel, 1963; John, 1963; Deutsch, 1964; Deutsch and Brown, 1964; and Oiln, Hess, and Shipman, 1965).

From the Institute for Developmental Studies, Deutsch (1967) has attempted to specify cognitive and language areas that have been most greatly affected by depressed environmental circumstances. Further, he has attempted to identify patterns in context of background variables at two developmental stages and to relate these background variables to specific cognitive and linguistic patterns. Deutsch indicates evidence to support the assumption that it is active verbal engagement of people who surround the child which is the operative influence in the child's language development.

Other studies focusing on the relationship between language usage and social class support the findings of Bernstein. Anastasi (1952), Templin (1957) and Thomas (1962) indicate the number of words per remark were few for disadvantaged children when compared to their middle-class counterparts. The restricted form tends to confine thinking and communication to relatively low levels.

Comparisons of quantitative measures of language function by Pringle and Tanner (1958) consistently favor children reared in their own homes. Goldfarb (1945) studied the development of children who

had impersonal infant care during institutionalization in their first three years of life. When compared with a similar group reared in foster homes during the first three years, these children were inferior on all tests of intelligence. Also, Pringle and Tanner (1958) studied children reared in homes and in institutions. In both the Goldfarb and Pringle studies, it was indicated that lack of early stimulation resulted in restricted language development.

Templin (1957) cites retarded speech development as a deficit of the disadvantaged child. The data in the Templin study show a difference in mastery of speech sounds appearing after the age of one-and-a-half years with the disadvantaged child reaching a near mature form of articulation at least one year later than a child from a middle class environment.

Other investigations have been concerned with the relationship between socioeconomic status and language development. They include Irwin, 1968; Beckey, 1942; Day, 1951; and Thomas, 1962.

Hunt (1964) sees the young child late in the second year and throughout the third year of life as learning that objects have names. Minuchin, 1966; Deutsch, 1967; and Kahl, 1953 note that the disadvantaged child lives in crowded poverty stricken conditions that have few objects to provide rich input. His questions are seldom answered and often bring about punishment that obviously impedes further questioning. Hunt (1964) sees these environmental conditions as preventing the child from developing representative imagery which could furnish the referents for spoken or written language that are derived through scrutinizing and manipulating objects.

It has been stressed that an important kind of deprivation within the lower class is a deficit in the linguistic environment provided by the mother. The middle-class mother's language tends to be elaborative, while in many cases the lower-class mothers who verbalized and who get their children to do so as well, tend to have children who are more precise and better able to express themselves. It is evident that a child's learning difficulties and limitations are, to a large degree, associated with a deficit in the early learning-teaching process between the mother and child, and that this deficit is due to serious limitations in the way many lower-class mothers think and communicate with their children.

Intellectual Development and Environmental Influences

Thinking and communicating are manifestations of intellectual development. Hunt (1961) defines intelligence as the central neural processes which develop in the brain and give direction to incoming information by way of the senses and cause motor response. He maintains that the initial establishment and subsequent capacity of these processes are probably rooted in the child's earliest encounters with the world surrounding him. Intelligence is a dynamic process with wide hereditary limits subject to innumerable experiential factors.

In extensive studies, the Swiss psychologist, Jean Piaget (1952) provides abundant evidence that intelligence is the antithesis of a predetermined capacity. He points out the essential role that environment plays as it exerts its action on the subject and creates a response. The responses elicited from the subject vary in each of the stages

developed by Piaget and are directly related to the experiences of the subject. Hunt (1961) points out that in view of Piaget's developmental theory, a child develops more interest, becomes more adaptable and accommodates new behavior as he is exposed to new things.

Bloom (1964) has also written about the influence of the child's environment in the early years on cognitive development. Through analysis of a series of longitudinal studies of individual development, he concludes that in terms of intelligence measured at age seventeen, at least twenty percent is developed by age one, fifty percent by age four, eighty percent by approximately age eight, and ninety-two percent by age thirteen. This indicates a marked effect of environmental influence on the intelligence quotient before age eight with the greatest impact prior to age five. Bruner (1961) likewise contends that a rich environment enables the child to develop strategies for evaluating information and constructing models of the environment.

Research by Deutsch (1964), who studied Negro and white children in large slum areas in New York, indicates concept formation and IQ scores are related to factors such as stimulus deprivation or enrichment concomitant to the child's status. Supporting the view of Deutsch are John, 1963; Forgays, 1963; and Fowler, 1962.

Ausubel (1967) draws heavily from research to weave his assessment of the consequences of cultural deprivation on verbal and abstract intelligence and proposes that there are optimal periods of readiness for all kinds of cognitive development. The findings of Skeels and Filmore (1937), Skeels and others (1938), Skodak (1939), and Bayley (1937) show that the longer the child remains in a substandard environment such as an orphanage or with mentally retarded mothers the lower

his IQ becomes in comparison with the IQ's of children removed from those conditions and placed in more favorable environments. Ausubel (1967) concludes that the crucial formative years should offer a stimulating learning environment and in turn this would reverse the degree of retardation.

Since the initial contacts that a child has with people and objects are so crucial in the development of intellectual skills, early intervention is proposed by Fowler (1962) and Bruner (1960). Fowler points to the fact that cognitive stimulation, when organized appropriately to the capabilities of the child, can be effective in giving the disadvantaged child the opportunity for developing insight. Bruner accepts Dewey's theory of the need for concrete experiences, but questions the necessity for the child to come to school with his own needs or aims. Bruner (1960) feels that presenting experiences to the child will create aims for him. This is especially important to the disadvantaged child who knows so little about the world and has developed few goals for himself.

Deutsch (1964) calls attention to another dimension of early intervention. He has studied the critical and optimal periods for certain aspects of development in relation to the interaction between the organism and environment. Therefore, it is his contention that a program intended to compensate for environmental deprivation would be most effective if supplied at a particular stage in a child's life. This point of view is supported by Scott's (1962) summary of research relevant to critical stages of development. He concludes that the period of greatest plasticity is during the time of initial socialization. Also, at this early age, there is considerably less to be compensated for than when the child reaches the age for first grade.

Parent Participation in Intervention Programs

Forerunners in the study of parental participation include Hollingshead (1949), Kahl (1953), Martin (1954), Floyd (1956), Cohen (1958), Frasier (1959), Bordua (1960), Cloward and Joes (1963), Bell (1963), Douglas (1964), Boyle (1966), Sewell and Shaw (1968), Friedman (1968), Michael (1969), Rempson (1969), and Sandis (1970). Also relevant are recent studies of the home environment, a number of school related activities and attitudes of parents; e.g., Dave (1963), Wolf (1964), and Plowdon (1967).

Since the mid-1960's, certain basic requirements for parental involvement must be met by early childhood education federal projects such as Head Start and Project Follow Through. Prior to this requirement by federal projects, parental involvement was valued. America's child welfare movement included family life education and the advent of parents in cooperative school projects (Rotzel, 1971). As a result of the sound foundation established by these early educators, federal guidelines require a rationale and criteria for parental participation.

The Office of Economic Opportunity guidelines for Head Start and Parent Child Centers as well as for Project Follow Through establish the role of the parent as being important in all phases of the educational process from decision-making in terms of employment to active participation in classrooms. The advice of parents is essential in planning a quality early childhood program. Parents should have an opportunity to make suggestions and recommendations as members of planning advisory groups. Parents representing these groups should be chosen through democratic methods.

Categorical evaluation of the national program is still in progress; however, a summary of research to date indicates that within the category of economic poverty, those parents who volunteered to participate in early Head Start programs feel less alienated from American society. One study of a city-wide program indicates that Head Start families feel more positive attitudes toward legal authority and the church, are more optimistic about anti-poverty programs, make greater use of community welfare resources, are verbally skilled and better educated, are socially outgoing, and have more intact family structures than economically comparable non-Head Start families (McDavid, 1967).

It is also of note that children whose parents are voluntarily participating continue to do better once beyond Head Start than children whose parents have been actively recruited for participation in the program (McDavid, 1967).

Clarizio (1968) investigated changes in maternal attitude in two midwestern communities and found no significant difference in maternal attitude after parental involvement in an 8-week summer Head Start program. The basic program consisted of formal meetings of a small group nature, formal lectures and discussion of Head Start, nutrition, and valuing education. No reference is made to parents as active participants in the learning process. Clarizio (1968) concluded that higher priority must be given to activities designed to change parental beliefs . . . more imaginative means of strengthening the relationship between home and school must be designed, and greater emphasis placed on the importance of the home's reinforcement of the school's efforts.

There is an upward extension of Head Start called Follow Through. Follow Through Projects have been in 40 communities since 1967. As of

1974, there are 168 communities involved throughout the 50 states, Puerto Rico, and the District of Columbia. The Follow Through Program is designed to carry the Head Start comprehensive services for children into kindergarten and through third grade.

Basic to all Follow Through models are attempts to implement university-originated research in public school settings. Since the 1968 Kansas City meeting, thirteen model sponsors have been established. The methods of each model sponsor are quite diverse and each deserves separate attention.

Evans, in discussing some background factors of parent involvement, writes:

Teachers rarely are trained in techniques for effective parent-teacher communication, much less in the complex details of coordinating home-school curriculum activities, enlisting and rewarding parental support of school programs, and helping motivated parents to become better teachers of their children (1975, p. 339).

Ellis D. Evans continues:

Most obviously, even a minimal effort to involve parents in their children's education can bridge the continuity gap which often exists between home and school. Second, properly informed and equipped parents can provide home practice opportunities for their children in many school-related activities. This can be extremely important for children whose educational progress is problematical. Third, by contributing in meaningful ways to their children's development and education, many parents may achieve an improved sense of self-worth and respect (1975, p. 340).

As intervention programs in Early Childhood education develop, three factors are identified consistently as leading to progressive intellectual retardation and the inability to cope effectively in an increasingly complex society: restricted language code, restricted experiences, and inadequate learning to learn skills. Hughes (1968), a leading figure in educational research, identified four goal areas

that are consistent with this thesis. She bases these goal areas on the rationale that we are living in a highly technical and everchanging society. The four goal areas are: (1) language base, (2) motivational base, (3) the societal arts and skills, and (4) intellectual base. It is within the framework of these four goal areas that the Tucson Early Education Model operates. The parent component functions as an integral part of the model.

Another widely known model for parent involvement is the Florida Parent Education Program (Gordon, 1968). The Florida model makes explicit provision for maternal self-improvement with a graduated program of home visits to project mothers by trained parent educators. Piagetian thought has strongly influenced the design of this model as the parent educators spend much time in play and language activities. Project mothers serve as assistants in the educational phase of the program.

Evaluation of the Florida Model participants as compared to control groups has been consistently positive. Florida project participants have demonstrated greater mental development and self-confidence in parenting ability (Gordon, 1970). Project Home Base, Yakima, Washington, has been cited as a well implemented version of the Florida model. This model also reports supportive data in terms of increased mother-child interaction among project participants and superior pre-academic skill development among model children as compared to control groups of the project (Evans, 1975).

Swift supports the need to involve parents in the educational activities of their children when he writes:

There is overwhelming evidence of the adverse impact of the lower-class mother's limited ability to communicate with her children so as to enable them to meet the emotional, social and educational demands of the larger environment (1968, p. 1).

He continues:

Little has been done to develop programs to enhance the effectiveness of the lower-class mother. While the child receives more and more assistance outside the home, the lower-class mother has scant opportunity to participate in the many aspects of the education of her child. In this area, as in many aspects of her life, the lower-class mother feels powerless to positively affect her life or the lives of her children (1968, p. 2).

Swift (1968) notes that to overcome the feeling of alienation, most preschool programs in poverty areas have urged mothers to take an active role in day-to-day classroom activities. Following this line of thought, Henderson and Garcia (1973) investigated the effects on children whose mothers were trained in question-asking behavior and were playing an active role in the school's activities. They observed that although the experimental and control groups were drawn from the same population, they appeared to represent two different populations at the termination of the study. It is essential to note that parents who have relatively little formal education can be trained in parenting skills relating to the development of intellectual competencies.

Research projects by Kirk (1958), Deutsch (1962), Jugel (1963), Strodbeck (1962), Fourace (1958), Moore and Anderson (1960), Fowler (1962), and Blatt (1962) have explored cognitive development in early childhood. These studies are somewhat similar to the Perry Preschool Project. However, the Perry Preschool Project combines a stimulating cognitively-oriented curriculum with a unique home-based program.

From this project emerge three significant findings. It is possible to operate a home-based educational program with culturally different

families. Parenthetically, this is a significant finding of Henderson's (1973) study with the Papago. A second finding is the ability of both black and white teachers to establish a good relationship with lower-class black mothers. A third finding was that it is possible to involve lower-class black parents in small discussion groups which met regularly. The success of this project would indicate the potential involvement of culturally different parents in the education of children is possible, and these parents can be reached by regular classroom teachers.

The State Compensatory Education Program, San Francisco Unified School District used field trips to broaden the experience of Chinese, Negro, and Spanish-speaking children in disadvantaged areas. The report contained the following comments.

Parents have been most wonderful. Although their involvement was slow at first it gradually built up. Several took time off from work to accompany children on trips. Some went on every trip. Others served as resource personnel, coming into classrooms to share stories or experiences, to show articles of clothing or equipment related to the trip, or to help as aides. As a result of their involvement, attitudes of teachers have changed. Greater use of local facilities, including art galleries, the Arboretum, and the Junior Museum have been reported (1965, p. 8).

The North Point Project was developed by Boston University under the direction of Dr. Eleanor Pavenstedt. The basic parental involvement procedure, beyond the almost daily contact between the teacher and mother, was case work.

The Early Training Project at George Peabody College began in 1961 and is continuing. This project focused on the cognitive aspects of development in contrast to the psychiatric orientation of the Boston study. The goal was to intervene in such a way as to influence both cognitive development and motivation which might affect later school performance.

The first goal of the project was to have the mother see herself as a teacher and to involve her as an active participant in the program. Klaus and Gray (1971) described the goal as no easy task because most of the parents were experiencing the helplessness that frequently characterizes a deprived population. Many of the homes are fatherless, leaving the mother the task of rearing a family and working long hours at a low-paying job.

Other programs with somewhat similar goals but with different procedures are the University of Illinois and Howard University preschool projects. The Illinois project was designed to study the effect that short-term parent training in instruction would have on intellectual and language development of the child. The training program was for parents only, and there was no preschool program for the children.

In 1964, Howard University in Washington, DC, inaugurated a program for children beginning at age three. Its major objective was to help the children's parents participate in and contribute to their children's experiences and to widen parents' interests and knowledge of neighborhood facilities so they might make use of these facilities (Kittrell, 1968). As in the Boston program, teachers visited homes of all children before school opened. Parents were seen as essential providers of information and support for the project.

The Howard University Project had no organized curriculum for parents beyond involvement and utilization of parental questions and concerns as they emerged as guidelines for the teacher and other staff members in providing information for parents. The focus was on helping parents to be a teacher of the child by involving them in the classroom.

The NIMH project provided instruction in the home, but the mother was little more than an observer. Schaefer and Furfey used home tutoring as the format for helping mothers become more aware of educational and child care practices. The tutors worked an hour a day, five days a week in thirty homes and emphasized verbal stimulation. The work is being conducted in one of the most disadvantaged sections of Washington, DC.

In summary, teaching by modeling facilitates measurable changes in the behavior of a child. Environmental and socioeconomic status of the parent influences the intellectual development of the child. Of equal significance is the fact that language development is concurrently influenced by these factors. Since the initial contacts that a child has with people and objects are so crucial in the development of intellectual skills, early intervention involving parental participation has been a viable element of compensatory projects. Selected intervention projects involving parents in activities varying from being an observer to making materials for children, and in learning to use those materials as they were actively involved in the formal learning environment have been cited.

CHAPTER III
RESEARCH DESIGN AND INSTRUMENTATION
OF THE STUDY

The purpose of this study was to investigate the level of question-asking behavior demonstrated between low socioeconomic parents who were actively involved in small group work in the formal learning environment of the Tucson Early Education Model classrooms in Shawnee, Oklahoma and McCloud, Oklahoma and those who were not.

In order to fulfill the requirements of this study, it was necessary to measure the question-asking behavior of high participating parents in the formal learning environment and low participating parents in the formal learning environment to find whether a difference in question-asking behavior of the Follow Through mothers could be identified. Details regarding the selection and description of the subjects, collection of data, and treatment of data will be presented in the remainder of this chapter.

This study utilized twenty mothers whose children were enrolled in the Shawnee Follow Through Project, Tucson Early Education Model in Shawnee, Oklahoma, a town of approximately 20,000 located near the center of the State of Oklahoma, and in McCloud, Oklahoma, a town of approximately 2,000 located fifteen miles northwest of Shawnee.

The sample population included Black, Caucasian, Spanish, and Pottawatomie and Shawnee Indians. The mothers were drawn from two

different poverty areas in a twenty mile radius in Pottawatomie County and participated in their neighborhood schools.

There were six elementary schools involved in the study under two different school administrations. There were five Follow Through Elementary Schools under the Shawnee School Board, Shawnee, Oklahoma; and one Follow Through Elementary School under the McLoud School Board, McLoud, Oklahoma. Although these are neighborhood schools and many of the children attending these schools are within walking distance, there are busses providing transportation for the outlying rural areas.

Since the Follow Through Projects admit children on the basis of socioeconomic level of the family, the children and parents come from a low socioeconomic status based on the 1968 poverty index scale, United States Office of Economic Opportunity.

The mothers participated in Follow Through Classrooms that were under the Tucson Early Education Model sponsorship, and the program organization in each classroom followed those guidelines.

The 1974 fiscal records of the parent component of the Shawnee Follow Through Project were used to identify the parents who were participating in classroom activities. These parents were eliminated from the sample population. All non-participating parents were asked to respond to a questionnaire. The writer met with each parent in the parent's room of the Follow Through Program. This room provided an atmosphere which had been designed for parental involvement and was less threatening for the parent. The writer met with each parent to explain the Follow Through Project and to gather demographic data. From the list of the 207 non-participating parents, 102 qualified as a population from which a random selection was secured. The 102 names

were numbered and a random numbers table was used. Twenty-five names were identified. Five mothers did not participate in the study. Two of these five mothers did not participate in the study because they were soon to move from the area. Three of the mothers had recently secured jobs and could not leave work.

For the purpose of this study, two groups of mothers were needed. The two groups formed the independent variable of the study and consisted of the ten mothers who would form the high participation group, and ten mothers who would form the low participation group. These two groups formed the basis for classifying those who were actively involved in classroom participation and those who were not involved in classroom participation.

The dependent variable of this study was the questioning behavior of the mothers under study. The mothers' questioning behavior was obtained by observing them and taping their verbal interaction as they worked with a committee of children during regular classroom activities, and by scoring their verbal behavior according to categories of the Zimmerman-Bergan Question-Asking Model. Each mother was taped two times. The first taping was at the middle of the session and the second taping was at the end of the session. Two coders, who were trained in the use of the Question-Asking Model, tabulated the mothers' verbal interaction. The tallies for the four tapings were summed by category to obtain normative data for statistical analysis.

Zimmerman-Bergan Question-Asking Behavior Model

The question-asking behavior of the mothers was obtained from the responses to the Zimmerman-Bergan Question-Asking Behavior Model, an

instrument designed to measure the levels of questions asked. It consists of seven subscales. The Intellectual Operations Question Model was developed for a study focusing on the teacher question-asking behaviors as a means for initiating intellectual operations in students (Zimmerman and Bergan, 1971). The categories for the Model are based on Guilford's (1967) Structure of the Intellect. The categories of the model are described in the following way:

- (1) Perceptual Questions. An interrogative statement concerning discriminable aspects of presented stimuli; e.g., shape, color, size.
- (2) Cognition Questions. An interrogative statement about comprehension or knowledge.
- (3) Memory Questions. An interrogative statement asking for the recall of information which was received at an earlier point in time.
- (4) Divergent Production Questions. An interrogative statement asking for multiple student responses with regard to the presented stimulus.
- (5) Convergent Production Questions. An interrogative statement asking for a single correct response from the child from a field of alternatives. It is often termed problem solving in that it requires intermediate steps between the presentation of the stimulus (problem) and the response (answer).
- (6) Evaluation Questions. An interrogative statement asking for student responses concerning the extent to which information matches criteria.

- (7) Other Questions. An interrogative statement which is indistinct and/or cannot be discriminated according to the aforementioned categories.

There is no scale implied by the seven categories. Each number is classificatory; it designates a particular kind of communication event. The categories of the instrument are distinct.

A series of steps were followed by the investigator in training five observers in tabulating the data for this study. The following procedures were observed.

- (1) Memorizing the Zimmerman-Bergan Question-Asking Model Categories.
- (2) Tabulation practice using a classroom taping.
- (3) Listening to and tallying the Question-Asking Responses with the investigator present to interact with the trainees answering questions about different responses and making judgments on the categories.
- (4) Listening to and tabulating the Question-Asking Responses alone and checking observer reliability.
- (5) Tabulating five tapings.

After ten hours, two hours per day for one week of training, the observers developed the ability to judge and categorize consistently.

The two observers who were the most consistent were retained for the study and the other three were dismissed. To secure an unbiased tabulation, the recorders tabulated data from tapes simultaneously, but separately and without discussion. Control head sets with listening station equipment was used.

For a Question-Asking Model Tabulation Sheet, see Appendix B.

Observer Reliability

Scott's coefficient (Flanders, 1966) was used to determine observer reliability. The advantages of using Scott's coefficient are that is is (1) unaffected by low frequencies, (2) adaptable to percent figures, (3) possible to use in the field for rapid calculation, and (4) sensitive at higher levels of reliability.

The coefficient has been names "pi," and it is determined by the following formula:

$$\pi = \frac{P_o - P_e}{100 - P_e}$$

P_o is the proportion of agreement on the same parent who is interacting with children and is found by computing the difference between observers in each category, totaling over all categories, and subtracting from 100. P_e is the percentage of agreement expected by chance which is found by squaring the proportion of tallies in each category and squaring the average of the sum of each category, dividing by 100, and summing the overall categories.

$$P_e = \sum_{i=1}^k P_i^2$$

In this formula there are k categories and P_i is the proportion of tallies falling into each category and may be written:

$$P_i = \frac{\left(\frac{\%A_{cat\ x} + \%B_{cat\ x}}{2} \right)^2}{100}$$

In summary π can be expressed as the amount two observers exceed chance agreement divided by the amount that perfect agreement exceeds chance.

Statistical Treatment

Because of the nature of the data in this study, the t-test (Bruning & Kintz, 1968) was used for analysis to determine whether there is a significant difference between the control and experimental groups. The basic computational formula for the t-test of a difference between two independent means is

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left[\frac{\sum X_1^2 - \frac{(\sum X_1)^2}{N_1} + \sum X_2^2 - \frac{(\sum X_2)^2}{N_2}}{(N_1 + N_2) - 2} \right] \cdot \left[\frac{1}{N_1} + \frac{1}{N_2} \right]}}$$

where

- \bar{X}_1 = the mean of the first group of scores
- \bar{X}_2 = the mean of the second group of scores
- $\sum X_1^2$ = the sum of the squared score values of the first group
- $\sum X_2^2$ = the sum of the squared score values of the second group
- $(\sum X_1)^2$ = the square of the sum of the scores in the first group
- $(\sum X_2)^2$ = the square of the sum of the scores in the second group
- N_1 = the number of scores in the first group
- N_2 = the number of scores in the second group

The data in this study may not be inferred to a population other than the population of the study.

Chapter III has reported the purpose of the study, the population, the selection of the sample, the instruments employed and the statistical

treatment applied to the data. The succeeding chapter will present the procedures, analysis and treatment of the data.

CHAPTER IV

PROCEDURES, ANALYSIS, AND TREATMENT OF DATA

This chapter contains a description of procedures used by the investigator to gather data for this study. In addition, this chapter contains the tabulated results of the data from the instruments described in Chapter III. The primary purpose for gathering data was to test the following null hypotheses.

- I. There is no significant difference between total responses of question-asking behavior of high participating and low participating low socioeconomic status parents in the formal learning environment.
- II. There is no significant difference between the number of perceptual questions asked by high participating and low participating low socioeconomic status parents in the formal learning environment.
- III. There is no significant difference between the number of low level questions asked by high participating and low participating low socioeconomic parents in the formal learning environment.
- IV. There is no significant difference between the number of upper level questions asked by high participating and low participating low socioeconomic status parents in the formal learning environment.

The data to test these null hypotheses were collected through the use of the Zimmerman-Bergan Question-Asking Behavior Model (Zimmerman-Bergan, 1968).

Subjects

The subjects were parents of students in the Shawnee Follow Through Project, Tucson Early Education Model, in Shawnee, Oklahoma and McCloud, Oklahoma. These Follow Through classrooms were selected for this study because of the representation of the model for the economically and culturally different in grades kindergarten, first, second, and third.

Two groups of ten mothers each were randomly assigned to the experimental and control groups. The investigator met with the experimental group and discussed the need for parents being involved in the education of their children. The idea was accepted by the ten mothers and expressions of willingness were received. At the same time, the Follow Through Parent Worker helped organize a schedule for classroom involvement. This established a commitment to become involved in classroom activities.

Data Collection

The collection of data was made by the investigator using audio tape recorders. The use of tape recorders is common in the Follow Through classrooms; therefore, the parents were not unfamiliar with them. The microphone was placed in an obscure position so it would not interfere with the activities of the center and the interaction of the parent with the children. Each mother was audio taped for a total of 40 minutes. All tapings were made within a period of four hours with no more than two hours separating a taping of any one individual.

Observer reliability was examined by employing Scott's Coefficient (Flanders, 1968).

$$\pi = \frac{P_o - P_e}{100 - P_e}$$

Scott's Coefficient is explained in Chapter III. The reliability of each data collection agent was checked at the beginning, during the middle and again near the end of the tabulation process.

The pertinent data relating to observer reliability are found in Table I.

TABLE I
SUMMARY OF OBSERVER RELIABILITY DURING THE
COURSE OF THE INVESTIGATION

Early	0.860
Middle	0.910
End	0.916

Testing the Hypotheses

The four hypotheses of this study were tested by using a test of significant difference. Each hypothesis is stated and preceding it are the statistic and level of confidence for significant difference.

The level of confidence for the t-test (Bruning & Kintz, 1968) with 18 degrees of freedom was set at .05 level which requires 2.101 or greater to be considered significant.

The following formula (Bruning & Kintz, 1968, pp. 10-12) has been employed for testing each hypothesis.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left[\frac{\sum X_1^2 - \frac{(\sum X_1)^2}{N_1} + \sum X_2^2 - \frac{(\sum X_2)^2}{N_2}}{(N_1 + N_2) - 2} \right] \cdot \left[\frac{1}{N_1} + \frac{1}{N_2} \right]}}$$

Hypothesis I: There is no significant difference between the total responses of the question-asking behavior of high participating and low participating low socioeconomic status parents in the formal learning environment.

To test this hypothesis, the total number of tallies recorded on the Zimmerman-Bergan Question-Asking Model by the trained data collection agents was totaled by category and summed overall by participant. The relevant data used to determine the significant difference are in Table II.

The t for testing Hypothesis I was 3.48304 with an N of twenty and a value of 2.101 needed for rejection of the hypothesis at the .05 level of confidence. The hypothesis was rejected.

TABLE II

SUMMARY OF TOTAL RESPONSES BY PARTICIPANT FOR
THE TEST OF SIGNIFICANT DIFFERENCE BETWEEN
THE QUESTION-ASKING BEHAVIOR OF HIGH AND
LOW PARTICIPATION OF LOW SOCIOECONOMIC
STATUS PARENTS IN THE FORMAL
LEARNING ENVIRONMENT

Participant Experimental	Total Responses	Participant Control	Total Responses
W	79	F	49
G	81	C	80
M	50	A	23
N	88	E	60
I	87	O	54
L	91	X	46
R	73	Z	83
V	67	B	33
U	60	H	28
S	87	P	22
N = 10	$\bar{X} = 76.3$	N = 10	$\bar{X} = 47.8$
High Participating Parent		Low Participating Parent	
Total tallies = 763		Total tallies = 478	
t = 3.48304		df = 18	
		p > .05	

Hypothesis II: There is no significant difference between the number of perceptual questions asked by high participating and low participating low socioeconomic status parents in the formal learning environment.

To examine this hypothesis, the trained observers recorded their observations on the Zimmerman-Bergan Question-Asking Model by category. The tallies that were recorded in each category of Question-Asking Behavior were totaled separately for high participating and low participating parents. The level of confidence for the t-test with 18 degrees of freedom was set at .05 which requires 2.101 or greater to be considered significant. The relevant data used to determine whether or not there was a significant difference are in Table III.

The t for testing Hypothesis II was 1.734 with an N of twenty and a value of 2.101 needed for rejection of the hypothesis at the .05 level of confidence. The hypothesis was accepted.

Hypothesis III: There is no significant difference between the number of low level questions asked by high participating and low participating low socioeconomic parents in the formal learning environment.

To test this hypothesis, the tallies of categories 2, 3, and 7 were totaled separately and summed for each participant in the experimental and control groups. The relevant data used to determine whether or not there was a significant difference are in Table IV.

The t for testing Hypothesis III was 2.24 with an N of twenty and a value of 2.101 needed for rejection of the hypothesis at the .05 level of confidence. The hypothesis was rejected.

TABLE III

SUMMARY OF OBSERVATIONAL DATA FOR THE TESTING
OF SIGNIFICANT DIFFERENCE OF PERCEPTUAL
QUESTION-ASKING BEHAVIOR BY HIGH AND
LOW PARTICIPATING PARENTS OF LOW
SOCIOECONOMIC STATUS IN THE
FORMAL LEARNING ENVIRONMENT

Participant Experimental	Total Responses	Participant Control	Total Responses
W	12	F	24
G	12	C	15
M	21	A	8
N	14	E	6
I	28	O	3
L	17	X	1
R	20	Z	26
V	4	B	12
U	17	H	1
S	17	P	7
N = 10	$\bar{X} = 16.2$	N = 10	$\bar{X} = 10.3$
High Participating Parent		Low Participating Parent	
Total tallies = 162		Total tallies = 103	
t = 1.734		df = 18	
		p < .05	

TABLE IV

SUMMARY OF OBSERVATIONAL DATA FOR THE TESTING OF
SIGNIFICANT DIFFERENCE BETWEEN LOW LEVEL
QUESTION-ASKING BEHAVIOR BY HIGH AND
LOW PARTICIPATING PARENTS OF LOW
SOCIOECONOMIC STATUS IN THE
FORMAL LEARNING ENVIRONMENT

Participant Experimental	Total Responses	Participant Control	Total Responses
W	61	F	19
G	58	C	59
M	20	A	12
N	62	E	47
I	43	O	42
L	53	X	32
R	44	Z	48
V	42	B	9
U	23	H	22
S	69	P	15
N = 10	$\bar{X} = 47.5$	N = 10	$\bar{X} = 30.5$
High Participating Parent		Low Participating Parent	
Total Tallies = 475		Total Tallies = 305	
t = 2.24		df = 18	
		p > .05	

Hypothesis IV: There is no significant difference between the number of upper level questions asked by high participating and low participating low socioeconomic status parents in the formal learning environment.

To test this hypothesis, the tallies of categories 4, 5, and 6 were totaled separately and summed for each participant in the experimental and control groups. The relevant data used to determine whether or not there was a significant difference is in Table V.

The t for testing Hypothesis VI was 2.40 with an N of twenty and a value of 2.101 needed for rejection of the hypothesis at the .05 level of confidence. The hypothesis was rejected

Summary

The four null hypotheses of this study were tested and the results are summarized in this chapter. Using the summarized data by grouping the categories, it was found that there was no significance difference in the null hypothesis II, but null hypotheses I, III, and IV were rejected.

TABLE V

SUMMARY OF OBSERVATIONAL DATA FOR THE TESTING OF
SIGNIFICANT DIFFERENCE BETWEEN HIGH LEVEL
QUESTION-ASKING BEHAVIOR BY HIGH AND
LOW PARTICIPATING PARENTS OF LOW
SOCIOECONOMIC STATUS IN THE
FORMAL LEARNING ENVIRONMENT

Participant Experimental	Total Responses	Participant Control	Total Responses
W	6	F	6
G	18	C	6
M	9	A	3
N	12	E	7
I	16	O	9
L	21	X	13
R	9	Z	9
V	21	B	12
U	20	H	5
S	0	P	0
N = 10	$\bar{X} = 13.2$	N = 10	$\bar{X} = 07.0$
High Participating Parent		Low Participating Parent	
Total tallies = 132		Total tallies = 70	
t = 2.40		df = 18	
		p > .05	

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This study was designed to see if there was a significant difference in the level of question-asking behavior demonstrated between the high and low participating, low socioeconomic parents of the Shawnee - McCloud Follow Through classrooms, Tucson Early Education Model.

Summary

This project may be regarded as an intervention effort aimed at providing a receptive atmosphere for parents to volunteer and participate in a formal learning environment. The formal learning environment was designed to promote intellectual skills development as intellectual kits were used by the parents. Of primary importance was securing data on question-asking skills of culturally different parents. This provided an index for intellectual skill development.

The results of this experiment support research and related literature on investigations of effects of modeling procedures (Henderson and Garcia, 1973, Rosenthal and Zimmerman, 1972). Of equal importance are results in changes in the kinds and number of questions asked by participating parents. The underlying assumption is that different types of questions call for different levels of intellectual involvement.

The instrument selected to analyze the levels of question-asking behavior of high and low participating, low socioeconomic status parents of the Follow Through Project was the Zimmerman-Bergan Question-Asking Model (Zimmerman-Bergan, 1971). This instrument has seven subscales which are based on Guilford's (1967) Structure of the Intellect. Chapter III contains a complete description of the instrument.

The selection of participants was based on two factors: (1) They had children attending the Shawnee-McCloud Follow Through Project, Tucson Early Education Model; and (2) the parents were not actively participating at the time the study was initiated. There were ten mothers randomly assigned to an experimental group and ten randomly assigned to a control group. Each participant was audio taped for twenty minutes on two separate occasions, and two trained data collection agents tabulated their question-asking behavior.

The major objective of this study was to test the following null hypotheses:

- (1) There is no significant difference between the total responses of question-asking behavior of high participating and low participating low socioeconomic status parents in the formal learning environment.
- (2) There is no significant difference between the number of perceptual questions asked by high participating and low participating, low socioeconomic status parents in the formal learning environment.
- (3) There is no significant difference between the number of low level questions asked by high participating and low participating low socioeconomic parents in the formal learning environment.

- (4) There is no significant difference between the number of upper level questions asked by high participating and low participating low socioeconomic status parents in the formal learning environment.

The data was analyzed using a test of significant difference called the t-test, and the level of confidence was set at the .05 level.

Findings

The findings of this study considered to be most significant were:

- (1) A significant difference was found between the total responses of the question-asking behavior of high participating low socioeconomic status parents and low participating low socioeconomic status parents in the formal learning environment.
- (2) There was no significant difference between the number of perceptual questions asked by high participating low socioeconomic status parents and low participating low socioeconomic status parents in the formal learning environment.
- (3) There was a significant difference between the number of low level questions asked by high participating low socioeconomic status parents and low participating low socioeconomic parents in the formal learning environment.
- (4) There was a significant difference between the number of upper level questions asked by high participating low socioeconomic status parents and low participating low socioeconomic parents in the formal learning environment.

Conclusions

The following conclusions have been drawn from the findings of this study.

- (1) The opportunity for the culturally different parent to interact in a formal learning environment over an extended period of time apparently alters the restricted verbal behavior.
- (2) The amount of participation, whether it be high or low, does not alter appreciably the number of perceptual questions asked by low socioeconomic status parents in the formal learning environment.
- (3) The number of low level questions asked by low socioeconomic status parents is altered appreciably when the participation of the parents is increased in the formal learning environment where the teachers are modeling the goals of the Tucson Early Education Model during the routine schedule of class activities.
- (4) The number of upper level questions asked by low socioeconomic status parents is altered appreciably when the participation of the parents is increased in the formal learning environment where the teachers are modeling the goals of the Tucson Early Education Model during the routine schedule of class activities.

Theoretical Considerations of This Study

Parents of children from culturally different backgrounds foster different physical experiences and oral language opportunities. Three basic considerations comprise the rationale of this study. The first holds that each individual is reared in a specific sub-culture that has

its own style of interpersonal relations and intellectual operations. The burden for how an individual has developed rests with the general structure of society in terms of its demands upon the individual, especially during the process of socialization within the family. It was observed earlier that intellectual development is highly dependent on the experiences which a child has in his home environment. Also observed was the fact that different cultures facilitate development of differing kinds of intellectual capabilities. With these observations, the writer calls attention to Henderson's (1971) observation that different cultural backgrounds may attribute to the factors that their children's experiences are different.

The second consideration is the point of view that culturally different parents can learn principles of intellectual skill development which will facilitate question-asking behavior. The third consideration is the point of view that through modeling procedures cognitive skills can be facilitated. The writer observes that children learn many intellectual tasks by observing and imitating what significant others do.

In this research, the writer was interested in the kinds of questions asked by culturally different parents as well as the increase in number. Upon finding significant differences in three of the four hypotheses, the writer would theorize that curriculum planners and teacher training institutions go beyond theoretical consideration and make manifest a plan of action which would be relevant to the learning situation.

Most intervention programs have been designed to compensate for experiences presumed to be missing in the backgrounds of children who are culturally different. The majority of compensatory intervention programs have concentrated on instruction or reorganizing the curriculum.

A few educators have developed intervention programs involving the home through parent training programs (Gray, 1971; Gordon, 1969; and Weikart, 1967).

A preservice program for in-the-field teachers would provide a foundation on which a continuous in-service program would promote an understanding and appreciation of how to involve parents beyond observer or heavily-weighted cognitive programs.

Recommendations

The data from this study and the review of the related literature provide a basis for making recommendations to those who are responsible for teacher-training programs and to those who foster future research and innovative compensatory programs. The following recommendations are made:

- (1) A course of study should be available to curriculum specialists making them aware of parent participation procedures and the potential impact parents can have on development of intellectual skills of their children.
- (2) A policy advisory committee comprised of parents and educators should be elected by the various agencies respective to each group and civic leaders should be appointed by elected policy advisory committee officers. Recommendations for home-school efforts should be developed in terms of the skills they determine requisite for their children.
- (3) Existing parent social workers and/or certified elementary counselors could be utilized in parent intervention projects designed to promote development of intellectual skills.

Recommendations for Further Study

The following recommendations are extended for further investigation of parent participation in early childhood education programs.

- (1) The existing staff (i.e., counselor, principal, curriculum coordinator) should be analyzed with respect to role identification and implementation of a program that views the parent, child, and educator as a team, working for the optimal development of each child.
- (2) Research studies need to investigate the cognitive-intellectual functions in adults in terms of interaction levels with their children in a way that would build cognitive skills.
- (3) A correlation study should be generated in terms of the synthesis of data provided by: (a) Henderson Environmental Learning Process Scale, and (b) the Illinois Test of Psycholinguistic Abilities.
- (4) Develop a parent-participation longitudinal study based on the central theme of Vygotsky's thinking: that children develop and test their ideas about the meaning of words and the syntax chiefly through verbal interaction with more verbally mature speakers.
- (5) Develop a parent-participation study replicating this study.

The report of this study, combined with the evidence of prior research data and related literature, provides a viable model for educating parents in intellectual skills.

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APPENDIX A

LEARNING TO LEARN

APPENDIX A

LEARNING TO LEARN

by Dr. Marie M. Hughes

1. To awaken sensory perception: taste, hearing, smell, sight, touch.
To compare things tasted. To label with words the experiences and activities.
2. To foster the habit of labeling.
3. To foster recognition and discrimination.
4. To arouse curiosity.
5. To develop categorization skill.
6. To develop spatial awareness.
7. To develop time awareness:
 - a. To encourage recall and reconstruction.
 - b. To encourage practice of anticipation.
 - c. To develop skill of organizing in terms of sequence.
8. To develop the concept of change:

spatial	developmental	atmospheric
temporal	(growth process)	mechanical
textural	cyclic	chemical
9. To foster the practice of tentativeness.
10. To stimulate awareness of cause and effect.
11. To facilitate problem-solving (social-intellectual).
12. To encourage imagination.
13. To elicit and weigh alternatives.
14. To foster aspects of the creative process:

fluency	elaboration
flexibility	originality

15. To guide the differentiation of fantasy and reality.
16. To develop discrimination of relevance in what is said in relation to the "givens" in the situation.
17. To foster linguistic awareness:

new words in use	completeness of thought
use of apt simile	(use of prepositions and con-
elaboration of thought	junctions and subordination)
18. To acquire positive self-concept.
19. To acquire mastery of the societal arts: speaking, writing, reading.

Learn to learn is geared toward the development of intrinsic motivation, positive self-concept, efficient processing of environmental information and information received from the self -- only this can result in productive thinking and constructive action.

APPENDIX B

INTELLECTUAL OPERATIONS QUESTION MODEL

CODE SHEET

INTELLECTUAL OPERATIONS QUESTIONS MODEL

CODE SHEET

Data Agent

Tape Code

Question Category

#1 _____
#2 _____
#3 _____
#4 _____
#5 _____
#6 _____
#7 _____
#8 _____
#9 _____
#10 _____
#11 _____
#12 _____
#13 _____
#14 _____
#15 _____
#16 _____
#17 _____
#18 _____
#19 _____
#20 _____

Total Responses _____

Total Perceptual _____

Total Cognition _____

Total Memory _____

Question Category

#21 _____
#22 _____
#23 _____
#24 _____
#25 _____
#26 _____
#27 _____
#28 _____
#29 _____
#30 _____
#31 _____
#32 _____
#33 _____
#34 _____
#35 _____
#36 _____
#37 _____
#38 _____
#39 _____
#40 _____

Total Divergent _____

Total Convergent _____

Total Evaluation _____

Total Other _____

VITA

William Dale James

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Doctor of Education

Thesis: THE INFLUENCE OF PARENTAL INVOLVEMENT IN CLASSROOM ACTIVITIES
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