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THE DIFFERENTIAL EFFECTS OF THREE PARENT
EDUCATION PROGRAMS ON THE ACHIEVEMENT
OF THEIR CHILDREN ENROLLED IN AN
EXPERIMENTAL HEAD START PROGRAM

by

Judith L. Kuipers

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DEDICATION

My husband, Jerry, and children, Lori, Mark, and Chris
for their enduring enthusiasm in our cooperative learning
experience.

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CHAPTER I

THE PROBLEM AND PURPOSES OF THE STUDY

It would appear that early childhood education has just been discovered or more accurately rediscovered! Witness such title articles from periodicals such as Newsweek, Saturday Review and Psychology Today to psychological and education journals--"Are Public Schools Ready for the Preschooler?" "The Importance of the Early Years," "Starting Them Young," "Are Kindergartens Obsolete?" and "Poverty, Education and the Young Child."

Psychologists, interested in learning and cognition, linguists, mathematicians, physicists, economists and representatives of other disciplines are becoming increasingly aware that a child's experience in the years before he is six may influence not only his attitudes toward intellectual ideas, but his actual abilities for grasping them.

The effects of an impoverished environment in the early years upon personal health, social relationships, and emotional development has been a concern to early

childhood educators for years. Recent evidence emphasizes influences on intellectual functioning as well.

In their report on compensatory education for cultural deprivation, Bloom, Davis and Hess speak of culturally disadvantaged or deprived students as those "whose early experiences in the home, whose motivation for present school learning, and whose goals for the future are such as to handicap them in schoolwork."¹ A large proportion of them come from homes in which the adults have a minimal level of education; "from homes where poverty, large family size, broken homes, discrimination and slum conditions further complicate the picture."² Bloom, Davis, and Hess speak of the importance of early experience and state that research reveals the aspects of the home environment most significant in affecting the child's learning involve "provisions for general learning, model and help in language development, and parental stimulation and concern for achievement and learning on the part of the child."³

¹Benjamin S. Bloom, Allison Davis, and Robert Hess, Compensatory Education for Cultural Deprivation (New York: Holt, Rinehart, and Winston, 1965), p. 4.

²Ibid., p. 5.

For more than a half century, the nursery school and kindergarten have been viewed by early childhood educators as one approach to meeting the needs of impoverished families. It was less than accidental that the first nursery school was organized in the heart of a London slum to meet the needs of a disadvantaged population. Due to lack of public support in the United States over the years, however, nursery schools have been a "privilege" primarily of the middle and upper classes.

However, with the advent of Project Head Start inaugurated in the summer of 1965 under the aegis of the U. S. Office of Economic Opportunity, a national attempt is being made to provide preschool education for disadvantaged children.

The emphasis on parent education is a still more recent phenomenon. In November 1968, a special conference was held in Houston, Texas. The topic of this conference was "Parent Involvement in Headstart." While scientists of human behavior have long recognized the family as the primary socialization agent, it has been only recently that theory has emerged into the world of practical programs. A perusal of the literature evidences a real dearth of fruitful parent education programs.

³Ibid., p. 12.

The Problem

It is generally recommended that pre-school programs for socially disadvantaged children involve the parents, yet many programs are implemented with little parent participation. This investigator hypothesized that a parent participation-education pre-school program would provide a more effective approach to overcoming language retardation as well as difficulties in other areas.

Language disadvantage may be due to the smaller amount and the poorer quality of the interaction which the child has with his parents, chiefly his mother. Research suggests this is true for the lower class urban child. The "disadvantage" in the rural family may be of a different nature, however. The Darcee Research center in Tennessee reports that the rural low income child's language is better, their perceptions keener, and their gross motor development more advanced than inner city low income children.⁴

However, the rural child and the rural community he encounters is affected by an isolation geographically as well as ideationally. One tertiary objective of this study will be to shed further light on the nature of "disadvantage" in children living in rural communities.

⁴Susan Gray, "Early Training Project, Darcee Rural Center." Fairview, Tennessee, February 1968. (Research Newsletter.)

If a parent-participation education program can stimulate the mother to provide an effective level of interaction and can reinforce her efforts, the effects on the child's education could be far reaching, extending perhaps to older and younger siblings.

The need for a program in which professionals educate mothers to more effectively interact with their preschool children in the home is evident. However, the questions of what educational procedures could best achieve this end and what content should be included in such education remain to be answered. This study will present three differentiated language training programs to mothers in an attempt to shed more light on pertinent models for involving parents in an attempt to strengthen the preschool child's language skills, broaden his intelligence, and bolster his concept of self.

The Importance of the Study

The plethora of recent research studies in the area of the culturally disadvantaged reveals many measurable differences between the advantaged and the disadvantaged child. They typically have found that the characteristics present in the social environment of the disadvantaged child have adverse effects on the development of intelligence, perceptual habits, motivation, language development and self concept. In Deutsch's now much quoted 1964 work, it is stated that

language development is perhaps the best indication of environment:

. . . language is the primary avenue for communication, absorption, interpretation of the environment, but it also reflects highly accultured styles of thought and ideational modes for solving and not solving problems.⁵

Styles of communication in the disadvantaged home are found to differ significantly from that of the advantaged home. John notes that feedback, as well as adult-child dialogue, occurs with a much lower frequency in the disadvantaged home.⁶ Hess and Shipman further substantiated this fact in their studies which reveal that the lower class mothers use more imperative control whereas middle class mothers use subjective-personal or cognitive-rational methods.⁷

Bernstein describes the language patterns of the disadvantaged as fragmentary and informal to the extent that the child is denied the verbal parameters necessary to develop normative labeling and identification of his

⁵Martin Deutsch, "The Disadvantaged Child and the Learning Process" in Education in Depressed Areas ed. by A. H. Passow (New York: Columbia University, Teachers College Press, 1963), pp. 163-180.

⁶Vera John, "The Intellectual Development of Slum Children: Some Preliminary Findings," American Journal of Orthopsychiatry, XXXIII (1963) 813-822.

⁷R. D. Hess, E. G. Olim, and Virginia Shipman, "Relationship Between Mothers' Language Styles and Cognitive Styles of Urban Preschool Children" (Paper presented at Biennial Meeting of the Society for Research in Child Development, Minneapolis, Minnesota, March 1965). (Mimeographed.)

environment.⁸ Hess found in a problem-solving situation the lower class mother used fewer words when explaining an event to her child, fewer abstract words, fewer statements of personal orientation, and offered less help.⁹

If cultural effects on the intellectual functioning are as Bruner states, "from the outside in," then the techniques by which this process can be influenced through parental practice are certainly an area of legitimate concern.¹⁰ Kagan and Moss state that there are definite critical periods in the child's language development during which parental practices drastically affect later development.¹¹ Bloom concludes after an extensive review of longitudinal studies from the past forty years, that 50 per cent of the intelligence can be accounted for by age four.¹²

⁸Basil Bernstein, "Social Class and Linguistic Development: A Theory of Social Learning," Education, Economy, and Society, ed. by A. H. Halsey, J. Floud and C. A. Anderson (New York: Free Press of Glencoes, Incorporated, 1961), pp. 288-314.

⁹Robert D. Hess and Virginia Shipman, "Early Blocks to Children's Learning," Children, XII (1965) pp. 189-194.

¹⁰C. Brunner, "Deprivation--Its Effects, Its Remedies," Educational Leadership, XXIII (1965), pp. 103-107.

¹¹Jerome Kagan and H. A. Moss, "Maternal Influences on Early I.Q. Scores," Psychological Reports, IV (1958), pp. 655-661.

¹²Bloom, Davis, Hess, op. cit.

Intervention in the preschool years of the culturally disadvantaged child is necessary to deter the cumulative effect of this style of life. Bereiter and Engleman have produced significant change in intelligence test scores through a structural language program.¹³ Weikart and Levenstein have been instrumental in the training of mothers by professionals in child stimulation. Both results show mothers can be educated for this role.^{14,15} Karnes et al. developed a training program for mothers to work with their four year olds in the homes. Results showed significant gains in language development and general intelligence over a control group which was engaged in no training.¹⁶

To summarize, in most American families, the mother is the major socializing agent for her preschool child. Consequently, she continually functions as a teacher in their daily interactions, whether or not she is aware of her teaching role. Much of the implicit language,

¹³Carl Bereiter and Siegfried Engleman, Teaching Disadvantaged Children in the Preschool (Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1966.)

¹⁴David Weikart and D. Lambie, "Preschool Intervention Through a Home Teaching Program," (unpublished manuscript, June, 1967). (Mimeographed.)

¹⁵Phylliss Levenstein, "Aiding Cognitive Growth in Disadvantaged Preschoolers," (unpublished manuscript, Mother-Child Home Program. Progress Report, 1968). (Mimeographed.)

¹⁶Merle Karnes, W. Studley, W. Wright and Ann Hodgins. "An Approach for Working with Mothers of Disadvantaged Preschool Children," Merrill-Palmer Quarterly, XIV (1968), pp. 28-46.

conceptual, and social-emotional learning is conveyed by communication patterns the child receives from his mother.

Differences among mothers in the way they teach may not only affect the degree to which the children learn the intended message or meaning but also affect their child's motivation in the learning situation, the kinds of learning habits he develops, and his view of himself as a successful learner.

While Hess and Shipman, Bernstein and others have provided the necessary evidence for verification of these phenomena little has been done to formulate and test specific methods and techniques that lead to meaningful parent education. Indeed, the failure of certain parent education programs to spill over significantly into the child's school performance may be due to a failure to plan the content of the parent programs in a systematic and intensive fashion.

Statement of Purpose

The purpose of this study was to train teachers to educate mothers to work with their children to further linguistic skills, intellectual performance and self concept development.

This study differs from the majority of parent education studies along the following dimensions:

1. There was heterogeneous grouping of advantaged and disadvantaged children.

2. Three different approaches in techniques and materials were used in the parent education; structured, developmental, and placebo or workshop.
3. A rural rather than urban population was the focal point of the study.
4. Caucasian rather than Negro children and parents were subjects of the study.
5. Mothers attended the meetings voluntarily.

Statement of Major Hypotheses

In order to ascertain the effects of a differentiated parent education program on the linguistic, intellectual, and conceptual development of their children, it was hypothesized that:

1. Head Start children whose mothers receive structured or developmental education in language and communication techniques will evidence greater positive changes in linguistic achievement as measured by the ITPA than will children of mothers who receive the placebo experience.
2. Head Start children whose mothers receive structured or developmental education in language and communication techniques will evidence greater positive changes in intellectual performance as measured by the WPPSI than will children of mothers who receive the placebo experience.
3. Head Start children whose mothers receive structured or developmental education in language and communication techniques will evidence greater positive changes in self concept development as measured by the MSU Experimental Self Concept Test than will children of mothers who receive the placebo experience.

4. Head-Start children and mothers who receive structured or developmental education in language and communication techniques will evidence greater positive changes in mother-child interaction measured by the Hess and Shipman Mother-Child Interaction, and the MSU Experimental Tell-A-Story Test, than will children and mothers in the Placebo Group.
5. There will be no difference in the level of performance on intellectual, linguistic and self concept measures between children whose mothers take part in Developmental Training Group as compared to those who take part in the Highly Structured Training Group.

Assumptions

Assumptions Underlying the Child's Development

1. The pre-school years are critical to the child's developing intellectual abilities, language skills, and conceptual skills.
2. Intelligence is not a fixed entity, but emerges out of stimulation from, and interaction with, the environment.
3. The rate, quality, and quantity of growth and development is unique for each child regardless of socio-economic background.
4. Continuity of the child's school experience can be fostered through effective parent participation.

Assumptions Underlying the Parent Education Program

1. A philosophy of respect for the dignity and integrity of the individual permeating the

group experience can help parents view this philosophy as a basis for guiding their children.

2. The parents' previous experience and the way they view themselves plays a direct role in their family interaction and parent role performance.
3. Approaches which are confidence inspiring rather than self defeating, and help parents become more aware of their own ability to relate to their children, are most beneficial.
4. Parents are capable of absorbing and implementing much of the accumulating child development knowledge, though they often use this information in their own ways.
5. Information concerning the availability and function of community resources will enable parents to make greater use of these resources.
6. Parents can learn methods, techniques and skills to improve the mother-child interaction.

There are differing opinions as to whether parents within lower socio-economic groups would voluntarily participate in specific education programs designed to benefit the child as well as the mother.

The essence of these assumptions is that the majority of disadvantaged mothers are concerned about the well being of their children, though they often

suffer from feelings of helplessness in providing an adequate environment for their own off-spring. Certainly, effective parent education programs offer an opportunity for altering the cyclic nature of the "culture of poverty."

Limitations of the Study

This study is limited to the children and parents of lower and middle income groups who reside in the Pigeon, Elkton, Bay Port area of the State of Michigan.

There is a wealth of research centering on the whole problem of the disadvantaged. However, studies reviewed in this paper will deal exclusively with the child and the environment his parents provide that affects his language, intellectual and self concept development.

The parent program took place concurrent to the general pre-school program. There was no way to isolate the pre-school effect. This fact must be taken into consideration in interpreting the results of the experiment.

The evaluation procedures of the study are limited in that no measures of creative kinds of abilities were taken. Creative use of language itself, and language used to behave more creatively are two competencies this investigator values. Regretfully, lack of available valid instruments, competent testers, time, and funds, precluded any attempt to obtain this type of data.

This study is limited in that there has been a dearth of recent psychological and educational investigations of rural populations in the United States. This has resulted in a clouded picture of just who and what the disadvantaged rural American really is.

Finally, time was definitely a limiting factor. The investigator worked from September 1968, through April 1969, handling the logistics of the situation, orienting administrators, parents and teachers, testing and attempting to establish a genuine rapport. However, the actual parent education program, by necessity, was limited to an intensive twelve-week program, a relatively short period of time compared to the child and adult's total previous experience.

Definition of Terms

Disadvantaged

Various definitions of the "disadvantaged" have been proposed and various terms have been used to refer to them. The terms, "culturally deprived," "educationally retarded or deprived," "underprivileged," "socially or culturally disadvantaged" are reported in much of the current literature.

It is at this point that it should be reemphasized that the disadvantaged are a heterogeneous group, not a homogeneous group as many programs too often indicate. As Dr. Robert Boger and Suann Ambron state in their

research report, "We still do not know enough about the etiology of disadvantage or what the term means for specific sub-groups of disadvantaged children."¹⁷

The disadvantaged children chosen for this study by the Director of the Pre-school program met the following criteria: (1) inadequate housing for size of the family in terms of space and facilities, (2) location in terms of rural isolation or less desirable city area, (3) income level, if below the O. E. O. \$3,000 mark. However, the following definition by Havighurst seems most fitting for the kinds of socially disadvantaged people dealt with in this study:

1. They are at the bottom of the American society in terms of income.
2. They have a rural background. [sic]
3. They suffer from social and economic discrimination at the hands of the majority of the society.
4. They are widely distributed in the United States. While they are most visible in the big cities, they are present in all except the very high income communities. There are many of them in rural areas.

Altogether, these groups make up about 15 per cent of the United States population. Since they tend to have large families, their children make up as much as 20 per cent of the child population. Not all socially disadvantaged children come from these groups, but the great majority do.

¹⁷Robert Boger and Suann Ambron, "Subpopulation Profiling of the Psychoeducational Dimensions of Disadvantaged Preschool Children," (report presented at the Third National Head Start Research Seminar held on October 9, 1968 in Washington, D. C.) (Mimeographed.)

Not all children in these groups are socially disadvantaged, but the great majority are.

· · · · · Above all, it is important to avoid the error of saying that all children of working-class families are socially disadvantaged. Approximately 65 per cent of the children of this country are living in working-class homes. That is, their fathers or mothers do manual work for a living. The great majority of these families give their children a fairly good start for life in an urban industrial democratic society.¹⁸

Language Training

Language training in this study means helping mother and child:

1. Use more words
2. Speak in complete sentences
3. Ask specific questions
4. Correct their own language mistakes
5. Understand selected basic concepts, reason and solve problems, and use words to explain their thinking.

In essence language is a tool, but it also has content. It refers to the way things are or might be. By listening to others speak, the toddler learns language and, through language he learns about the world in which he lives.

¹⁸R. J. Havighurst, "Who Are the Socially Disadvantaged?" The Educationally Retarded and Disadvantaged, Sixty-sixth Yearbook of the National Society for the Study of Education, Part I (University of Chicago Press, Chicago, Illinois, 1967), p. 3.

Language Achievement

Because the measurement field is limited in its ability to measure all aspects of this phenomenon, change in language achievement will be viewed in relation to performance on the Illinois Test of Psycholinguistics (ITPA).

Structured Approach

The structured method teaches the children a set of selected sentence patterns, some of which serve the function of labeling, others of describing, explaining, or questioning.

The formal part of the program is the language lesson. Selected patterns are introduced by direct teaching, practiced in a specified sequence, and made meaningful by the use of related materials and experiences. The purpose of the language lesson is to provide the kind of experience that allows the children to learn efficiently. It enables the mother to expose every child to specific material and keep track of daily progress in a systematic manner.

It is not only a formal situation, however, that allows children experiences for learning and practicing language skills. Semi-structured and informal activities provide opportunities for language practice.

It is important for language skills to be transferable to situations outside the language lesson. Although it is not always necessary to speak in complete

sentences, at times it is important to be able to call upon a precise code.

Developmental Approach

The developmental approach emphasizes that much of the learning in early childhood is spontaneous and comes to the child in many ways. It is not necessarily sequential. It cannot always be carefully structured and ordered. This learning takes place long before language comes into existence and continues.

Physical movement and life experiences provide the first vocabulary for the child. Seeing, touching, tasting, smelling, and manipulating tell him what the world is like. The crucial modality of the young child is play behavior. To the child, play is essentially a research activity, an internal transactional process. It is free because the child's activity is still tentative and uncommitted. It is capable of exploration, revision, renunciation and replacement. In play the child can manipulate objects, events and even people with less restriction than that imposed on adults. Therefore, play provides not only a means for practicing, consolidating and assimilating what one knows, but provides an opportunity to challenge or revise that knowledge.

All the activity previously mentioned implies a thoughtfully prepared environment--with space, freedom, and challenging materials to explore and experiment with. Further, it implies that mother and teachers understand

how patterns of thought and commensurate language abilities develop in the young child. This is, of course, the basis for this specific developmental approach.

Intellectual Performance

Because the measurement field is limited in its ability to measure all aspects of this phenomenon, intelligence change in this study will be viewed in relation to performance on the Wechsler Preschool and Primary Scale of Intelligence (WPPSI).

Mother-Child Interaction

Mother-child interaction is viewed as the total communicative process existing between mother and child. This includes dimensions of quantity and quality of language behavior as well as non-verbal communication and a dimension of warmth of relationship.

Self-Concept

In this study self concept will be designated as the child's concepts or cognitive construction of his total characteristics of self in relation to the significant persons that surround him.

Organization of the Remainder of the Study

The remainder of the study will include a survey of current literature in three areas. These will be considered in Chapter II under the sub-titles of: Effects of Early Experience on the Development of

Intelligence, Language, Learning, and Self Concept;
Rationales for Language Oriented Programs; and, Parent
Participation Education Programs.

In Chapter III, a description of the population and procedures used for collecting and analyzing will be presented. Chapter IV will contain an analysis of the data and results of the study. Summary, conclusions, and recommendations for further study will be explicated in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

It has been fairly well established that the preschool years are critical ones to the growing, developing child. Bloom's analysis of the stability and variability in the development of certain characteristics from infancy to maturity--physical factors, intelligence, scholastic achievement, interests, attitudes, and personality--underscores this critical influence. ¹

Bloom carefully surveyed data from over one thousand longitudinal studies in an attempt to identify and explain stability and change in the above mentioned characteristics. Besides uncovering countless support for the idea of the salience of the early environment, he also mustered evidence to indicate that any given characteristic has its greatest potential for change during the period of its most rapid growth. The early years are periods of the most rapid growth for the child's

¹Benjamin Bloom, Stability and Change in Human Characteristics (New York: John Wiley and Sons, 1964).

developing intelligence, language abilities, and certainly for the foundations of self concept. Hence, there is a tremendous influence of the home environment on these aspects of the child's development.²

Bloom continues with a description of three factors that affect the development of general intelligence, (1) "the stimulation provided in the environment for verbal development," (2) "the extent to which affection and reward are related to verbal reasoning accomplishments," and (3) "the encouragement of active interaction with problems, exploration of the environment and the learning of new skills."³ The child's family structures the initial environment concerning the three factors cited by Bloom.

There is merit in viewing the specific knowledge researchers have uncovered over the past few years concerning socially disadvantaged children as beneficial to understanding the growth and development of all children. Barring congenital deficiencies, all babies come into this world with certain positive physical, social-emotional, and intellectual potentialities. Indeed, the definition of intelligence has been previously stated as a product of the interaction of these potentialities with the environment. While there

²Ibid.

³Ibid.

are definite differences in the manner in which lower income and middle-upper income parents structure their child's environment, it should be pointed out that often the differences reduce to the upper income parent providing wholesome food, warm clothing, creative playthings, lessons, and trips,--but they often pay little attention to the development of the child as an interesting competent personality. In this sense the "culturally disadvantaged" is viewed as the "culturally different" with definite strengths, trying to avoid what Eisenberg calls, "confusing difference with defect."⁴ The strengths that Eisenberg as well as Reissman report could well describe many of the rural children that are subjects of this study.^{5,6}

A degree of cooperativeness and mutual aid which extends beyond the nuclear family typical of the middle class; collective group values, rather than individualistic ones; more genuine egalitarian values and less susceptibility to consideration of status and prestige; freedom from family overprotection and more readiness to accept responsibility for family chores; superior physical coordination and skill.⁷

⁴Leon Eisenberg, "Strengths of the Inner City Child," Baltimore Bulletin of Education, XLI (1963-64, pp. 10-16.

⁵Ibid.

⁶Frank Reissman, The Culturally Deprived Child (New York: Harper and Bros., 1963).

⁷Eisenberg, op. cit.

In line with Murphy's and Schachtel's suggestion, then, research should concentrate on locating the means for releasing further potentialities.⁸

The review of the following research provides few answers, but offers stimulating and provocative findings that challenge and facilitate existing educational programs, and hopefully, fosters the development of new programs.

Effects of Early Experience on
the Development of Intelligence,
Language Learning, and Self Concept

Klineberg's review of studies of the relationship between intelligence and environment, and studies by Deutsch and Brunner concluded that there is a "cumulative deficit" problem in disadvantaged environments.^{9,10,11} These researchers describe phenomenon by stating that by the age of six many socially disadvantaged youngsters are one year retarded in language, reading readiness, and

⁸Gardner Murphy, Freeing Intelligence Through Teaching (New York: Harper & Bros., 1961); Ernest Schachtel, Metamorphosis (New York: Basic Books, 1959) cited by Harry Passow and David L. Elliot in The Educationally Retarded and Disadvantaged (Chicago: University of Chicago Press, 1967), p. 32.

⁹Otto Klineberg, "Negro-White Difference in Intelligence Test Performance: A New Look at an Old Problem," American Psychologist, XVIII (1963), 198-203.

¹⁰Deutsch, op. cit.

¹¹Brunner, op. cit.

quantitative ability. By the third grade, there is over two years retardation, by sixth grade over three years and by the end of Junior High School about five years.

What is the nature of this deficit? One of the theories that has taken hold is the interpretation of cultural deprivation as sensory deprivation. That is, the child is considered deprived because he has failed to receive the sensory stimulation necessary for adequate cognitive development. According to this theory, a compensatory program must concentrate on the development of perceptual ability and sensori-motor skills.¹² However, there is little evidence that the culturally deprived fail to receive adequate stimulation for normal learning. As Hunt points out in his research, studies of children under two years of age show:

(1) few, if any, differences in sensory motor development; (2) that because of over-crowded conditions they may literally be bombarded with stimuli; and (3) that organisms are known to seek optimal stimulation given the opportunity.¹³ The more theoretical issue is whether concrete pre-verbal experience is the crucial factor in the development of academic aptitude.

¹²Deutsch, op. cit.

¹³J. McVicker Hunt, "The Psychological Basis for Using Preschool Enrichment as an Antidote for Cultural Deprivation," Merrill-Palmer Quarterly X (1964) 209-248.

Hunt, following Piaget, would suggest this to be more accurate.¹⁴

Bereiter has compared the intellectual and academic performance of blind and deaf children, the blind representing a group who had verbal experience and severely limited concrete experience, and the deaf, a group who had no verbal experience but full concrete experience. Blind children show little or no academic deficiency, whereas deaf children are about ten points below normal in IQ. Deaf children are also retarded from two to five years throughout school, and even with a longer period of schooling. The socio-economic level of the home does not seem to affect the amount of deprivation. There appear to be no differences when deaf children from lower-class homes are compared to children from upper-class homes, although the upper-class child presumably has a background more rich in concrete experience. From this study Bereiter concludes that academic achievement is affected more by a lack of verbal experience than of concrete experience.¹⁵

The cumulative deficit hypothesis, verbal experience deficit hypothesis, and the relationship between

¹⁴J. McVicker Hunt, "How Children Develop Intellectually," Children, XI (1964), 83-91.

¹⁵Bereiter, op. cit.

intelligence and learning ability seems to emphasize the critical effect of verbal learning on intelligence of children, and hold special implications for programs concerning socially disadvantaged children.

Many researchers have established intelligence test scores of socially disadvantaged urban children to be lower than those of upper income groups.

Boger reports that three ideas draw substantial support from the research on rural children: (1) rural children tend to have lower measured intelligence scores, especially on tests which require speed and have many verbal items, (2) the more isolated the rural child, the lower his intelligence scores will be, and (3) the intelligence test score does not necessarily reflect the rural child's learning ability.¹⁶

In a study of slow learners, ages five through ten, in different socio-economic and cultural groups, Jensen found that:

In culturally nondeprived children, there is a good correlation between learning ability and IQ measured by tests. In culturally deprived children, IQ tells little about learning ability of the non-verbally mediated variety. Deprived children seem to be 'normal' in learning ability, but have failed

¹⁶Boger and Ambron, op. cit.

to learn the verbal mediators that facilitate school learning.¹⁷

According to Gordon's summary of the research, deprivation in early experience of children results in the following: weakness in auditory and visual discrimination; limited vocabulary range; restricted language usage with much communication through gestures and other non-verbal means; restrictions in number of grammatical forms used; lack of familiarity with speech used by teachers; insufficient practice in attending to prolonged speech sequences; deficiencies in cognitive development, especially in abstract concepts and ability to generalize; lower IQ score averages including decreases after about age five; and depression of intellectual functioning.¹⁸

A few additional comments on language development beyond Gordon's summary above are appropriate, since, according to Bernstein and others, language is one of the principal areas of retardation in socially disadvantaged children.¹⁹ The relationship between language

¹⁷Arthur R. Jensen, "The Role of Verbal Mediation in Learning as a Function of Age and Cultural Background," Research Relating to Children, XVI, U. S. Department of Health, Education and Welfare (Washington; U. S. Government Printing Office, 1962).

¹⁸Edmund W. Gordon, "Characteristics of Socially Disadvantaged Children," Review of Educational Research XXXV (1965), 377-388.

¹⁹Bernstein, op. cit.

development and socio-economic status has been recognized for some time. In 1954, McCarthy summarized the research thus: "There is considerable evidence in the literature to indicate that there exists a marked relationship between socio-economic status of the family and the child's linguistic development."²⁰ Bernstein found that the restricted language patterns among working-class youth were characterized by: short, grammatically simple, often unfinished sentences with poor syntactical form; simple and repetitive use of conjunctions; little use of subordinate clauses; rigid and limited use of adjectives and adverbs; and infrequent use of impersonal pronouns. In contrast, the elaborated middle-class language is more complex and accurate in syntax, and the frequency and range of various parts of speech are both greater.²¹ M. Deutsch has found signs of impoverishment in the language of the culturally deprived, mainly in its formal, abstract, and syntactical aspects.²²

Recent studies have attempted to determine what is lacking in the environment of many socially disadvantaged children. Investigators, principal among them, Martin Deutsch, have pointed to the family environment

²⁰Dorothea McCarthy, "Language Development in Children," Manual of Child Psychology, edited by Leonard Carmichael (New York: Wiley and Sons, 1954), p. 586.

²¹Bernstein, op. cit.

²²Deutsch, op. cit.

and interaction.²³ Henry believes that the middle class home contains a "hidden curriculum" which enables the child to deal appropriately with his first school experience.²⁴ Strodbeck further describes this "hidden curriculum." Strodbeck has pointed out that the power structure of the middle-class home lends itself to a teaching situation, whereas the structure of the lower class home does not. He demonstrated that the lower class mothers use more imperatives in the adult-child exchange and that when faced with the problem of teaching their child a particular task, they flounder as if this were a completely new experience for them.²⁵ The disadvantaged home contains little such curriculum. This research suggests that it even represents a discontinuity with the school environment.

Hess and Shipman have studied mother-child relations and interaction in terms of "cognitive style." The disadvantaged mothers they studied tended to teach their children passive compliance, giving them commands but few reasons. Overburdened and lacking the concept of developing their children's interests, these mothers

²³Martin Deutsch, "Facilitating Development in the Preschool Child: Social and Psychological Perspectives," Merrill-Palmer Quarterly, X (1964), 249-263.

²⁴Jules Henry, Culture Against Man (New York: Random House, 1963).

²⁵Fred Strodbeck, "The Hidden Curriculum of the Middle Class Home," in Urban Education and Cultural Deprivation, edited by C. V. Hunnicutt (Syracuse, New York: Syracuse University Press, 1964), pp. 15-31.

merely cope with them in the attempt to minimize trouble. Demands are usually enforced with threats of punishment.²⁶

One can conclude, upon analysis of relevant studies, that most disadvantaged children spend less time in direct interaction with their parents than do advantaged children; their parents do not have the skills or language to effectively foster language and cognitive development; and the children do not receive corrective feedback when they begin speaking. Raph has made a review of research in the area of language development also and she concludes:

Research to date indicates that the process of language acquisition for socially disadvantaged children, in contrast to that of advantaged children, is more subject (a) to a lack of vocal stimulation during infancy, (b) to a paucity of experiences in conversation with more verbally mature adults in the first three or four years of life, (c) to severe limitations in the opportunities to develop mature cognitive behavior, and (d) to the types of emotional encounters which result in the restricting of the children's conceptual and verbal skills.²⁷

Olim, Hess, and Shipman found that the child's ability to use abstractions was related to maternal language style and that the mother's tendency to use

²⁶Robert Hess and Virginia Shipman, "Parents As Teachers," Early Education Research Center, University of Chicago, 1967. (Mimeographed.)

²⁷Jane B. Raph, "Language Development in Socially Disadvantaged Children," Review of Educational Research, XXV (1965) 389-400.

abstract language was more related to the child's abstract ability than the IQ of either mother or child.²⁸ As was stated previously, Jensen's conclusion was that the disadvantaged child has not learned the verbal mediators which facilitate school learning. Cynthia Deutsch believes that the educational implication of such findings is for greater emphasis on language teaching for disadvantaged children.²⁹ This investigator believes these findings also have implications for greater emphasis on parent involvement in the educational program.

Finally, child development theory proclaims the interrelatedness of the various aspects of growth in the child. It is not surprising, in light of these other findings, that many of disadvantaged children have a poor concept of self. Gordon's research summary states: "Ego development in disadvantaged children has been described as including low self-esteem, impaired patterns of personal-social organization, high incidence of behavioral disturbance and distorted interpersonal relationships."³⁰ Andrews, Ausubel, and Hawk have

²⁸Hess, Olim, and Shipman, op. cit.

²⁹Cynthia P. Deutsch, "Education for Disadvantaged Groups," Review of Educational Research, XXV (1965), 140-146.

³⁰Gordon, op. cit., p. 383.

documented depressed self concepts and tendencies toward self depreciation.^{31,32,33}

Further, an unfavorable self concept has been shown to be related to low aspirations and academic failures.³⁴

In his poignant and provocative book, Dark Ghetto, Kenneth Clark recognized impairments brought upon by poor home environments, but clearly adds that these are further ingrained by ineffective and inefficient teachers in our public schools.

The evidence so far very strongly suggests that these children will learn if they are taught and they will not learn if they are approached as if they cannot learn . . . if children, poor children or Negro children or immigrant children are taught, accepted, respected and approached as if they are human beings, the average performance of these children may approach, and eventually reach the norm performance of other human beings who are so taught.³⁵

³¹Robert J. Andrews, "The Self Concept and Pupils With Learning Difficulties," Slow Learning Child, XIII, 1 (1966), pp. 47-54. (Mimeographed.)

³²David P. Ausubel and Patricia Ausubel, "Ego Development Among Segregated Negro Children," in Education in Depressed Areas, edited by A. H. Passow (New York: Teachers College of Columbia Bureau of Publications, 1963), pp. 109-141.

³³Thomas L. Hawk, "Self Concept of the Socially Disadvantaged," Elementary School Journal, IV (1967), 196-206.

³⁴K. P. Bhatnager, "Academic Achievement as a Function of One's Self Concept and Ego Functions," Educational and Psychological Review, II (1964), 178-182.

³⁵Kenneth B. Clark, Dark Ghetto: Dilemmas of Social Power (New York: Harper and Row, 1965), p. 131.

It is noteworthy that the majority of self concept studies have been done on disadvantaged black city children. Children in white, rural sub-cultures may manifest a very different kind of concept of self.

Rationales for Language Oriented Programs

The need for intervention programs has been established. There is much agreement among educators and researchers that programatic emphasis should be upon language and cognitive skills. However, there is very little agreement as to the content, form, or time involved in increasing language quality and performance.

Three general approaches emerge from the literature. Brotzman, in a recent Child Development Monograph, states that programs differ as to how they fall along a continuum of structuredness. (He defines structure as, "the organization of a body of concepts which may be applied to provide a means of acquiring standard English language skills.")³⁶ There are the relatively unstructured programs, the semi-structured or cognitive programs and finally the highly structured or task oriented programs.

The unstructured rationale is based on what many term the traditional developmental rationale where language and other cognitive skills are viewed as

³⁶Marvin A. Brotzman, (ed.) Language Remediation for the Disadvantaged Preschool Child, Monographs of the Society for Research in Child Development, XXXIII (1968), 2.

developing within the context of social-emotional development.

Patricia Minuchin and Barbara Biber give an informative presentation of this rationale. They see language as having two forms: a form of communication among human beings; and, a part of the development of symbolization and thought. It has what they term "a relationship aspect" and a "cognitive aspect." These aspects develop from the total life experience of the child, and therefore to teach language skills separately from this total experience would be antithetical to the natural development of the child. Language, then, is to be used and taught in all aspects of learning in addition to using special times or special materials designed to help teach special language skills.³⁷

Minuchin puts forth the notion that the purposes and methods of the unstructured rationale require a complex system of assessment, with need for many kinds of criteria to judge progress. There is a definite concern for the evaluation of the process of thinking as well as accuracy of performance. They quote H. Zimiles research report concerning the dearth of these kinds of measurement techniques and difficulty in developing them.³⁸

³⁷Patricia Minuchin and Barbara Biber, "A Child Development Approach to Language in the Preschool Disadvantaged Child," in Language Remediation for the Disadvantaged Preschool Child, Monographs for the Society for Research in Child Development, XXXIII (1968), 10-17.

³⁸Ibid.

The Bank Street Program, many Head-Start Programs, Cooperative Programs, many college laboratory pre-schools, Alpern's Community Project and Strodbeck's Project are indicative of the unstructured kind of rationale.³⁹

The second rationale, semi-structured or cognitive, provides a more structured and teacher-directed emphasis on specific cognitive and language learnings. This rationale will accept the cognitive socio-emotional relationships in early learning and use some of the same traditional materials and activities. However, it is maintained that because a deficit is known to exist the traditional rationale is not the most efficacious. David Weikart's Perry Project, and Gotkin's structured game orientation are representative of this approach. They both support use of materials which represent a logical step-wise approach to language development. Language is taught with specific adult direction, yet in a game-like atmosphere. Improvement in performance on language tests such as the Illinois Test of Psycholinguistics and the verbal sections of intelligence scales are offered as evidence for the support of these programs.^{40,41}

³⁹Ibid.

⁴⁰David Weikart, "Perry Preschool Project Progress Report," Ypsilanti, Michigan: Ypsilanti Public Schools, 1967. (Mimeographed.)

⁴¹David Gotkins, "Programmed Instruction as a Strategy for Developing Curricula for Disadvantaged Children," in Language Remediation for the Disadvantaged Preschool Child, Monographs of the Society for Research in Child Development, XXXIII (1968), 19-36.

Finally, at the other end of the continuum, lies the highly structured, (and probably most controversial,) Bereiter-Engleman "task oriented program." In their book they clearly state that enrichment programs are completely inadequate, and that the deficit is so great that only intense pattern drill is efficient. The teacher leads the child in a fast alternating statement, question, and response pattern. Little emphasis is put on socio-emotional needs, and top priority goes to cognitive and language skills. Basically, this approach is an adult-directed, deliberately planned sequential talk approach to the three content areas: basic language training, reading, and arithmetic.⁴²

To summarize, the three rationales focus on agreement that disadvantaged children do have deficits in language ability, and that these deficits are related to competence in the school situation. They all profess methods to help overcome the deficiencies.

Stodolosky states that:

It will eventually be necessary to execute detailed observational studies of children in home environments if one wants to arrive at valid hypotheses about the dynamics of development in interaction with environment. The dearth of naturalistic data about children's behavior and concomitant environmental circumstances is most regrettable.⁴³

⁴²Bereiter, op. cit.

⁴³Susan S. Stodolosky and Gerald Lesser, "Learning Patterns in the Disadvantaged," Harvard Educational Review, XXXVII (1967), 546-593.

The deficits have been pinpointed, the rationales put forth, and pre-school intervention programs have been initiated. In the next section a review of the research that attempts to bring the home and school closer together is presented.

Parent Participation-Education Programs

Bloom, Davis and Hess review the various studies involving enriched nursery school programs for socially disadvantaged children such as those of Deutsch in New York, Gray in Tennessee, and Weikart in Michigan. They recommend that every effort be made to have parents serve as part-time assistants and observers in these schools. Other investigators recommend parent participation and education, yet this feature has been minimal, nonexistent or inadequately planned in many programs.⁴⁴

The parent participation-education nursery school (often called the parent cooperative) has become a popular program in various states. The usual pattern is a nursery school program in which the parent participates one day a week and attends a parent education class two to four times monthly. The number of these schools has grown rapidly since they were first introduced about thirty years ago, but their participating families have

⁴⁴Bloom, Davis, and Hess, op. cit.

been primarily middle-class, often upper middle-class families.

Many educators point out that enthusiastic statements about the values of cooperative nursery schools are frequently made in books, newspaper articles, and magazines, whereas little critical material can be found. Supporters of the cooperative ideal claim values that affect our total social structure. These schools, say the supporters, offer the parents opportunity to gain values which range from: an increased understanding of children, new ways of guiding them, and enrichment of family life, to: insight regarding themselves, friends who become an expanded family through shared understanding, increased awareness of their role in the educational situation and the community, and a deeper appreciation for and facility in democratic processes. Katharine W. Taylor, one of the principal leaders of the cooperative nursery school movement in this country, has described numerous values in this experience for parents.⁴⁵

There is little research as to what extent cooperative nursery schools are actually achieving these values, and little indication that disadvantaged parents have access to cooperative nurseries.

There are other kinds of parent programs reported in the literature.

⁴⁵Katherine Whiteside Taylor, Parent Cooperative Nursery Schools (New York: Bureau of Publications, Teachers College, Columbia, 1954).

Earladein Badger at the University of Illinois describes the first year of a two-year exploratory study aimed at teaching socially disadvantaged mothers to stimulate the intellectual development of their infants (1-2 years of age). Twenty mothers, divided into two groups, met weekly for two hours during a seven month period. They were provided with a sequential program of educational toys and materials and instructed in principles of teaching emphasizing positive reinforcement. The groups were small in order to facilitate discussion and attitude change through the mothers' interaction with each other. The two-part emphasis of the program recognized the needs of the infant and the mother. Monthly home visits, and more often when indicated, provided professional help as well as corrective feedback on the principles of teaching as presented in meetings. Subjective evaluations of the first year's results suggest that similar programs should be developed wherever social deprivation exists, as an effective and practical method of preventing learning deficits in children, and as a means of fostering dignity and worth in mothers through self-help.⁴⁶

Gordon, at the University of Florida, reports a study in which paraprofessionals were used to train

⁴⁶Earladein Badger, "Mothers Training Program," Institute for Research on Exceptional Children, College of Education, University of Illinois, February 1969. (Mimeographed.)

mothers and their infants in their homes. Two control groups were used: a group receiving visits without training procedures; and a group receiving no visits of any kind. The 1966-67 groups were three months to one year in age. Results of tests at the first birthday showed that infants in the experimental group excelled infants in control groups on tasks from the training series as well as relevant dimensions of a developmental scale. Control group infants did not differ significantly from each other. Therefore, to date, the use of paraprofessionals, the inclusion of the mother in training, and the focus on the infant appear to have been combined into an effective program.⁴⁷

Project Know-How, directed by Richard Dunham at Florida State University, aims to involve mothers as assistants in a class program using a center for pre-school training for ages one to six. The mothers are employed at the center and the focus of their training is on "homemaking skills." It appears from the brief available report that this project is attempting to train mothers to provide more attention and stimulation for their children.⁴⁸

⁴⁷Ira Gordon, Early Child Stimulation Through Parent Education: Research Report: Infant Performance, Institute for Development of Human Resources, University of Florida, 1968. (Mimeographed.)

⁴⁸Richard Dunham, "Project Know-How," in Early Child Stimulation Through Parent Education: Research Report: Infant Performance, Institute for Development of Human Resources, University of Florida, 1968. (Mimeographed.)

Earl Schaefer is attempting to tutor children during the period of fifteen months to three years through daily home visits by trained college students emphasizing verbal stimulation of the child by the tutor. Results thus far indicate that the tutoring does make a significant difference in early verbal development in spite of repeated observations of extreme deprivation in the homes.⁴⁹

Maya Pines described Bettye Caldwell's study at Syracuse University as a research program studying the effects of stimulating infants from six months to three years in a day-care setting. The focus was on the child, with little or no contact with mothers. The adult to child ratio was arranged to provide frequent one-to-one interaction between an adult and the young child. The results in the children's emotional, social and intellectual development seemed to indicate that day care could be a stimulating child-rearing method even for very young children.⁵⁰

One of the more extensive current programs is DARCEE, directed by Susan Gray at the Peabody Institute in Tennessee. Three treatment groups are included in this project--all four year olds. Maximum Impact includes both mother and child in a pre-school program. The

⁴⁹Earl S. Schaefer, "Intellectual Stimulation of Culturally Deprived Infants," excerpted from Mental Health Grant Proposal No. MH-09224-01, June 1965. (Mimeographed.)

⁵⁰Maya Pines, Revolution in Learning (New York: Harper and Row, 1966).

Curriculum Group is the more traditional child-only program. A third group is a Home Visitor program in which mother and child are trained with the mother committed to follow up during the week. DARCEE has in training methods for participating mothers and ways to train them for more effective motherhood as well as classroom responsibilities. Results indicate that mothers can be trained, that the training enhances their self-concept and their ability to mobilize themselves to make changes in family life. In addition there is considerable evidence of diffusion--both to siblings and to friends and neighbors (including the control groups). Their reports would indicate that given effective training and a good role model in the teacher, the mothers are eventually both ready and eager to assume an active role in their child's development.⁵¹

Both Weikart and Levenstein are involved with programs in which trained professionals have visited homes to train the mother in child-stimulation, using four year olds. Preliminary results indicate that mothers can be trained for this role. The mothers first trained in the project Levenstein reports will now go out to

⁵¹Susan W. Gray and Rupert A. Klaus, Early Training Project for Disadvantaged Children: A Report After Five Years, Monograph for the Society for Research in Child Development, XXXIII, No. 4, 1-65.

train other mothers in the place of professional social workers.^{52,53}

At present a research program is being carried out at the Mental Research Institute in Palo Alto, California, with Mrs. Hazel Leler, Director. The experimental hypothesis to be tested in this study is: In a preschool program with an enriched curriculum for socially disadvantaged children, those children whose parents are involved in weekly participation-education activities will show significantly more language and intellectual development than children whose parents are involved minimally.⁵⁴

Socially disadvantaged families with children approximately three years of age (eligible to enter kindergarten in September, 1968) were selected on the basis of socio-economic status (receiving welfare aid) and living in an area having a high proportion of low income and minority group families. A social worker visited the mothers to determine their willingness to enter a parent participation preschool program. Only those families in which the mothers indicated such willingness were enrolled in order to control for bias

⁵²Weikart, op. cit.

⁵³Levenstein, op. cit.

⁵⁴Hazel Leler, "An Experimental Preschool Education Program for Socially Disadvantaged Families," Mental Research Institute, Palo Alto, California, Research Report, 1967. (Mimeographed.)

among the experimental groups. The research design involved two groups of about twenty five children each. There was a stratified random assignment of the children into the two groups on the basis of socio-economic status, race, education of the mother, presence of the father in the home, and the sex, birth order, and pre-test results of the child.

All of the children were enrolled in a preschool program with an enriched curriculum, especially in language activities. There was a morning session and an afternoon session, each conducted by two teachers assisted by a teacher aide. In order to keep the environment for the two groups of children as similar as possible, the morning program served half of the children from each of the following two groups and the afternoon program served the other half of the two groups.

Group I. Intensive parent-participation group. The mothers of the children in this group are expected to participate in the preschool program for three hours each weekly and attend a weekly parent education class.

Group II. Minimal parent-participation group. The mothers of the children in this group are encouraged to visit the preschool program occasionally (4-6 times a year) and expected to attend a monthly parent education class.

Home visits by the teachers were kept equal for the two groups. The parent education classes focus on

child behavior and development, ways the parents can help in the education of the child, family relationships, and self-help planning. The program will be conducted for two years (nine months each year). Tests of language and intellectual development such as the Peabody Picture Vocabulary Test and the Stanford-Binet, Form L-M, will be used as pre- and post-tests. If possible, older and younger siblings will be tested also to compare diffusion effects, and pre- and post-measures will be made of parents' attitudes to compare possible changes.

In a mimeographed report, the Harrisburg, Pennsylvania Primary Education Project has reported a parent education program based on remediating of ITPA diagnosed language weaknesses at home.⁵⁵

The highly structured Bereiter-Engleman Language Program at Illinois is currently initiating parent meetings to help parents continue the language curriculum at home.⁵⁶

The Karnes study, working with socially disadvantaged mothers and children, investigated the effects of a short term training program for mothers as reflected in the intellectual and linguistic development of their

⁵⁵Pre-school Parent Education Program, Experimental Edition prepared by Preschool and Primary Education Project, Department of Public Instruction, Harrisburg, Pennsylvania, 1966. (Mimeographed.)

⁵⁶Siegfried Engleman, private interview held in December, 1968, at the Colonel Wolfe Preschool, Champaign, Illinois.

children. Fifteen pairs of disadvantaged preschool children were matched on appropriate variables. Neither experimental nor control subjects were enrolled in a preschool, nor were control mothers enrolled in a training program. During a weekly two-hour period mothers of the experimental children made instructional materials and learned methods for using them with their children in the home. Children of mothers involved in the training program manifested significantly greater gains than the control children on measured intelligence and language skills.⁵⁷

Loveless and Kelly, in conjunction with the University of Hawaii Head Start Evaluation and Research Center, have developed a highly structured sequential language curriculum for the preschool child. Doris Crowell directs a parent program concurrently. Parents are presented with structured materials and techniques to foster the child's language development in the home. Statistical results are as yet unavailable.⁵⁸

Concerns which are emphasized repeatedly in these reports include the child behaviors disadvantaged mothers reward and do not reward. It is clear that disadvantaged

⁵⁷Karnes, Studley, Wright, and Hodgins, op. cit.

⁵⁸Patricia Loveless and K. Kelly, University of Hawaii Pre-school Language Curriculum Guide, University of Hawaii Head Start Evaluation and Research Center, 1968. (Mimeographed.)

children are most often "rewarded for passivity" and receive little positive reinforcement for language and assertive behavior. In encouraging interaction between mother and child, the goals of assisting the mother to function with positive reinforcement of verbal behavior with interaction which adds information, encourages reflection and a variety of responses through the request of and response to it, are mentioned in contrast to restricted orders found before education.

The variety of studies reported indicate that early language deprivation, including inadequate home language and control methods for verbal and cognitive skill development, is a critical deficiency resulting from poverty. Training programs show that given a qualified program, children can be educated in either group or home settings. In addition, efforts to use mothers in both home and group settings to assist in groups and/or apply new methods at home have shown considerable promise.

Summary

This chapter has pointed to the importance of early experience (primarily that experience provided by the family), for the child's developing intelligence, language abilities, and self concept. These abilities are closely related to later success in the school setting.

In reference to intelligence, socially disadvantaged children (among them rural children), do not

perform as well as advantaged children on standard intelligence tests. However, analyzing these studies more closely, either by social group and ethnic group membership or on specific mental capabilities, the research loses much significance. That is, the significance does not appear to be in social disadvantage as much as in these other factors.

In terms of school achievement, the "cumulative deficit" hypothesis has been pointed out. The few longitudinal studies of achievement reflect the socially disadvantaged child's achievement pattern as one of deceleration as he moves through the current school system. As Stodolosky and Lesser state, "when intelligence test data and early achievement data are combined, we have a predictor's paradise, but an abysmal prognosis for most children who enter the school system from disadvantaged backgrounds."⁵⁹

Certainly, this indictment of the ability to predict school failure can become a challenge to the schools to specifically engage in correcting this pitiful situation.

Many school intervention programs are evident. However, there is increasing interest in parent education programs that would enhance home-school communication and

⁵⁹Stodolosky, Lesser, op. cit.

cooperation. Research seems to indicate that child development education with an emphasis on language activities may be beneficial.

In the socially disadvantaged home, there seems to be a lack of feedback to reward and develop the child's language patterns fully. As language proceeds, not only feedback, in the sense of initial responses to the child's language, but dialogue, (verbal interaction) becomes a critical factor.

Characteristics of the environment and family style tend to mitigate against elaborate verbal and attentive relationships between family members.

Clearly, socially disadvantaged children have special deficits and problems. The research reported in the Rationale section indicates a good deal of groping and searching for new procedures, materials, and techniques to use with these children.

Education programs can help parents become aware of how their young child is beginning to know his environment, and learn some principles, techniques, and activities to facilitate this process. The limited research on this type of program emphasizes infant teaching in the home, use of paraprofessionals, and programs of a more highly structured nature.

Chapter III includes a discussion of the population, Procedures and methods of data collection used in this Parent education study.

CHAPTER III

POPULATION, PROCEDURES AND DATA COLLECTION

The notion of a differential parent education program as a focus for a research problem emerged from a workshop the writer held in late September of 1968 in the Elkton, Pigeon, Bay Port, Michigan School District on the topic Methods and Techniques of Successful Parent Education Programs. At the conclusion of the program the principal mentioned that a Head Start Experimental Program was about to begin in cooperation with the Research and Evaluation Center at Michigan State University. The focus was a study of attitudes toward Head Start in the community. The writer later met with MSU Project Director, Dr. R. Boger, and discussed the differential parent education program. Dr. Boger and staff submitted a proposal accordingly and the study was funded by the United States Office of Economic Opportunity Contract 4118 with the Office of Economic Opportunity.

Background and Description of the Population

The Elkton-Pigeon-Bay Port School District conducted a summer Head Start Program during the summer of 1965. They have operated a full year Head Start Program during

the past three years. The school district, located in the Thumb Area of the eastern part of Michigan covers an area of 255 square miles. Three villages, Elkton, Pigeon, and Bay Port, are located within the school district. They are primarily rural communities with a limited amount of light industry. The Bay Port area is particularly depressed due to a radical decline in the fishing industry which has been a dominant source of income.

Prior to the 1969 school year the Head Start program in the district enrolled 104, three, four, and five year old children from disadvantaged families. These children were enrolled in six classes with six teachers and six teachers' aides. Although the Head Start Program in the Elkton-Pigeon-Bay Port area had provided services to the community through its preschool program as well as a parent program, it had great difficulty attaining community acceptance.

Due to the rural nature of the area many families border on the poverty line as set by the Head Start guidelines, but do not fall below it. Seasonal changes in crop productivity can result in fluctuation above or below this line from year to year. Because of their isolation, many of these children, though ineligible by Head Start guidelines, are still disadvantaged culturally, emotionally, and socially. The negative attitude of the community is derived in part from that segment of the community which has been excluded from the Head Start program under the present guidelines.

An experimental program including advantaged and disadvantaged children was initiated in 1968-1969 in an effort to broaden community understanding and involvement. By opening enrollment in the Head Start Program to all "four-year-olds" in the community this may be accomplished, as well as a deeper understanding of the nature of the cultural limitations of children from rural communities.

Advantaged-Disadvantaged Dichotomy

As indicated in the introductory statement, an important aspect of the Pigeon-Elkton-Bay Port study was the requested waiver of OEO income guidelines so that all four year olds in the community might be included in the sample. Initially, it was a part of the planned design to compare varying ratios of guideline eligible (so-called disadvantaged) and nonguideline (so-called advantaged) children in the sample classes. Initial testing, however, with the Wechsler Preschool and Primary Scale of Intelligence, indicated a less than distinct difference between the two groups. On the basis of these findings, the viability of testing modeling behavior hypotheses as based on social class difference was interpreted to be lacking, and although a partial change score analyses based on guideline eligibility vs. non-eligibility will be completed, this is not considered to be a central issue in this project.

Table 1 provides a breakdown of the population of the classes based on guideline eligibility. The numbers of disadvantaged and advantaged children in a given class are dependent upon location of homes and patterns of transporting the children.

TABLE 1.--Breakdown of Class Population by Guideline Eligibility.

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Total
Guideline Eligible	16	9	9	6	6	4	50
Non-Guideline Eligible	2	9	9	12	12	14	58
Total	18	18	18	18	18	18	108

Sample

The sample was drawn from six Head Start Classes in the Pigeon-Elkton-Bay Port School District. Each class consisted of eighteen children, Caucasian, and of rural background. Twelve children and their mothers from each class were randomly selected for the test group sample. (Due to budget, time, and personal limitations, it was necessary to use less than the total class population for testing purposes). However, all eighteen children and their mothers in each class were involved in the Training Program. Each class consisted

of eighteen children, one teacher, one aide, and one volunteer mother.

TABLE 2.--Testing Sample.

	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Total
Guideline Eligible	10	6	6	4	5	3	34
Non-Guideline Eligible	2	6	6	8	7	9	38
Total	12	12	12	12	12	12	72

Procedures

The six classes were randomly paired to obtain samples consistent with the proportion of advantaged and disadvantaged in the total population.

The pairs of classes were randomly assigned to the three treatment groups (see Table 3). The three treatments were: Developmental Language Training (treatment 1), Structured Language Training (treatment 2), and Discussion Workshop (Placebo treatment). The Placebo group strengthened the design by dealing with the Hawthorne effect while at the same time including all mothers, children, and teachers in some kind of "treatment" group which minimized feelings of exclusion. In view of past negative community feelings this aspect was deemed to be of utmost importance (see Tables 3 and 4).

TABLE 3.--Number of Guideline Eligible and Non-guideline Eligible Children in Each Training Program.

	Developmental Training	Structured Training	Placebo Workshop	Total
Guideline Eligible	15	15	20	50
Non-guideline Eligible	21	21	16	58
Total	36	36	36	108

TABLE 4.--Testing Sample by Treatment.

	Developmental Training	Structured Training	Placebo Workshop	Total
Guideline Eligible	11	11	13	35
Non-guideline Eligible	13	13	11	37
Total	24	24	24	72

All three treatment groups were treated as follows:

1. Each group of mothers met in twelve weekly two-hour sessions with their children's teacher.
2. The general atmosphere was conceived to be one of parents and teachers working together

to attain the goals and objectives of each program.

3. Training and instructions to the teachers for each week's program was provided each Monday by the investigator. At these weekly orientations the trainer would go over specifically prepared objectives, materials, and lessons with each pair of teachers.
4. Each teacher met with the trainer each Friday for an evaluation of that week's program in terms of attendance, problems, and suggestions.
5. The professional person involved in training was constant across all training groups in an attempt to minimize effects of trainer variability.
6. Follow-up home visits were used to provide materials and directions to mothers unable to attend meetings.
7. Other mothers came to the school for make-up lessons.
8. Teachers refrained from direct use of materials developed for the training program in their own classroom programs.

Experimental Treatment:
Developmental Training

The major objectives of the Developmental Education was to extend the parents' awareness of the importance of early years in the development of language and cognitive growth.

Parents were instructed in the general theory and philosophy of the developmental language approach.

The developmental approach emphasized that much of the learning in early childhood is spontaneous and comes to the child in many ways. It is not necessarily sequential. It cannot always be carefully structured and ordered. This learning takes place long before language comes into existence and continues after.

Physical movement and life experiences provide the first vocabulary for the child. Seeing, touching, tasting, smelling and manipulating tell him what the world is like. The crucial modality of the young child is play behavior. To the child, play is essentially a research activity, an internal transactional process. It is free because the child's activity is still tentative and uncommitted. It is capable of exploration, revision, renunciation and replacement. In play the child can manipulate objects, events and even people with less restriction than that imposed on adults. Therefore, play provides not only a means for practicing, consolidating and assimilating what one knows, but provided an opportunity to challenge or revise that knowledge.

Every object becomes a source of new experimentation, first sensory-motor, then visual-symbolic, and ultimately logical and concrete. The child discovers something about the properties of everything he encounters. Bodily movements, physical manipulation of objects, and sensory experiences induct the child into social living, community discovery, physical prowess, music, arts, language, numbers, mechanics, and the sciences. Experience helps the child feel his way to awareness of relationship.

The child must be encouraged to operate on his environment, take it apart, measure it, order it and so handle it that a qualitative idea comes forth. This requires leadership on the part of mother as teacher.

Language, then, plays a critical role. At this point the child needs words to define and clarify new operational experiences. These words enable actions to become symbolic representations which are freed from the limitations and inflexibility of specific images. Movements then become internalized and lead to precise mental operations.

Specific materials and techniques have been developed for this study to enhance the mother's awareness of the child's thought processes and language development. Suggestions for using the materials were demonstrated by the teachers. However, mothers were encouraged to implement their own ideas in the use of materials and were provided with these opportunities in role-playing and small group situations.

Activities utilized in this group included color games, flannel boards, dramatic play with puppets, lotto games, cooking activities, and many others. (See Appendix E for sample lessons). With each activity general instructions were given; however, each mother was encouraged to alter materials as necessary to maintain her child's interest level and attain the above stated objectives.

All this activity previously mentioned implies a thoughtfully prepared environment--with space, freedom, and challenging materials with which to explore and experiment. Further, it implies that mother and teachers understand how patterns of thought and commensurate language abilities develop in the young child. This was, of course, the basis for this specific developmental area program.

Experimental Treatment II; Structured Training

The major objective of the Structured Education was to extend the parents' awareness of the importance of the early years by an examination of the sequential nature of intellectual and language growth in the preschool years. Loveless and Kelly in conjunction with the University of Hawaii Head Start Evaluation and Research Center, have developed a sequential language curriculum for the preschool child. Adaptations of this curriculum were implemented here with the assistance and consultation

of Doris Crowell, project coordinator, University of Hawaii Language Training Program. Illustrated in Table 5 are the sequential levels of language utilized in this program.¹

Parents were presented with a specific repertoire of relevant skills which they could apply in teaching situations to enhance their child's discriminative skills and concept acquisition. Materials and techniques to teach their children language structure were presented to the mothers. As in the developmental training, an atmosphere of parent and teacher learning together was maintained.

Materials constructed by the mothers in the meeting were to be used in the home with the child in a very specific way. The emphasis in this group was to help the child explain and discuss things in complete sentences, to verbalize each thing he saw or did. Mothers were encouraged to reward this behavior with warm affectionate kinds of behavior.

Specific activities included color games, candy-land, "Go Fish," lotto, puppets, flannel boards, and others. With each activity a specific set of instructions were given for the mother to follow. (See Appendix D).

¹Loveless and Kelly, op. cit.

TABLE 5.--Sequential Levels of Language Development.

Levels	Labels	Verbs	Descriptions	Extensions
I E N	Identity singular	Present progressive singular	Opposite words: big, long, straight, smooth Colors: red, blue Prepositions: on, under, in - singular	Additional vocabulary and verbs Use flashcards for opposite words, colors, prepositions
	positive and not	positive and not		
II N K	Identity plural	Present progressive plural	Plural of Opposite words: big, long, straight, smooth Colors: red, blue Prepositions: on, under, in "I don't know"	Labels: more vocabulary (pl.) Verbs: more verbs (plural) Descriptions: Opposite words: wet, clean, soft, heavy, fat Prepositions: in front of, singular and plural
	positive and not	positive and not		
III H T E	Categories: Animals Plants Buildings Vehicles Toys Pieces of clothing	Past of "to be" Past progressive singular and plural	Opposite pairs: big, long, straight, smooth "and"	Labels: Categories--tools, weapons, furniture, things to read Verbs: present progressive Add new verbs Descriptions: Opposites: dark, loud, tall cold, happy Colors: green, orange Prepositions: next to "Guessing"
IV E L L W O O	Subject Pronouns	Simple past singular and plural	Same-Different "all"	Labels: "a" and "an" with nouns Numbers and letters, food, parts, children and adults Verbs: expanded forms: past tense Descriptions: Reversible "and" Opposite pairs: wet, clean, soft, heavy, fat Colors: purple, black, white, brown Preposition: between Questions
V E C H B E C H B	Materials: What Things Are Made Of	Infinitives Future singular and plural	Superlatives Comparatives	Labels: more plurals Object pronouns Verbs: Infinitive, Future Opposite pairs: dark, loud cold, happy, tall "Or" "Different from" Colors: pink, gray, silver, gold
VI O O O O	Workers	Simple Present singular and plural	Polar Changes	Labels: fruit, vegetables, money Possessive pronouns, adjectives Verbs: simple present Other adjectives Irregular comparatives and superlatives Colors: light and dark Seriation, sequencing Deductions Miscellaneous

Activities were designed to maintain the child's interest while at the same time presenting a logical sequence of language development from simple identity statements through complex construction. An emphasis on the how the child's language develops was stressed in this group.

Common Characteristics of the
Two Experimental Treatments

1. Each mother was asked to spend at least 10 minutes a day working on the materials with her child.
2. Materials were to be kept in a bag provided to be used "in a special place" at a "special time" each day.
3. Mothers were asked to return an evaluation sheet each week stating the amount of time spent, tasks completed, and general comments.
4. Agenda for meetings followed the pattern:

7:00 - 7:20	Evaluation of previous week's material
7:30 - 8:00	Developing instructional material
8:00 - 8:20	Refreshments
8:30 - 9:00	Discussion of use of materials
	Handouts

Placebo Treatment: Workshop Training

The placebo group was incorporated into this design to allow for control of possible Hawthorne effect.

Basically it was a check of how meetings with the mothers, in which no definite instructional program for interaction with their children was included, may lead to measurable changes in child behavior. This was the type of parent program that was most typically employed as a part of Head Start programming.

Some objectives of the workshop training were:

1. To develop an appreciation of the value of education as a means by which parents and their children can progress and enjoy life more.
2. To develop an understanding of children's growth, development, and behavior.
3. To support and strengthen the positive attributes of parents.
4. To help parents utilize personal and community resources.
5. To help parents develop a sense of their own worth as individuals, parents, and citizens.
6. To develop self-help activities of the parents through involvement in democratic processes, and
7. To strengthen family relationships through the above means.

Programs were developed to familiarize the mother with the school, the community and her own resources.

(See Appendix C for sample programs and complete list of topics.) Films, discussions and resource persons were presented with no instructions for the mother to interact with her child in the home. Most of the workshops were child-related, for example: 1) Value of Play and Play Equipment, 2) Nutrition, 3) Guiding the Young Child, 4) Why Children Behave the Way They Do, and 5) First-aid Around the Home. However, the programs were presented for the mother alone and no attempt was made to project specifics for use in her interaction with her Head Start child.

Instrumentation

A pre-test and post-test model was used on the following measurement approaches (see Appendix B for bibliographical data.):

1. Wechsler Preschool and Primary Scale of Intelligence (WPPSI)
2. Illinois Test of Psycholinguistic Abilities (ITPA)
3. Hess and Shipman Mother-Child Toy Sort and Block Design (1965)
4. Experimental Self-Concept-Social Constructs Measure (adaptation of Brown, Henderson-Ziller-Long, and Woolner techniques).

Mothers were evaluated on two measures (pre and post):

1. Hess-Shipman Mother-Child Interaction Test

2. MSU Experimental Tell-A-Story Test
developed for use in this study by
M. S. U. Head Start Research and
Evaluation staff.

Intelligence Scale

The Wechsler Pre-school and Primary Scale of Intelligence (WPPSI) evolved from a dual need in the measurement field. First, there were frequent requests for a downward revision of the Wechsler Intelligence Scale for Children, (WISC), and secondly, there was a definite need for a scale that would more accurately appraise the mental abilities of the pre-school child, certainly an elusive task at best.

The WPPSI consists of a battery of sub-tests, each of which when treated separately may be considered as measuring a different ability, and when combined into a composite score, as a measure of overall or global intellectual capacity. Both performance and verbal scores are obtained on this instrument, and items supposedly are optimally suited for the mental examination of the 4 to 6-1/2 year old child.² (See Table 6).

²David Wechsler, WPPSI Manual (New York: The Psychological Corp., 1967).

TABLE 6.--WPPSI Sub-tests.

Sub-Tests	No. of Items
Verbal:	
Information	23
Vocabulary	22
Arithmetic	20
Similarities	16
Comprehension	15
Sentences	13
Performance:	
Animal House	20
Picture Completion	23
Mazes	10
Geometric Design	10
Block Design	10

Standardization³

The problem in standardization of any test is to get an adequate representation of the population. Wechsler used a stratified sampling plan to insure representative proportions of various classes of individuals within the population. Quotas for each stratum were based on an analysis of the latest available reports of the 1960

³Ibid.

United States Census. It is interesting that Wechsler acknowledges a "minimal" bias in the test because it was impossible to follow true random selection methods. Instead, field examiners were required to select cases to fit several quota requirements, to make contact with parents of the children, and to obtain permission for testing. One may presume that parents to whom examiners have access and who give permission to test, tend, on the average, to be brighter and better educated than parents in general. They believe this bias to be small, but of course the extent is unknown.

The standardization sample consisted of 1200 white and non-white children stratified according to age, sex, geographical region, urban-rural residence, color, and father's occupation.

Reliability⁴

The reliability-coefficients for all tests except animal house are odd-even correlations corrected by the Spearman-Brown formula. The split-half technique was not deemed appropriate for estimating reliability of speed tests so the reliability for the animal house test was derived from test-retest data.

For verbal, performance, and full scale IQs, the reliability coefficients were estimated from the formula for the correlation between two sums of equally weighted scores.

⁴Ibid.

Based on an N of 200 for each sub-test across age groups 4-6-1/2 years average reliability for each sub-test ranges from a low of .77 to a high of .87. Average reliability across age groups on the verbal IQ is .94, on performance IQ, .93, and full scale IQ, .96.

The standard error of measurement of sub-tests across groups ranges from a low of .87 to a high of 1.87. On the three overall scores the average SE_m is 3.00.

Validity⁵

Acceptable average intercorrelation of tests scores are given for the six age groups. Stability coefficients on a test-retest study averaged .80 on sub-tests and .87 on overall, and there is a high correlation with other instruments designed to measure intelligence (Stanford-Binet, Peabody Picture Vocabulary Test, and the Pictorial Test of Intelligence). (However, this is not enough to insure scales as interchangeable.)

Language Scale

The Illinois Test of Psycholinguistic Abilities is a recent test, the first edition coming out about 1961. It is generating much research and interest. As yet it is not in its final form. The past few years have been a time of trial and experimentation. This test is an attempt to assess and differentiate various aspects of

⁵Ibid.

language ability, or disability, depending upon one's point of view.

The development of the test was the result of dissatisfaction with current test instruments such as the WISC and Stanford-Binet. A more specific delineation of language processes was needed. Work was begun at the University of Illinois on an instrument which could be used to diagnose language defects of cerebral palsied children. The United Cerebral Palsey Fund has, in fact, supplied a substantial portion of the research money. The test was designed with the hope that individual remediation programs could be designed. Current research in the Institute for Research on Exceptional Children at the University of Illinois is centering on the development of such specific remediation programs.⁶

The main theory used in the construction of the ITPA was Charles Osgood's model of language acquisition and behavior. Two of the subtests were taken from a slightly different theory by Joseph Wepman. In order to understand the test, it is necessary to understand the underlying concepts. Osgood, also of the University of Illinois, supplied some of the concepts in an article published in 1957.⁷

⁶Charles E. Osgood, "A Behavioristic Analysis," Contemporary Approaches to Cognition (Cambridge, Mass., Harvard University Press, 1957), pp. 75-120.

⁷Ibid.

The Test

The construction of the test included five steps:

1. Development of a theoretical model upon which differential diagnosis of language difficulties could be based. The two models chosen have just been mentioned.
2. Implementation of the theory into operationally defined tasks.
3. Adaptation of the subtests in terms of clinical knowledge.
4. Standardization on a normal group.
5. Development of remedial procedures.⁸

At the present time, the test is undergoing a certain amount of revision. It has been in the field on a more or less experimental basis and has generated a good deal of comment and research, with reference to the validity of the subtests, its diagnostic value, and the techniques of administration. The authors are taking these all into critical consideration in their revamping process. Part five, the development of specific remediation programs, is the current major center of activity and energies at the University of Illinois.

⁸Samual Kirk and James McCarthy, "The ITPA--An Approach to Differential Diagnosis," American Journal of Mental Deficiency, LXVI (1961), 399-412.

The ITPA⁹

The ITPA tests three psycholinguistic processes.

They are:

Decoding - the ability to obtain meaning from visual and auditory linguistic stimuli.

Association - the ability to manipulate linguistic symbols internally.

Encoding - ability to express ideas by words or gestures.

Table 7 presents a brief organization of the test.

Statistical Characteristics

Statistical data is available and clearly presented for anyone using this test. Following are some brief comments on the statistical reports.

Standardization: The norm group consisted of 1,100 children between the ages of 2-1/2 to 9 from Decatur, Illinois, public schools. Since the test was intended to differentiate language disabilities, a group of linguistically normal children was sought.

Validity¹⁰

No set of validity coefficients was given. Content validity is still being researched. However, the authors were able to make some comments on the test. In general, each subtest is qualitatively homogeneous. Whatever it measures, all items on the subtest measure the same thing. Correlational and factor analytic

⁹Ibid.

¹⁰Ibid.

TABLE 7.--Derivation and Description of ITPA Subtests

Processes	Channels	Levels	Sub-test
Decoding	Auditory	Representational	1 ^a
		Automatic Sequential	
	Visual	Representational	2 ^b
		Automatic Sequential	
	Auditory Vocal	Representational	3 ^c
		Automatic Sequential	4,5 ^d
Association	Visual Motor	Representational	6 ^e
		Automatic Sequential	7 ^f
	Auditory Motor	Representational	
		Automatic Sequential	
	Visual Vocal	Representational	
		Automatic Sequential	
	Motor	Representational	8 ^g
		Automatic Sequential	
Encoding	Vocal	Representational	9 ^h
		Automatic Sequential	

^a1. Auditory Decoding--Vocabulary test requiring only yes or no answer, e.g., do females slumber?

^b2. Visual Decoding--Matching a stimulus picture to its perceptual counterpart, e.g., office table and coffee table.

^c3. Auditory Vocal Association--A verbal analogies test, e.g., soup is hot. Ice cream is . . .

^d4. Auditory Vocal Automatic--Correct grammatical form must be provided in sentences, e.g., here is an apple. Here are two . . .

5. Auditory Vocal Sequential--Digit repetition as in Binet. Note: There is an auditory vocal test at both automatic and sequential levels.

^e6. Visual Motor Association--Relate pictures on some conceptual basis, e.g., sock with shoe.

^f7. Visual Moto- Sequential--Sequence of geometric shapes must be reproduced from memory.

^g8. Motor Encoding--Expressing one's ideas in terms of meaningful gesture, e.g., "Show me what you should do with this." (hammer)

^h9. Vocal Encoding--Describe a simple object verbally, e.g., block, nail.

studies also show that there exists a fair degree of heterogeneity between the subtests. They all tend to measure something different. This does not mean, of course, that the tests measure all the linguistic areas.

It was felt that the weakest areas on the test are the tests on the automatic and sequential levels (tests 7, 8, and 9). McCarthy and Kirk feel that these tests should be broken down further to test small, discrete areas. Certain contaminations were discovered among the tests on the meaningful level. The decoding tests are slightly contaminated with association ability. Association tests are contaminated with both decoding and encoding factors. The very nature of the testing situation precludes a really pure test at this level. The encoding tests were found to be reasonably free of contamination from other tests. However, for some reason, they were found to be contaminated with each other. The authors have since revised the test to correct this, and the 1968 edition used in this study was the revised edition.

It is important to note that the testers were less experienced in administering this test than the WWPSI, and that it was specifically designed for diagnostic use.

Reliability¹¹

Two forms of reliability have been computed for the ITPA, internal consistency reliability and stability reliability. An internal consistency check was made to

¹¹Ibid.

ensure that the questions in each subtest were homogeneous. It was found the best consistency for subjects was in the middle age ranges. A test-retest method with an intervening time of three months was used as well as a split-half check. Restricted stability coefficients and full range estimates of stability reliability for each subtest for each age range is available. Standard errors of measurements for each subtest for each age range are also available.

Mother-Child Interaction Tests

The Hess and Shipman Mother-Child Interaction tests evolved from a research attempt at the University of Chicago Early Education Research Center to study differences in maternal teaching styles.¹² (See Appendix B). Mothers and children were brought to the laboratory where each mother was to teach the same content to her child. The teaching situations were structured so that information to be conveyed to the child was constant for all subjects, but each mother was free to use any means or techniques she desired in attempting to convey it.

The interactions revealed striking differences in the way mothers attempted to teach the same basic message or skill to their children and in their relative

¹²Robert B. Hess and Virginia Shipman, Mother-Child Interaction on Toy Sorting and Puzzle Tests, Published Research Report, no copyright, University of Chicago Headstart Center, 1966. (Mimeographed.)

success in doing so. In attempting to account for these differences, a number of maternal teaching variables were examined including language (variety, organization, and relevance), motivation techniques (methods used in attempting to get the child to want to learn or to be prepared to learn), ability to interpret the child's responses, and success in giving appropriate feedback in reaction to those responses. Effects observed in the children were also measured and were analyzed in relationship to the various maternal variables.¹³

Directions for the test and scoring procedures may be seen in Appendix B. Studies of construct validity were significant at the .01 level. This test was used in the Educational Testing Bureau's National Assessment Program. Specific reliability and validity coefficients are as yet unpublished.¹⁴

The MSU Experimental Tell-A-Story Test was designed to measure quantity and quality of mother's output in a story telling situation. Mothers are asked to tell a story using a set of sequential pictures. The mother's story to the child was tape recorded in the presence of no one (to simulate as close as possible normal story-telling conditions). Analysis of the story includes total word output, length of sentences, complexity of sentences and number of abstract words.

¹³Ibid.

¹⁴Ibid.

Child's Self Concept Measures

An experimental battery of self concept and social construct measures were compiled for this study. The unavailability of an adequate self concept instrument necessitated the development of a new approach. Parts of the Brown IDS Self Concept Referents Test, Henderson, Long, and Ziller's Children's Self Social Constructs Test, and Woolner's Pre-school Self Concept Picture Test were adapted for use in assessing these dimensions. (See Appendix A for bibliographic data.) This was an attempt to gain a knowledge of the child's concept of himself, his perception of his mother's concept of him, and how he perceives himself in relation to significant others, (mother, father, teacher, peers). The combination of these tests could give measure on all three variables.

The Pre-school Self Concept Picture Test

The complete Woolner Test was used. It is designed to measure the child's concept of himself.

The Preschool Self-Concept Picture Tests consists of ten plates with paired pictures on each plate. Culturally and developmentally orientated, the pictures represent personal characteristics which preschool children may commonly attribute to themselves. Two sets of pictures are provided: one for boys and one for girls. Pictured characteristics, according to Plate number are:

1. Dirty - Clean
2. Active - Passive
3. Aggressive - Nonaggressive
4. Afraid - Unafraid
5. Strong - Weak
6. Acceptance of male figure - Rejection of male figure
7. Unhappy - Happy
8. Group Rejection - Group Acceptance
9. Sharing - Not sharing
10. Dependence - Independence

The picture characteristics represent ten positive and ten negative characteristics.¹⁵

The rationale for selecting the characteristics which are depicted on the ten plates is related to the needs, concerns, characteristics and developmental tasks of middle-class kindergarten children, their parents, and teachers.

For six plates the positive and negative characteristics are identical for boys and girls, while on four plates sex differences are noted.¹⁶

¹⁵Rosestelle B. Woolner, Preschool Self-Concept Picture Test (R.K.A. Publishing Co.: Memphis, Tenn., copyright, 1966.)

¹⁶Ibid.

Depicted Characteristics

<u>Positive</u>		<u>Negative</u>	
<u>Boys</u>	<u>Girls</u>	<u>Boys</u>	<u>Girls</u>
Clean	Clean	Dirty	Dirty
Active	Passive	Passive	Active*
Aggressive	Nonaggressive	Nonaggressive	Aggressive*
Unafraid	Unafraid	Afraid	Afraid
Strong	Weak	Weak	Strong*
Like Male	Like Male	Dislike Male	Dislike Male
Figure	Figure	Figure	Figure
Happy	Happy	Sad	Sad
Group	Group	Group	Group
Acceptance	Acceptance	Rejection	Rejection
Sharing	Sharing	Not Sharing	Not Sharing
Independent	Independent	Dependent	Dependent*

*Sex difference

Validity and Reliability¹⁷

The Preschool Self-Concept Picture Test was first administered to a group of emotionally healthy preschool children and a group of emotionally disturbed preschoolers who attended Children's Guild, Inc., Baltimore, Maryland. The emotional stability of both groups was determined by a professional team composed of a psychologist, a psychiatrist, a social worker and a preschool teacher. Results of this administration of the PS-CPT indicated that emotionally healthy children viewed themselves differently than emotionally disturbed children. Healthy children saw themselves as having more positive characteristics than disturbed children. Congruence between self and ideal self-concept was 80 per cent to 100 per cent in the emotionally healthy group, whereas congruence between

¹⁷Ibid.

self and ideal self-concept was 20 percent to 00 percent in the disturbed group. One child, a five-year-old girl, who attended the preschool for emotionally healthy children, when tested, responded as the children in the emotionally disturbed preschool did. The staff members of both schools were not informed of the results of the test. Some weeks after the test was administered, the teacher requested that the therapeutic preschool staff review the girl's record because she felt the child showed some symptoms of emotional disturbance.

To determine if preschool children viewed the picture in the same or similar context as the test designer, a group of middle-class four and five-year-old children, in an individual interview, were asked to describe each plate. Their responses were taped and tabulated. Except for one plate, unafraid, the children's descriptions of the plates agreed with the test designer's descriptions. Because of the children's responses to the unafraid and afraid plate, it was redrawn.

A study conducted at Memphis State University provided additional validity and reliability data. To determine the consistence of performance of PS-CPT, one group of children received three exposures to the self-concept test and the three sets of scores were inter-correlated. All correlations were found to be above .90 except for the correlations between Test 1 and Test 3 on ideal self-concept which was found to be .80.

Although the correlation between Draw-A-Man Self-Concept Test and the PS-CPT was not significant ($r = .21$), it approached the .02 significant level ($p < .232$).

Brown-IDS Self Concept Referents Test

Robert Brown of the New York Medical College developed a technique designed to assess some dimensions of self concepts held by four-year-old children. The test attempts to measure the extent to which the child perceives his mother; his teacher; and friends as seeing him positively or negatively. For purposes of this study the child and mother perceptions were most pertinent, so these items were abstracted for the experimental form.¹⁸ (See Appendix B.))

Brown states that his study has shown that this test minimizes the extent to which psychological interpretation must be imposed upon obtained responses, maximizes comparability to responses between child in order to permit generalization, and tests directly the stability of responses over a specified period of time.¹⁹

¹⁸Robert Brown, IDS Self Concept Reference Test, Published Research Report (no copyright, Institute for Developmental Studies, New York Medical College, 1966.) (Mimeographed.)

¹⁹Ibid.

Reliability - Validity²⁰

Thirty-eight four-year-old lower class Negro subjects and thirty-eight white upper middle subjects of the same age were given the Brown IDS Self Concept Reference Tests. A re-test was given three weeks later. Findings indicated a high level of reliability in the perceptions of self held by Negro and white children over a three-week interval (.76 for white S's, .71 for Negro S's.)

Children's Social Self Construct Test

The self social symbols method was originated by Robert C. Ziller who first used felt cutouts to study the self-perceptions of neuropsychiatric patients. From this beginning a number of forms of paper and pencil tests have been developed which provide non-verbal measures of self in relations to others.²¹

In the test, the child is presented with a booklet containing a series of symbolic arrays in which circles and other figures represent the self and/or other persons of importance.

The child responds to each task by arranging these symbols, by selecting a circle to represent the self or some other person from among those presented,

²⁰Ibid.

²¹Robert C. Ziller, E. H. Henderson, and Barbara Long, Children's Self-Social Constructs Test, Preschool Form, Research Report (no copyright, 1968.) (Mimeographed.)

by drawing a circle to stand for himself or others or by pasting a gummed circle onto the page with the other symbols. From these arrangements, in which the child relates himself symbolically to a variety of social configurations, certain aspects of the person's conception of himself are inferred.²²

Reliability²³

For the pre-school form of the test, studies revealed split-half reliability coefficients corrected for length ranging from .48 to .85 with a median of .73 for eight measures among a sample of ninety-eight four-year-olds.

Validity²⁴

In an eighty-two page paper entitled Manual For The Self-Social Symbols Method by Ziller, Henderson, and Long, empirical evidence is presented to establish construct validity by making multiple comparisons in relation to the theoretical ideas of what was being measured. There are comparisons of: known groups, among tasks themselves, and of the tasks to behavior in various situations. All findings reported were significant at the .05 level or better unless otherwise indicated.

²²Ibid.

²³Ibid.

²⁴Ibid.

Administration of Tests

All tests were administered on a pre-test-post-test basis. The WPPSI and the ITPA were administered by local psychometric diagnosticians. Testers received training on the WPPSI under the direction of David Wechsler. Training on the ITPA was in conjunction with the University of Illinois, but of a limited nature.

The Hess and Shipman Mother-Child Test was administered by the writer and the MSU Head Start Evaluation Center Test Coordinator. The self concept measure was taken by the MSU Head Start Evaluation Coordinator and a former teacher who trained three days at the Center.

All testers spent time in the pre-school setting getting acquainted with the subjects. The investigator spent about the month before pre-testing began preparing teachers, children, and mothers for the testing experience. Because of this gradual approach at establishing rapport only two of the seventy-two children needed a supportive adult in the testing room.

Data Analysis and Processing

The major hypotheses that predict improved language skills, intellectual performance, self concept, and mother-child interaction through parent education were tested by employing the following procedures.

Variables were submitted to a 2 x 3 Analysis of Variance Model. Computer Program, L. S. routine,

(Analysis of Co-Variance and Analysis of Variance With Unequal Frequencies Permitted in the Cells), was used.

In this procedure the post-test of each dependent variable was analyzed by analyses of co-variance, with the appropriate pre-test serving a co-variate for the post-test. This procedure sets the initial group differences to zero in terms of post-test interpretation. The resulting analyses reflect the relative change of each group to one another. This does not allow a test for significant pre- to post-test gains across all groups. Therefore, group pre- to post-test mean scores were subtracted to obtain gain scores.

Scheffe's method of post hoc comparisons was used to evaluate comparisons among means of experimental groups that show significant differences. This method has advantages of simplicity, applicability to groups of unequal sizes, and suitability for any comparison.

Scores obtained from all subjects on all instruments were used in a coding system developed by the Michigan State University Head Start Research and Evaluation Center. Data on IBM cards were programmed for statistical treatment through Michigan State University's CDC-3600 tabulator system. Analysis of the data will be presented in Chapter IV of this study.

CHAPTER IV

ANALYSIS OF THE DATA

The chapter is divided into three sections: The first section presents analyses of the data in terms of statistical support for each hypothesis. The second section presents a discussion of the findings derived from statistical analysis. The third section includes anecdotes of parent, teacher, and child reactions to the experimental program.

The Data

Predicting Language Improvement

In order to ascertain the effects of a differentiated parent education program on the linguistic achievement of their children, it was hypothesized that:

Head Start children whose mothers receive structured or developmental education in language and communication techniques will evidence greater positive changes in linguistic achievement, as measured by the ITPA, than will children of mothers who receive the placebo experience.

ITPA total scores and subtest scores for each treatment group were analyzed by the co-variance method previously described. Table 8 presents the analysis of

TABLE 8.--ITPA Analysis of Co-variance (N-64¹)

Variables	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Auditory Reception Independent Variables--Eligibility and Treatment					
Eligibility ²	1.33821844	1	1.33821844	0.0389	0.844
Treatment ³	26.44405926	2	13.22202963	0.3843	0.683
Interaction	89.86387763	2	44.93193882	1.3058	0.279
Dependent Variable--Visual Reception Independent Variables--Treatment and Eligibility					
Eligibility	0.34565086	1	0.34564086	0.0133	0.909
Treatment	3.93602111	2	1.96801056	0.0757	0.927
Interaction	18.20412614	2	9.10206307	0.3503	0.706
Dependent Variable--Visual Sequential Independent Variables--Treatment and Eligibility					
Eligibility	24.02419141	1	24.02419141	0.5639	0.456
Treatment	24.92604384	2	12.46302192	0.2925	0.747
Interaction	54.14670026	2	27.07335013	0.6354	0.533

Dependent Variable--Visual Association
Independent Variables--Treatment and Eligibility

Eligibility	49.59835627	1	49.59835627	1.8529	0.179
Treatment	2.13929904	2	1.06964952	0.0400	0.961
Interaction	6.38166996	2	3.19083498	0.1192	0.888

Dependent Variable--Visual Closure
Independent Variables--Treatment and Eligibility

Eligibility	3.16296376	1	3.16296376	0.1103	0.741
Treatment	4.52521303	2	2.26260652	0.0789	0.924
Interaction	70.85670489	2	35.42835245	1.2357	0.298

Dependent Variable--Verbal Expression
Independent Variables--Treatment and Eligibility

Eligibility	1.52325353	1	1.52325353	0.0332	0.856
Treatment	44.19791117	2	22.0985558	0.4824	0.620
Interaction	39.87585519	2	19.93792759	0.4352	0.649

Dependent Variable--Grammatic Closure
Independent Variables--Treatment and Eligibility

Eligibility	7.39043669	1	7.39043665	0.6977	0.407
Treatment	0.12952455	2	0.06476227	0.0061	0.994
Interaction	17.379224341	2	8.68962170	0.8203	0.445

TABLE 8.--Continued

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Manual Expression Independent Variables--Treatment and Eligibility					
Eligibility	0.00348420	1	0.00348420	0.0001	0.991
Treatment	120.02112419	2	60.01056209	2.4494	0.095
Interaction	6.68212393	2	3.34106197	0.1364	0.873
Dependent Variable--Auditory Association Independent Variables--Treatment and Eligibility					
Eligibility	11.26783657	1	11.26783657	0.9087	0.344
Treatment	31.34782488	2	15.72391244	1.2681	0.289
Interaction	36.31223301	2	18.15611601	1.4642	0.240
Dependent Variable--Auditory Sequential Independent Variables--Treatment and Eligibility					
Eligibility	115.26110869	1	115.26110869	4.8366	0.032
Treatment	24.76453484	2	12.38226742	0.5-96	0.598
Interaction	8.834811985	2	4.17405993	0.1752	0.840

Dependent Variable--Summed Total				
Independent Variables--Treatment and Eligibility				
Eligibility	443.72096842	1	443.72096842	0.7349
Treatment	1261.66386718	2	630.83193359	1.0448
Interaction	73.89021736	2	36.94510868	0.0612
				0.395
				0.358
				0.941

Constant across all Tables

1Thirty-five advantaged and twenty-nine disadvantaged children.

2Eligibility refers to advantaged-disadvantaged status.

3Treatment refers to Structured, Developmental, and Placebo.

co-variance results. There were no significant differences in linguistic achievement between groups due to treatment effects. The main effect of treatment did not meet the criteria of .05 level of significance on any of the ten sub-tests or on the total score.

However, subtraction of mean scores (see Table 9) indicated gains on all subtests across all groups. The average gain for the subtests was 3.116 points. Gains were only slightly higher than expected gains reported in the ITPA Manual Age Norm Tables.

TABLE 9.--ITPA - Mean Gain Scores (N=64)

Sub-Test Names	Pre	Post	Difference
Mean Gains			
Auditory Reception	15.86	18.34	+ 2.48
Visual Reception	11.06	13.58	+ 2.52
Visual Sequential Memory	7.27	12.16	+ 4.89
Auditory Association	13.31	17.03	+ 3.72
Auditory Sequential Memory	15.55	16.27	+ .72
Visual Association	13.40	15.82	+ 2.42
Visual Closure	13.67	17.21	+ 3.54
Verbal Expression	9.38	13.32	+ 3.94
Grammatical Closure	10.11	12.80	+ 2.69
Manual Expression	15.08	19.32	+ 4.24
Total	124.68	155.81	+31.23

Advantaged - Disadvantaged Dichotomy

The Auditory Sequence subtest met the .05 significance criterion on the eligibility variable with an F equal to 4.836, and significance level of .032.

Disadvantaged children performed significantly better than advantaged children across all groups on this particular subtest.

Predicting Intellectual Achievement

In order to ascertain the effects of a differential parent education program on the intellectual performance of their children, it was hypothesized that:

Head Start children whose mothers receive structured or developmental education in language and communication techniques will evidence greater positive changes in intellectual achievement as measured by the WPPSI than will children of mothers who receive the placebo experience.

WPPSI total scores and subtest scores for each treatment group were analyzed by the co-variance procedure previously described. Table 10 presents the analysis of co-variance results. There were significant differences between treatment groups on the verbal subtests of the WPPSI. Full scale IQ scores between groups were not significant at the .05 level. Therefore, the null hypothesis cannot be rejected. However, the level of significance for the Full Scale IQ differences was .08. Scheffe's method of comparisons computed on the differences in treatment revealed significant differences between all groups at the .05 level. The Developmental Treatment Group performed better than the Structured Group and the Developmental and Structured groups better than the Placebo group.

TABLE 10.---WPPSI Analysis of Co-variance (N-64)

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable---Full Scale IQ					
Independent Variable---Treatment and Eligibility					
Eligibility	38.19899917	1	38.19899917	0.3925	0.533
Treatment	497.62341078	2	248.81170539	2.5566	0.086
Interaction	247.71685170	2	123.85842585	1.2727	0.288

There were no significant differences between groups due to treatment on performance items on WPPSI. (See Table 11).

Three subtests of the WPPSI with heavy loading on language ability evidenced significant differences between groups due to treatment effects.

On the Vocabulary subtest differences were significant at the .01 level. (See Table 12). Scheffe's post hoc comparisons on vocabulary revealed significant differences between the Developmental Treatment and Placebo Treatment and between the Structured Treatment and the Placebo Treatment, both performing at a significantly higher level than the Placebo group. There was no significant difference in performance between the Developmental and Structured Groups.

The Verbal Comprehension subtest manifested significant treatment main effects at the .001 level of significance (See Table 13). Scheffe's post hoc comparisons indicated significant differences (.05) between both language education treatment groups and the Placebo group. Children in the Developmental and Structured groups performed at a higher level than children in the Placebo group on the Comprehension test. There was no difference between Structured and Developmental Groups, however.

Treatment main effects were also suggested on the Similarities subtest with differences between groups significant at the .06 level (See Table 14). Scheffe's

TABLE 11.--WPPSI Analysis of Co-variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Performance IQ					
Independent Variable--Treatment and Eligibility					
Eligibility	164.36602838	1	164.36602838	1.3163	0.256
Treatment	140.45723226	2	70.22861613	0.5624	0.573
Interaction	232.54008300	2	116.27004150	0.9311	0.400
Dependent Variable--Animal House					
Independent Variable--Treatment and Eligibility					
Eligibility	173.72860557	1	173.72860557	1.3093	0.257
Treatment	571.72621410	2	285.86310705	2.1544	0.125
Interaction	134.49300751	2	67.24650376	0.5068	0.605
Dependent Variable--Picture Completion					
Independent Variable--Treatment and Eligibility					
Eligibility	4.01641180	1	4.01641180	0.3781	0.541
Treatment	32.76836548	2	16.38418274	1.5424	0.223
Interaction	49.59640023	2	24.79820011	2.3346	0.106

Dependent Variable--Maze		Dependent Variable--Block Design	
Independent Variable--Treatment and Eligibility		Independent Variable--Treatment and Eligibility	
Eligibility	183.27901911	0.07805933	0.07805933
Treatment	179.48987713	9.23548845	4.61774422
Interaction	569.31970315	14.84045915	7.42022958
	1	1	0.0098
	2	2	0.5812
	2	2	0.19339
	183.27901911	0.07805933	0.0098
	89.74493857	4.61774422	0.5812
	284.65985157	7.42022958	0.19339
	1.5870	0.0098	0.921
	0.7771	0.5812	0.563
	2.4649	0.19339	0.399
Dependent Variable--Geometric Design		Dependent Variable--Block Design	
Independent Variable--Treatment and Eligibility		Independent Variable--Treatment and Eligibility	
Eligibility	0.07805933	45.16607178	3.0213
Treatment	9.23548845	20.91521600	.6995
Interaction	14.84045915	38.68758470	1.2940
	1	1	0.088
	2	2	0.501
	2	2	0.282
	45.16607178	45.16607178	3.0213
	20.91521600	10.45760800	.6995
	38.68758470	19.34379235	1.2940

TABLE 12.--WPPSI Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Vocabulary Independent Variable--Treatment and Eligibility					
Eligibility	14.63417793	1	14.63417793	0.5756	0.215
Treatment	215.29111211	2	107.64555606	4.2337	0.010
Interaction	110.48466787	2	55.24233393	2.1727	0.123

TABLE 13.--WPPSI Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Comprehension Independent Variable--Treatment and Eligibility					
Eligibility	22.76854742	1	22.76854742	1.6028	0.211
Treatment	226.23385238	2	113.11692619	7.9630	0.001
Interaction	22.77886868	2	11.38943434	0.8018	0.454

TABLE 14.--WPPSI Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Similarities					
Independent Variable--Treatment and Eligibility					
Eligibility	18.11902803	1	18.11902803	1.8350	0.181
Treatment	55.78310974	2	27.89155487	2.8247	0.068
Interaction	29.28666612	2	14.64333306	1.4830	0.236

post hoc comparisons (.05) evidenced the previous finding. Developmental and Structured Treatments show superiority over the Placebo Treatment, but no difference between each other.

Total group pre- to post-mean scores were subtracted and there was an average gain across all treatment groups of 2.97 on all subtests of the WPPSI. Overall mean gain is that which would be expected due to increase in age.

TABLE 15.--WPPSI Means--Gain Scores

Sub-Test Names	Pre	Post	Difference
Total Information	9.63	12.67	+ 3.06
Vocabulary	15.28	16.53	+ 1.25
Animal House	32.48	43.28	+ 10.80
Picture Completion	7.98	11.61	+ 3.63
Arithmetic	6.87	8.31	+ 1.44
Maze	10.82	14.31	+ 3.49
Geometric Design	5.59	7.26	+ 1.67
Similarities	6.25	8.25	+ 2.00
Block Design	6.28	8.59	+ 2.31
Comprehension	10.05	11.84	+ 1.79
Verbal IQ	99.04	101.21	+ 2.17
Performance IQ	102.85	105.80	+ 2.95
Full Scale IQ	100.31	102.33	+ 2.02

Advantaged - Disadvantaged Interaction

Eligibility and interaction effects were significant on several sub-tests of the WPPSI. The Total Information subtest showed an interaction at the .04 level of significance. (See Table 16). Sheffe's method of post hoc comparisons yielded a significant difference (.05 level) due to the interaction of eligibility and treatment

TABLE 16.--WPPSI Analysis of Co-Variance (N-64)

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Total Information Independent Variables--Treatment and Eligibility					
Eligibility	65.90082650	1	65.90082650	2.1607	0.147
Treatment	14.13994954	2	7.06997477	0.2318	0.794
Interaction	199.71353552	2	99.85676776	3.2740	0.045

between advantaged and disadvantaged children in the Placebo Treatment group. In other words, advantaged and disadvantaged children attained the same level of ability on the Total Information subtest in the Developmental and Structured Treatments but not in the Placebo Treatment. The advantaged children did significantly better than the disadvantaged in the Placebo Treatment.

The Arithmetic subtest evidenced an interaction effect of eligibility and treatment at the .01 level of significance (See Table 17). Scheffe's method of post hoc comparisons significant at the .05 level showed the disadvantaged children in the Structured group performed better than the disadvantaged children in the Developmental or Placebo Treatments. The advantaged children performed significantly better in the Developmental Treatment than advantaged children in the Structured or Placebo Treatment.

A definite interaction effect was obtained on Total Verbal IQ which was significant at the .03 level (See Table 18). Scheffe's post hoc comparisons showed no significant differences in performance on overall Verbal IQ between advantaged and disadvantaged children in the Developmental and Structured Treatments, but no significant differences between the advantaged and disadvantaged children in the Placebo Treatment. Advantaged children performed better than disadvantaged children in the Placebo Treatment.

TABLE 17.--WPPSI Analysis of Co-Variance (N-64)

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Arithmetic Independent Variables--Treatment and Eligibility					
Eligibility	0.39321662	1	0.39321662	9.0747	0.786
Treatment	3.80989413	2	9.90494706	0.3619	0.698
Interaction	46.1022709	2	23.05113550	4.3788	0.017

TABLE 18.--WPPSI Analysis of Co-Variance (N-64)

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Verbal IQ Independent Variables--Treatment and Eligibility					
Eligibility	213.42288219	1	213.42288219	0.8413	0.363
Treatment	281.51834902	2	140.75917457	0.5548	0.577
Interaction	1884.92264059	2	942.46132030	3.7149	0.030

Predicting Self Concept Improvement

In order to ascertain the effects of a differential parent education program on the self concept development of their children, it was hypothesized that:

Head Start children whose mothers receive structured or developmental education in language and communication techniques will evidence greater positive changes in self concept development than will children of mothers who receive the placebo experience.

Brown IDS Self Concept Reference Test

The Brown Self Total and Mother Total scores for each treatment group were analyzed by the analysis of covariance procedure. Table 19 presents the results of Mother Total. There was a treatment main effect significant at the .02 level. Children in the Developmental and Structured groups had a significantly more positive perception of their mother's view of them than did children in the Placebo group.

Advantaged - Disadvantaged Interaction

The Brown Total Self subtest evidenced no significant treatment main effects. However, the Total Self subtest attained an interaction effect significant at the .05 level (see Table 20). Scheffe post hoc comparisons (.05) indicated the advantaged and disadvantaged children in the Developmental and Structured Treatment groups scored essentially the same on positive view of self. But there were significant differences between

TABLE 19.--Brown IDS Self Concept Reference Test

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Mother-Total Independent Variables--Treatment and Eligibility					
Eligibility	0.86934196	1	0.86934193	0.1776	0.675
Treatment	41.28433538	2	20.64216769	4.2166	0.020
Interaction	1.71948592	2	0.85974296	0.1756	0.839

TABLE 20.--Brown IDS Self Concept Reference Test

	Sum of Squares	Degrees of Freedom	Mean Squares	F	Significance Level
Dependent Variable--Self-Total Independent Variables--Treatment and Eligibility					
Eligibility	1.73789769	1	1.73789769	0.3323	0.567
Treatment	16.80180441	2	8.40090220	1.6064	0.210
Interaction	31.68211023	2	15.84105511	3.0291	0.050

the advantaged and disadvantaged children in the Placebo Treatment, the advantaged children evidencing the more positive view of themselves.

Henderson-Ziller-Long Children's
Self Social Constructs Test and
the Woolner Preschool Self
Concept Picture Test

Tables 21 and 22 present the analysis of co-variance data on the Henderson-Ziller-Long subtests and the Woolner Preschool Self Concept Test. There were no significant differences between groups due to treatment. Therefore the null hypothesis cannot be rejected.

Advantaged - Disadvantaged Dichotomy

There were no significant interaction or eligibility effects on the Henderson-Ziller-Long or the Woolner.

Subtraction of means shown in Table 23 evidences an erratic pattern of losses and gains on the various subtests.

Predicting Improved Mother-Child Interaction

In order to ascertain the effects of a differential parent education program on the mother-child interaction, it was hypothesized that:

Head Start children and mothers who receive structured or developmental education in language and communication techniques will evidence greater positive changes in mother-child interaction measured by the Hess and Shipman Mother-Child Interaction, and the MSU Experimental Tell-A-Story Test, than will children and mothers in the Placebo group.

TABLE 21.--HZL Self-Social Constructs Test (N-64)

	Sums of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Mother-Identification Independent Variables--Treatment and Eligibility					
Eligibility	10.43890193	1	10.43890193	1.9838	0.164
Treatment	7.74928792	2	3.87464396	0.7363	0.483
Interaction	0.36213693	2	0.18106846	0.0344	0.966
Dependent Variable--Father-Identification Independent Variables--Treatment and Eligibility					
Eligibility	4.48937130	1	4.48937130	0.5095	0.478
Treatment	4.87220737	2	2.43610369	0.2765	0.759
Interaction	6.93100600	2	3.46550300	0.3933	0.677
Dependent Variable--Friend-Identification Independent Variables--Treatment and Eligibility					
Eligibility	0.45572921	1	0.45572921	0.0675	0.796
Treatment	4.91287907	2	2.45643953	0.3636	0.697
Interaction	12.90576870	2	6.45288435	0.9552	0.391
Dependent Variable--Teacher-Identification Independent Variables--Treatment and Eligibility					
Eligibility	0.45572921	1	0.45572921	0.0675	0.796
Treatment	4.91287907	2	2.45643953	0.3636	0.697
Interaction	12.90576870	2	6.45288435	0.9552	0.391

Dependent Variable--Forced Mother Independent Variables--Treatment and Eligibility				
Eligibility	0.11834852	1	0.11834852	0.1433
Treatment	1.59430037	2	0.79715018	0.9651
Interaction	0.26295725	2	0.13147862	0.1592
Dependent Variable--Forced Father Independent Variables--Treatment and Eligibility				
Eligibility	2.01705288	1	2.01705288	2.7712
Treatment	1.01347423	2	0.50673711	0.6962
Interaction	0.05825435	2	0.02912718	0.0400
Dependent Variable--Forced Friend Independent Variables--Treatment and Eligibility				
Eligibility	1.51332371	1	1.51332371	1.6634
Treatment	0.49973794	2	0.24986897	0.2746
Interaction	1.87567219	2	0.93783609	1.0308
Dependent Variable--Forced Teacher Independent Variables--Treatment and Eligibility				
Eligibility	0.91760901	1	0.91760901	0.7319
Treatment	2.67913475	2	1.33956737	1.0684
Interaction	0.74903089	2	0.37451544	0.2987

TABLE 22.--Woolner Preschool Self Concept Picture Test

	Sum of Squares	Degrees of Freedom	Mean Score	F	Significance Level
Dependent Variable--Agree Total					
Independent Variables--Treatment and Eligibility					
Eligibility	7.64284721	1	7.64284721	0.7241	0.398
Treatment	7.90724500	2	3.95362250	0.3746	0.689
Interaction	8.24931315	2	4.12465658	0.3908	0.678
Dependent Variable--Disagree					
Independent Variables--Treatment and Eligibility					
Eligibility	1.98375603	1	1.98375603	0.1969	0.659
Treatment	3.74714317	2	1.87357159	0.1860	0.831
Interaction	6.39733438	2	3.19866719	0.3176	0.729

TABLE 23.--Brown IDS Self Concept Reference Test

	Pre	Post	Differ- ence
Brown			
Total Self	9.06	9.96	+ .90
Total Mother	9.39	9.92	+ .53
Henderson-Ziller-Long			
Mother	5.86	5.08	+ .78
Father	5.54	6.23	+ .69
Friend	5.88	5.70	- .18
Teacher	1.50	1.25	- .25
Forced Mother	1.43	1.90	+ .47
Forced Father	1.45	1.50	+ .05
Forced Friend	1.53	1.36	- .17
Forced Teacher	1.50	1.25	- .25
Woolner			
Agree	6.01	6.50	+ .49
Disagree	3.67	3.50	- .17

Hess and Shipman Mother-Child Test

Scores on the mother-child subtests of the Hess and Shipman Test for each treatment group were analyzed by analysis of co-variance. Since a comprehensive score was unobtainable on this test, and there were differential results between the subtests, it was not possible to test the null hypothesis with reference to a total score. However, significant differences were found on treatment main effects for two of the subtests across both tasks that were pertinent to this hypothesis. Table 24 on Total Reference to Specific Attributes (Toy Sort) criterion revealed significant differences at the .03 level between groups due to treatment main effects. Scheffe's comparisons (.054) showed the mothers in the Developmental and Structured Treatments referring to specific attributes of the task more often than mothers in the Placebo group. There were no differences between mothers in the Structured group and mothers in the Developmental Treatment groups.

Table 25 shows significant differences between groups due to the main effect of treatment at the .05 level of significance on the amount of the Mothers Verbal-Negative Reinforcement. Sheffe's comparisons placed differences between Developmental and Structured groups. The structured group used significantly more negative reinforcement (.05). Differences occurred between the Developmental and Placebo groups. The Placebo group used significantly more negative reinforcement (.05).

TABLE 24.--Hess and Shipman Mother-Child Analysis of Co-Variance (N=64)

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Total Specific Attributes Independent Variables--Treatment and Eligibility					
Eligibility	16.21098080	1	16.21098080	4.3600	0.041
Treatment	27.42477558	2	13.71238779	3.6880	0.031
Interaction	5.03143520	2	2.57571760	0.6766	0.512

TABLE 25.--Hess and Shipman Mother-Child Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Eligibility	2.65308055	1	2.65308055	0.5488	0.462
Treatment	30.48714968	2	15.24357484	3.1530	0.050
Interaction	8.73623683	2	4.36811841	0.9035	0.411

Table 26 shows that a trend is indicated between groups due to treatment, the level being .10 on both tasks. Scheffe's comparisons showed the same results for both tasks. The mothers in the Structured group used significantly less verbal positive reinforcement than either the Developmental or the Placebo group mothers who used essentially the same amount.

Advantaged - Disadvantaged Dichotomy

Table 24 on page 111 on Total Reference to Specific Attributes (Toy Sort) showed a significant difference between groups due to the eligibility effect at the .04 level. Advantaged mothers referred to specific attributes more often than did disadvantaged mothers.

Table 27 presents results of other subtests of the Hess and Shipman Mother-Child Test. No significant differences were obtained.

MSU Experimental Tell-A-Story Test

Table 28 reports analysis of co-variance data on the syntax aspect of the test (see Appendix B for explanation of syntax). Differences between groups due to treatment main effects were significant at the .04 level. Scheffe's comparisons showed the mothers in the Developmental group yielding a higher syntax index using a greater number of infinitives, adverbs, coordinate clauses, etc. than mothers in either the Structured or Placebo group.

TABLE 26.--Hess and Shipman Mother-Child Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Verbal Positive Reinforcement (Toy Sort)					
Independent Variables--Treatment and Eligibility					
Eligibility	1.75381353	1	1.75381353	.5874	0.447
Treatment	14.32462545	2	7.16231272	2.3990	0.100
Interaction	18.19757049	2	9.09878524	3.0477	0.054
Dependent Variable--Verbal Positive Reinforcement (Puzzle)					
Independent Variables--Treatment and Eligibility					
Eligibility	0.86303282	1	0.86303282	0.0991	0.754
Treatment	41.47601501	2	20.73800756	2.3822	0.101
Interaction	23.56870374	2	11.78435187	1.3537	0.266

TABLE 27.--Hess and Shipman Mother-Child Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Commands - Verbal (Puzzle)					
Independent Variables--Treatment and Eligibility					
Eligibility	0.77309624	1	0.77309624	0.3546	0.554
Treatment	0.50975994	2	0.25487997	0.1169	0.890
Interaction	4.12151310	2	2.06075655	0.9452	0.395
Dependent Variable--Questions - Physical (Puzzle)					
Independent Variables--Treatment and Eligibility					
Eligibility	0.55975802	1	0.55975802	0.2456	0.622
Treatment	4.68652318	2	2.34326159	1.0280	0.364
Interaction	3.19566135	2	1.59783068	0.7010	0.500
Dependent Variable--Questions - Verbal (Puzzle)					
Independent Variables--Treatment and Eligibility					
Eligibility	0.10730619	1	0.10730619	0.1311	0.719
Treatment	3.0838755	2	1.54191878	1.8843	0.161
Interaction	0.34353569	2	0.17176785	0.2099	0.811

Dependent Variable--Maternal Affection (Puzzle) Independent Variables--Treatment and Eligibility					
Eligibility	2.34317221	1	2.34317221	0.1998	0.657
Treatment	11.55221520	2	5.77610760	0.4925	0.614
Interaction	33.4139856	2	16.70699263	1.4244	0.249
Dependent Variable--Questions - Verbal (Toy Sort) Independent Variables--Treatment and Eligibility					
Eligibility	2.99585096	1	2.99585096	0.6580	0.421
Treatment	2.68749838	2	1.34374919	0.2951	0.746
Interaction	0.62600082	2	0.31300041	0.0687	0.934
Dependent Variable--Maternal Affection (Toy Sort) Independent Variables--Treatment and Eligibility					
Eligibility	3.67260382	1	3.67260382	2.2277	0.140
Treatment	1.86513437	2	0.93256719	0.5657	0.577
Interaction	3.07852899	2	1.53926449	0.9337	0.399
Dependent Variable--Puzzle Total Reference to Specific Attributes Independent Variables--Treatment and Eligibility					
Eligibility	4.96588306	1	4.96588306	1.8020	0.185
Treatment	0.48920384	2	0.24460192	0.0888	0.915
Interaction	2.75885011	2	1.37942505	0.5006	0.609

TABLE 27.--Continued

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Commands - Physical (Puzzle) Independent Variables--Treatment and Eligibility					
Eligibility	8.15537630	1	8.15537630	0.4969	0.487
Treatment	5.99566508	2	2.99783254	0.1827	0.834
Interaction	7.90870556	2	3.95435278	0.2409	0.787
Dependent Variable--Verbal Negative Reinforcement (Toy Sort) Independent Variables--Treatment and Eligibility					
Eligibility	0.00016897	1	0.00016897	0.0002	0.988
Treatment	0.21685059	2	0.10842529	0.1465	0.864
Interaction	3.02437647	2	1.51218823	2.0430	0.139
Dependent Variable--Commands - Verbal (Toy Sort) Independent Variables--Treatment and Eligibility					
Eligibility	3.13808852	1	3.13808852	1.3596	0.248
Treatment	0.91014021	2	0.45507010	0.1972	0.222
Interaction	17.19227790	2	8.59613895	3.7242	0.130

Dependent Variable--Commands Physical (Toy Sort) Independent Variables---Treatment and Eligibility					
Eligibility	3.37344137	1	3.37344137	0.7549	0.389
Treatment	10.53039855	2	5.26519927	1.1782	0.315
Interaction	5.35496061	2	2.67748030	0.5992	0.553
Dependent Variable---Questions - Physical (Toy Sort) Independent Variables---Treatment and Eligibility					
Eligibility	0.07317241	1	0.07317241	0.0799	0.779
Treatment	0.37675472	2	0.18837736	0.2056	0.815
Interaction	0.05240132	2	0.02620066	0.0286	0.972

TABLE 28.--MSU Experimental Tell-A-Story Test Analysis of Co-Variance (N-64)

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Syntax-Complexity					
Independent Variables--Treatment and Eligibility					
Eligibility	69.77469705	1	69.77469705	0.1162	0.735
Treatment	4004.51082611	2	2002.25541306	3.3347	0.046
Interaction	2824.23738557	2	1412.11869279	2.3518	0.108

Table 29 indicates difference between groups due to treatment main effects at the .06 level on the number of questions asked in complete sentences. Sheffe's comparisons showed that mothers in the Structured group asked more questions in complete sentences than mothers in either the Developmental or Placebo group.

A trend of significance between groups is indicated in Table 30 on the ratio of Complete Sentences to Incomplete Sentences. Significance between groups due to treatment effects is at the .07 level. Scheffe's comparisons showed the mothers in the Structured group used more complete sentences than incomplete sentences than mothers in either the Developmental or Placebo group.

There were no significant differences on the Total Number of Questions asked between groups (See Table 31).

Advantaged - Disadvantaged Interaction

Two aspects of the Tell-A-Story Test yielded significant interaction effects. Quantity or "Total Number of Words" subtests were significant on interaction at the .03 level, (See Table 32). Scheffe's comparisons (.05) indicated that disadvantaged mothers in both the Developmental and Structured Treatment groups used a significantly greater number of words to tell their child a story than disadvantaged mothers in the Placebo group.

TABLE 29.---MSU Experimental Tell-A-Story Test Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Question - Complete Sentences Independent Variables--Treatment and Eligibility					
Eligibility	0.00157768	1	0.1294	0.1294	0.721
Treatment	0.0709668	2	2.9104	2.9104	0.060
Interaction	0.00035075	2	0.0144	0.0144	0.986

TABLE 30.---MSU Experimental Tell-A-Story Test Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Incomplete Sentences: Complete Sentences Independent Variables--Treatment and Eligibility					
Eligibility	0.00188624	1	0.00188624	0.2294	0.635
Treatment	0.04670459	2	0.02335230	2.8398	0.070
Interaction	0.00320382	2	0.00160191	0.1948	0.824

TABLE 31.--MSU Experimental Tell-A-Story Test Analysis of Co-Variance

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Questions - Total Number Independent Variables--Treatment and Eligibility					
Eligibility	39.64282904	1	39.64282904	1.1384	0.292
Treatment	33.87191064	2	16.93595532	0.4863	0.618
Interaction	98.28633713	2	49.14316856	1.4112	0.255

TABLE 32.--MSU Experimental Tell-A-Story Test Analysis of Co-Variance (N-64)

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Quantity - Total Numbers of Words + 10 Independent Variables--Treatment and Eligibility					
Eligibility	6.03442131	1	6.03442131	0.1222	0.728
Treatment	177.50377307	2	88.75188654	1.7974	0.179
Interaction	372.79846758	2	186.39923379	3.7749	0.031

Complete Sentences results shown in Table 33 yielded a significant interaction effect between groups at the .05 level of significance. Sheffe's comparisons evidenced the same phenomenon on this aspect. Disadvantaged mothers in the Developmental and Structured groups tended to use a greater number of complete sentences in telling a story to their children than disadvantaged Mothers in the Placebo group.

Final Hypothesis

In order to ascertain whether there were any differential effects between parent education programs of a developmental nature and those of a structured nature, it was hypothesized that:

There are differences in the level of performance on intellectual, linguistic, and self concept measures between children whose Mothers participate in the Developmental Education Group as compared to those who participate in the Structured Education Group.

All tables have been presented. There were no significant differences in performance between children whose mothers had participated in the Developmental and Structured parent education groups.

Summary of Analysis

It was impossible to reject the null hypothesis for the five hypotheses stated in this study. However, significant differences on various subtests, as previously reported, evidenced support in the direction

TABLE 33.--MSU Experimental Tell-A-Story Test

	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance Level
Dependent Variable--Complete Sentences					
Independent Variables--Treatment and Eligibility					
Eligibility	41.70485348	1	41.70485348	0.8755	0.355
Treatment	69.94237781	2	34.97118890	0.7342	0.486
Interaction	291.39562673	2	145.69781337	3.0587	0.050

of the first four hypotheses. In hypothesis five, subtests presented evidence which failed to support the research hypothesis.

Discussion of Findings

The Illinois Test of Psycholinguistics evidenced no significant differences between treatment groups. Gains in each subtest were obtained across all groups but gains were only slightly higher than expected gains reported in the ITPA Manual Age Norm Tables. There were several possible interpretations of these phenomena. Since there were several significant differences on the verbal subtests of the WPPSI, discrepancy might be found in the tests themselves or in administration of the tests. As stated in Chapter III, testers were not as experienced in administering the ITPA as they were the WPPSI. This led to the possibility that the ITPA testing situation may not have been as reliable.

A second interpretation was that the ITPA is primarily a diagnostic measure. The tests yield a profile of strengths and weaknesses for each child. Treatment then becomes a leveler and differentiated group differences become more uniform, or are not as readily apparent. A non-treatment control group would shed light on this interpretation.

Experience with the test in this study casts a real doubt on the value of the ITPA as a device for measuring effect of treatment on language skills unless treatment

specifically trains for the attainment of each skill. There seems to be evidence for this in the literature. In a critical evaluation by Weener, Barrett and Semmel based on their own studies of the ITPA, a high internal consistency was reported. However, they also reported poor test - retest reliabilities for sub-scales and large standard errors of measurement.¹ Weener, et al. also pointed out that due to a restricted norm group, the ITPA may not have enough easy items to reliably test young disadvantaged children.²

A fourth interpretation, and the only statistical interpretation that can be stated, is that working with children in language education experiences has no differential effect on advantaged or disadvantaged pre-schoolers' language performance as measured by the ITPA.

There was one significant finding in this study on the ITPA that warrants specific attention in light of a recent article by Jensen.³ On the Auditory Sequential subtest, which is essentially a digit span or a serial learning test, disadvantaged children across all groups performed at a significantly higher level (.03) than

¹Paul Weener, Warren, Barrett, and Melvyn Semmel "Critical Evaluation of The Illinois Test of Psycholinguistics," Journal of Exceptional Children, February, 1967, pp. 377.

²Ibid.

³Arthur Jensen, "How Much Can We Boast I.Q. and Scholastic Achievement," Harvard Education Review, XXXIX, 1, 1969.

disadvantaged children. McCarthy and Kirk as well as Weener stated that this subtest has one of the highest reliability co-efficients, and is consistently stable.⁴ In Jensen's article he discussed the literature reporting this same finding among black disadvantaged children and interpreted this in the framework of racial-environmental interaction. The present study showed disadvantaged white children performing significantly better on the digit span task, which suggests the possibility that the explanation may lie in the fact that they are disadvantaged rather than racially different.

The overall total scores on the WPPSI evidenced no significant differences at the (.05) level in intellectual performance due to treatment main effects. However, the fact that Performance IQ subtests revealed no significant differences between treatment groups or eligibility groups, but Verbal subtests were significant on both of these independent variables, indicated an effect of the parent language education program.

Examination of the Analysis of Variance Tables showed that across Verbal subtests of Similarities, Comprehension, and Full Scale IQ there was a consistent finding that children who had participated in a specific language education group performed at a higher level than those children who were in the placebo treatment.

⁴Ibid.

Significant eligibility and interaction effects on the Verbal IQ, Total Information, and Arithmetic subtests all pointed to a common finding: disadvantaged children performed as well as advantaged children when their mothers worked with them at home, but not as well when their mothers did not work with them. This does not mean advantaged children benefit any less from the language training kind of program but may reflect the fact that they have had this kind of attention and direction from their mothers prior to Head Start experience. This is substantiated by the fact that there were consistent significant differences between disadvantaged and advantaged children in the Placebo treatment, advantaged performing at a superior level.

What is it in the Language Education Programs that is unique in relation to the more common Head Start general parent programs? Out of the feelings of respect for and confidence in the parents, which are communicated by the program leader, principals, teachers, and other staff, a sense of greater competency in the role of parent may arise. As parents gain insight into the "what," "how," and "why" of their children's needs and style of learning, they become aware of their critical role as teachers. This knowledge relevant to the parental role, coupled with specific information as to how the child learns and specific techniques to help him learn, may increase the parent's sense of competency as mother

and teacher. A consequence may be that they do a better job. Mothers in the Placebo group acquired some of this same kind of knowledge but because there was no specific direction to work singly and directly with their particular children on a particular task, the teaching competency may not have shown itself as greatly or as specifically.

This leads to the second, and most important aspect of the Language Education Program: the actual interaction between mother and child that occurs when completing the assigned lessons of the two language treatments. Mother meets with the child at a "special time" in a "special place" with "special materials" that are "fun" to use. The child then gleans from the whole situation that he is "special." He is important to mother and performs in a way that will gain her approval, i.e., learn the lesson. Statistical support for this was found in the Brown section of the Self Concept (Total Mother) where there was a significant difference (.02) between groups due to treatment in favor of the Developmental and Structured over the Placebo group. These children seemed to have a more positive perception of their mother's view of them than children in the Placebo group. The other finding on the Brown (Total Self-.05) of interaction alludes to the possibility that disadvantaged mothers need specific guidance and direction to work directly with their children and when they do, their children

have as positive a self concept as advantaged children in their group. However, when there is little specific interaction with Mother, disadvantaged children do not seem to view themselves as positively as advantaged children in their group. This interpretation must be regarded cautiously as the overall data on the self concept measures were erratic and insignificant. This elucidates the perennial problem of research that deals with the young child: the lack of really valid, reliable instruments to test any given aspect of their behavior. Theorists and empiricists extol the importance of self concept in effective human behavior, yet have a difficult time trying to measure it in the adult, let alone the young child.

The overall statistical test of improved Mother-Child interaction did not meet the criterion level of significance. Significant differences on several aspects of both the Hess and Shipman Mother-Child Test and the Experimental Tell-A-Story were in the direction of differentiated treatment effects. One objective that both language education groups stressed was to teach the mothers to ask specific questions and make statements that call the child's attention to specific attributes of any given task. There were statistically significant treatment and eligibility effects on the Total Reference to Specific Attributes aspect of the Mother-Child (.03). Mothers in the Developmental and

Structured Treatments referred to specific attributes to a greater extent than mothers in the Placebo treatment. This indicated that mothers could learn to perform a specific skill in a relatively short period of time (12 weeks) very well. Advantaged mothers implement this skill more often than disadvantaged mothers. This supports Strodbeck's notion of "the hidden curriculum" of the middle class home previously described.

Another interesting significant (.05) finding was on the Mother-Child Verbal Negative Reinforcement aspect. This finding appears, on the surface, to be a contradictory result. The Structured group used significantly more negative reinforcement than the Developmental group. There were no differences between the Structured and the Placebo group mothers. Negative reinforcement was coded on the Mother-Child as such for two kinds of statements:

Mother One states calmly: "No, John, the red block does not go there,"

and

Mother Two states in an irritated manner:

"John, you know that this block doesn't go there!"

Language education programs, especially the Structured Program, emphasized that mothers should call the child's attention to his incorrect as well as correct actions in reference to a given task. This was a form of negative reinforcement, and probably what mothers in

the structured group were doing. However, there was another, and more typical, form that had negative, affective, and less task specific attributes that was also coded as negative reinforcement. This behavior was typical of mothers not exposed to the information gaining aspect of negative reinforcement.

The findings on the Verbal Positive Reinforcement aspect showed that the Structured group mothers used less Positive Verbal Reinforcement than mothers in either the Placebo or the Developmental groups. This presented a problem in interpreting any of the data from the Mother-Child Test. One explanation could be that Structured mothers actually used less positive verbal reinforcement in their Mother-Child interaction. This seemed doubtful due to the fact that verbal positive reinforcement was heavily stressed in the program. The explanation may be related to the Specific Attributes dimension and the task. In other words, because more attention was paid to specific attributes of the task due to specific directions from mother, the children completed the task with fewer errors, hence there were fewer correct responses that would elicit verbal positive reinforcement. This finding was across both the Toy Sort and Puzzle tasks.

The fact that findings were not consistent on a given dimension (for example Reference to Specific Attributes) on both the toy sort and the puzzle task pointed up the difference in the nature of the two tasks,

and weaknesses in the scoring method that may have been the cause for no significance on other dimensions. For example, both examiners on the Mother-Child Test noticed definite differences in the maternal warmth dimension between tasks, between advantaged and disadvantaged mothers, and between treatment groups on the post test, especially disadvantaged mothers (disadvantaged mothers in the language treatment groups showing greater warmth). These differences did not show up in the analysis. Because the toy sort task was very easy for both mother and child, little affect was aroused. This resulted in a greater number of scores on the high warmth end of the scale. The puzzle task was difficult and elicited a wide range of responses, especially from the less than secure disadvantaged mother. The warmth dimension scale ranged from 1-13; from "passionate, consuming, intense, ardent, uncontrolled" to "hostile, rejecting, disliking, blaming, icy." Tester Variability alone with this span of possible judgment could cover up any differences. Also, there was no place to record the typical advantaged middle class mother as consistently observed--anxious, warm, loving but not particularly expressive, or the disadvantaged mother who was particularly expressive in both warm, loving and hostile rejecting ways, depending on task.

More direct kinds of relationships emanated from The Experimental Tell-A-Story Test. For example, the

Developmental Language Education Program provided multiple science, art, music, and literature experiences with suggested concomitant verbal descriptions on the part of the Mother that stressed complexity. The Structured Language Education Program used a variety of materials also, but with specific directions that presented language in simple, concise, syntactic forms. It was encouraging that experimental data evidenced significant difference (.04, .05, .06) between Developmental and Structured Groups on the Index of Syntax and Use of Complete Sentences. The Developmental mothers scored higher than the Structured and Placebo on the Index of Syntax. The Structured mothers scored highest on the Number of Complete Sentences used. Mother's language behavior was affected by the treatment. Yet there seemed to be little difference in language performance between the three groups of children at least as measured by the ITPA. Besides the possible explanations already mentioned for this earlier in the discussion, others are suggested by the Mother-Child Tell A Story Test. Perhaps twelve weeks time is long enough to have an effect on mother's language patterns, but not a sufficient length of time for effects of this particular modification to show up in her child. Frequently new learnings need time to be synthesized and integrated before they can become operationally effective in human

behavior. A follow-up study would shed light on this interpretation.

Finally, the lack of evidence to support a strong advantaged-disadvantaged dichotomy on language items may be supporting the suggested earlier contention that verbal deficits may not be the major problem of disadvantaged children in rural areas.

Anecdotes of Parent, Teacher and Child Reactions to the Experimental Program

Some of the most significant and exciting types of "data" emerging from this project were the qualitative kinds of changes occurring within the realm of interpersonal relationships. While it was difficult to report these kinds of changes in terms of measurable data, observation and interaction with project personnel and parents left little doubt that real changes in attitudes and behaviors have occurred. The evidence was in terms of experimenter-observed behavior, principal, teacher, parent, and student reports; and specific interaction. These specific instances of progressive change in behavior fall into the following general categories:

Improved Principal-Teacher-Parent-School
communication

Improved Principal-Teacher communication
and interaction

Improved Teacher-Teacher communication

Improved Parent-Parent interaction

Improved Parent-Child interaction.

Principal-School-Parent Communication

Two principals reported specific instances of mothers, who had previously avoided any kind of parent-school communication, coming to the school and approaching both him and the child's Head Start teacher. The mothers said they were afraid to come to school when some of their older children had problems. However, since becoming involved in the pre-school program they realized "The people were trying to help our kids."⁵

One family's sixth grade child was reading at the third grade level and previous efforts to involve the parents in remedial approaches were unsuccessful until this mother became involved in the parent pre-school meetings. After meeting with other parents and her youngest child's teacher for several weeks, she came to the school and asked the principal to help her with her older child's problems. Real progress has been made in the form of diagnostic testing, Michigan State University Reading Clinic Consultation, and specific materials and techniques given to the parents to assist their child at home.

In another community a mother who is expecting her seventeenth child (no husband in the home for the last

⁵This statement is a verbatim quote, in context, of one of the mothers.

five years) came to the school to get the teaching materials to use with the children. She was not yet confident enough to attend the parent meetings, but did make the effort to come to the school (which she had never done before) to pick up the materials and to talk to her child's teachers. Insignificant as this may seem compared to some mothers who attended every meeting, this was seen as a tremendous step in the right direction for this mother.

The principal in Elkton became so interested in the parent meetings that he took time to "sit in" as an observer, thus reinforcing the notion of the principal's real interest and concern for all members of his school community.

Principal-Teacher and Teacher-Teacher Communication

The principals in each community enjoyed fine relationships with their teachers. However, each one has had individual difficulties with given teachers centering around such areas as trying new curriculum, the emphasis and funds focused on the pre-school program, teachers working together, and testing and evaluation. The principals reported that as a result of the interaction with evaluation personnel and Michigan State University resource people and increased teacher-teacher communication, teachers throughout the grade school were becoming more receptive to principal-initiated comments and suggestions.

There were some very specific instances that suggested real change in teacher-teacher kinds of communication. Previously in all schools the interaction between kindergarten and pre-school teacher was at a minimum. In one school the atmosphere was absolutely hostile. However, through continued efforts by the principal, M.S.U. co-ordinator, and pre-school teachers to make this kindergarten teacher feel that she was a key person in the continuing development of the pre-school child, real change in her behavior seemed to be emerging. This was evidenced by the fact that the kindergarten teacher approached the pre-school teacher and invited her to get together to discuss the specific needs of the children and to sit in on some of her parent conferences. One almost has "to be there" to receive the full impact of the changes involved in this near-impossible situation.

The MSU co-ordinator called a voluntary after-school meeting for her principals and pre-school and kindergarten teachers and aides of all three schools. They held a stimulating discussion of the myriad of challenges and problems involved in their early childhood education programs. Specific responsibilities were taken by each person to plan a meeting for parents centered around the topic "Preparing Your Child for Kindergarten." They decided they would like to meet again to continue this but hoped it would not stop there. They suggested monthly

meetings at which time methods, curriculum and specific problems could be discussed and acted upon programmatically.

Participation of mothers across all groups was excellent. Table 34 shows attendance figures in all groups based on eighteen mothers in each group. One group had seventeen mothers, as there was one set of twins. There were 6 mothers out of the 72 Sample mothers who did not regularly attend the parent meetings.

Factors confounding attendance such as weather conditions, seasonal illness, and a flu epidemic undoubtedly had a toll on the mothers' attendance. Under these impending conditions, attendance was excellent.

It was not surprising that the best attendance records were in the three groups that had the more warm, empathetic teachers, and that the majority of attrition in the study (5 of 8 children) occurred in the class that had the cool, distant, demanding teacher.

Enthusiasm in all groups was high. Mothers seemed to enjoy the group meetings and verbalized their desire to continue such activities after the training program. They willingly shared their experiences in using the materials within the group. It was felt that positive relationships and greater understanding among the mothers generated through their interaction in the meetings.

The children's reactions to the program were perhaps the most difficult to assess, yet, undoubtedly,

TABLE 34.--Mother's Attendance (N-107)

Meeting Number	Structured Elkton 1 N=18	Developmental Elkton 2 N=18	Placebo Elkton 3 N=18	Structured Pigeon 1 N=18	Developmental Pigeon 2 N=17	Placebo Bay Port N=18
1	8	3	6	2	13	13
2	5	10	10	10	15	10
3	7	8	10	14	15	10
4	13	11	10	12	16	6
5	10	11	11	15	13	4
6	11	12	11	10	13	7
7	10	12	8	12	12	7
8	8	13	8	10	13	13
9	8	11	10	7	11	9
10	12	11	12	12	12	11
11	6	10	10	10	12	12
12	16	11	13	7	12	12

the most important. Many children expressed pride and pleasure over the fact that their mothers had (some for the first time) "come to school." The children in the experimental groups discussed materials in the classroom and with the teachers. Mothers reported that the children continually pressured them to work on the materials and attend the meetings.

Parent-Parent Communication

One parent commented, "I like coming to these meetings because I relax and don't have to worry about what everyone is going to think."

Another mother stated, "Even if we didn't make all these things I would still come to these meetings. It's good just to talk."

A mother with seven children and no father in the home told the teacher, "One of the best things about these here meetings is that we get a chance to visit with each other."

"Even if I didn't learn anything to pass on to David, the meeting would be worth it just to have someone to talk to with similar interest," stated one mother after a very enthusiastic meeting spent making and learning how to use puppets.

This enthusiasm concerning the value of shared ideas in the form of parent interaction, and the difference it can make in people's lives, is probably best indicated in the following example.

In the workshop group at Elkton there were two families the researchers just had not been able to reach. In the one situation the father was a semi-truck driver and the mother drove a school bus. Legitimate schedule and personal demands were the excuses given for not attending. In the other family the mother was painfully shy, and even after a special home visit by the teacher with an offer to pick her up, the response was still "I just don't like them meetings." On March 18, the meeting was on "The Role of the Father" and both parents were encouraged to attend. The truck driver and his wife were there for the first time (though the father had to drive his semi unit to Indiana later that night). The shy mother came with her husband. Upon signing a name sheet her hand shook so badly she could barely write. Afterward, during the coffee and discussion, they were gradually brought into the group. They were not extremely verbal themselves but it was obvious to those around them that the other parents were making these two couples feel welcome. Hopefully, they did indeed feel that the school can be a friendly place and will want to come again.

There were countless examples of mothers baby-sitting for other mothers so they might attend a meeting and mothers going to another's house to help dress one of many children so they might all attend the meeting. (Children are cared for in another room.)

In one of the developmental treatment groups one mother attended the first three meetings and sat off to the side of the group. At the fourth meeting, during a puppet making session, she evidenced superior creative skills. The teacher recognized this immediately and asked this mother to direct the construction of the stage. The mother became completely involved, seemed to forget some of her inhibitions, and literally became part of the group that evening. For the first time that evening she stayed after the meeting was over to visit with one of the other mothers.

The importance of this parent-parent interaction is very evident from this teacher-reported incident. One mother had five children and a husband who had recently deserted family and business for a younger woman. They own a local business and her initial reaction was that she was above all this. However, another mother brought her to a meeting where she sat and observed. The following meeting involved a cooking routine as a medium for increasing language skills. As the teacher was demonstrating the teaching potentiality involved in making applesauce with young children the mother stated, "You're not going to put the sugar in now, are you?" "No, I don't think I am by the sound of your voice," the teacher replied jokingly. The mother began making suggestions and comments based on her broad restaurant cooking experience. The other mothers were impressed and

supporting. The mother must have been impressed because for the next meeting her son had the car, she had to walk, it was Rotary night and she was short of help at work, it was also her birthday and she postponed the family party until after 9:00 p.m. so she could attend the meeting.

Parent-Child Interaction

There were numerous examples that mothers were spending the time with their children on the activities.

Mothers filled out weekly activity sheets that reported amount of time spent and comments or suggestions.

A mother reported, "I never used to read to my children." However, since attending the parent meeting where they exchanged books weekly, "D. will not go to sleep without a story."

Another mother stated, "I've got so much outa these meetings. I used to wap my kids all the time. W. was naughty last night. My husband says, 'Aren't you going to wap him?' I says 'No, I'm not.'" I learned at these meetings it don't do no good to wap em all the time. So I jes put him in his room. I sure wish my husband would come to these meetings." (The Head Start teacher reported that W. is less hostile and aggressive in the classroom situation).

A girl reported in class, "Momma and I made these cookies (part of a cooking lesson), but Daddy and I didn't like them."

One child shared with his class the news of a puppet show he and his sister made up, and that his mom made the puppets just for them.

One mother reported that her little girl told her she didn't want her to miss a meeting because she wouldn't get the "special toy" to play with, (the materials mothers made at the meeting for use at home).

Summary

This sample of individual reactions and behaviors with regard to the program is typical and accurate. All quotes are verbatim from notes recorded by the writer. It has been an attempt to gather accurate accounts of important behavioral "vignettes" that are so often lost in the psycho-social measurement-based research models employed to evaluate the program. The spuriousness and lack of objective rigor in these kinds of "evaluators" is not questioned but it was felt that some attitudinal and behavioral change aspects of the situation were difficult to capture in any other way.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS FOR RESEARCH

Summary

The general purpose of this study was to help mothers of advantaged and disadvantaged rural white children work more effectively with their preschool children. Specifically, the study was designed to ascertain the effects of differentiated short term parent training as reflected in the intellectual, linguistic, and self concept performance of their children as measured by testing instruments.

Review of the research indicated the critical importance of early experience (primarily that experience provided by the family) for the child's developing intelligence, language abilities, and self concept. These factors are closely related to later success in the school setting.

In terms of school achievement, longitudinal studies supported the "cumulative deficit" hypothesis. That is, as the socially disadvantaged child moves through the school system his achievement pattern is one of deceleration.

Descriptions of intervention programs are reported throughout the literature. Rationales for the programs evidence considerable groping and searching for new procedures, materials, and techniques to use with the children. However, there is increasing interest in parent education programs that would enhance home-school communication and cooperation. Finally, research implies that child development education programs with an emphasis on language activities may be most beneficial.

One hundred eight children and their parents participated in the parent education program for twelve weeks from January 6 to March 28, 1969. Seventy-two rural white advantaged and disadvantaged Head Start children in six experimental Head Start classes and their parents were randomly selected for the sample. The six classes were randomly paired to obtain samples consistent with the proportion of advantaged and disadvantaged children in the total population. The pairs of classes were assigned to three treatment groups: the Developmental Language Treatment; the Structured Language Treatment; and the Workshop or Placebo Treatment.

Each group of mothers met in twelve weekly two-hour sessions with their children's teacher. The general atmosphere was conceived to be one of parents and teachers working together to attain the goals and objectives of each program. Training and instructions to the teachers for each week's program were provided each

Monday by the investigator. At these weekly orientations the trainer went over specifically prepared objectives, materials, and lessons with each pair of teachers. Each teacher met with the trainer each Friday for an evaluation of that week's program in terms of attendance, problems, and suggestions. The professional person involved in training was constant across all training groups in an attempt to minimize effects of trainer variability. Follow-up home visits were used to provide materials and directions to mothers unable to attend meetings. Other mothers came to the school for makeup lessons. Teachers refrained from direct use of materials developed for the training program in their own classroom programs.

Five testing instruments were used to test the intellectual, linguistic, self concept, and mother-child interaction performances. They were: (1) The Wechsler Preschool and Primary Scale of Intelligence, Record Form 1967, (2) The Illinois Test of Psycholinguistic Abilities, Revised Record Form, 1968, (3) MSU Self-Social Constructs Test, (4) The Hess and Shipman Mother-Child Interaction Tests, and (5) MSU Experimental Tell-A-Story Test. Tests were administered in October and again in April. These data were used to test the hypotheses of the study.

The major hypotheses predicted improved: (1) language performance; (2) intellectual performance; (3) self concept development; and (4) mother-child

interaction as a result of a differentiated parent education language program.

These hypotheses were tested by employing the following procedures: Variables were submitted to a 2 x 3 analysis of co-variance model with eligibility and treatment as independent variables. In this procedure, the post-test of each dependent variable was analyzed by analysis of co-variance, with the appropriate pre-test serving as a co-variate for the post-test. This procedure sets the initial group differences equal to zero in terms of post-test interpretations. The resulting analysis reflects the relative change of each group one to another. This does not allow a test for significant pre-to-post gains across all groups. Therefore, group pre- to post- mean scores were subtracted to obtain gain scores.

It was impossible to reject the null hypothesis for the five hypotheses stated in this study. However, treatment main effects on the Full Scale IQ reached the .08 level, and significant differences (.001 to .05) on various subtests across instruments as previously reported evidenced support in the direction of the first four alternate hypotheses, i.e., improved performance. In hypothesis five, subtests presented unequivocal evidence to support the null rather than the alternate hypothesis. That is, there were no significant

differences in performance between the children in the Developmental Treatment Group and the Structured Treatment Group.

Conclusions

The levels of statistical significance for the individual segments of analysis do not permit unequivocal acceptance of the research hypotheses. However, the combined strength and systematic tendencies of the dependent variables suggest a number of conclusions:

1. Parent education programs that emphasize language techniques and specific interaction between mother and child in the home seem to be an effective approach for encouraging positive modification of behavior.
2. The more general workshop approach which treated only the mothers with no specific directions, materials, and techniques for home interaction with the child was not as effective in modifying the child's performance.
3. In this population, it would appear that specific verbal skills can be improved by maternal teaching situations which emphasize language.
4. There was evidence in this study to suggest that children whose parents interact early,

personally, and specifically with their children, have a more positive perception of their mother's view of them. With disadvantaged children, this interaction tended to result in a more positive self concept.

5. When interacting with their children, mothers who had experience in language education programs increased in the type of skills most heavily emphasized in their particular educational lessons.
6. Disadvantaged children in this study performed as well as advantaged children when their mothers worked with them at home.
7. Disadvantaged children in this rural area performed at a higher level in testing situations than did disadvantaged children in urban areas commonly reported in the literature.

Implications

The recent focus on the problems of the non-achieving segment of our society has emphasized the importance of learning for the child in the years before six. These are the years when every child, advantaged or disadvantaged, is influenced in the most concentrated fashion by his family. It is logical that this fact

should be considered by educational planners, and attempts made to draw the family into the child's educational experiences.

Planning Programs

Many parents, not only culturally different parents, feel a certain sense of helplessness when "Johnny" goes off to school. The educational process is viewed as an experience beyond their control, and to be left to the "experts." This situation implies a strong need for meaningful parent education programs. When combined with a meaningful preschool education program for the child, there could be long-lasting results. If a parent understands the needs of his child, sees himself and his child as important, places high value on educational processes (formal and informal) and participates in these processes, the potentialities of his child in the school, but more importantly, in all human interaction, become enhanced. The essence of meaningfulness in this Parent Education study has been participation. Typical parent education programs that involve the parent only in a passive, absorbing fashion, rather than an active, creative, contributing, fashion, do not seem to be the most effective approach.

This study implies that successful parent education programs are those that are characterized by the following:

1. Feelings of respect for and confidence in parents are communicated by all personnel involved in the program.
2. Parents are involved in the decision-making as much as possible. Competent personnel establish rapport that allows for this in group discussion, planning, and role playing.
3. Parent groups of 15-25 are too large for effective interaction. This implies the need for small group interaction.

The atmosphere should be informal and supportive for developing social relationships.
4. Concurrent home visits by teachers or other interested people are important, especially for the culturally different family. This gives the teacher a chance to positively reinforce the parent's effort in the home and give special attention to particular problems.
5. Mothers will participate without remuneration, but attention to transportation and babysitting problems enhance attendance.
6. Programs have specific content that meet two general objectives. Specific objectives should meet the agreed upon needs

of parents and children of a particular community in a particular social setting.

a. General Objectives

- (1) To provide educational experiences for parents that extend their awareness of importance of the early years to cognitive, social-emotional, and physical growth.

b. Specific Objectives

- (1) The specific objectives of this parent education program are compiled in a separate report available at the MSU Head Start Research and Evaluation Center.

Finally, through active, participating preschool involvement, parents may develop a "positive style of encounter" with the school situation that may extend into later public school experiences of their children. Perhaps this kind of program can invalidate the "cumulative deficit hypothesis."

Training Personnel

Emphasis on parent education implies a need for well-educated personnel to carry out these programs. Knowledge of early learning patterns, characteristics of small group interaction, sub-cultural differences, and materials and techniques for teaching are critical

to effective administration and processing involved in a meaningful parent education program.

Further Research

Further research is needed on the cooperating roles of home and school, on materials and techniques, and on instruments that will assist in the evaluation of parent programs.

The ideal design would have three groups: mothers and children treated in an active participating fashion, mothers and children treated in the passive fashion, and mothers and children that are not treated at all. The difficulty of remaining scientifically "pure" is a characteristic of much field research. How does one justify ignoring a particular group of eligible human beings in a community?

Improvement is needed in measuring devices that correct floor and ceiling effects. Greater use should be made of spontaneous speech samples of mothers and children. Observation in the home setting is necessary. More effective techniques are necessary to evaluate change in parental attitudes and child rearing practices.

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APPENDICES

APPENDIX A

TEST REFERENCES

TEST REFERENCES

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Brown, Robert, IDS Self Concept Reference Test, Published Research Report (mimeograph) no copyright, Institute for Developmental Studies, New York Medical College, 1966.

Hess, Robert B. and Shipman, Virginia, Mother-Child Interaction on Toy Sorting and Puzzle Tests. Published Research Report, (mimeograph) no copyright, University of Chicago Headstart Center, 1966.

Toy Sorting Task - Post Test Teaching Performance
Affectionateness - Rating Scale for Maternal
Affectionateness
Child Cooperation - Rating Scale for the Child's
Cooperation
Mother-Child Interaction on Puzzle Task
(Score Sheet) MSU

Experimental Tell-A-Story from Ginn Basic Readers Workbook, Fun with Betty and Tom, (Boston: Ginn and Co., 1964)

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APPENDIX B

INSTRUMENTS

Name of Measure: Hess and Shipman Toy Sorting Task

Variables Measured: Maternal Teaching style: information-processing (use of feedback, orienting, specificity of question); encouragement of verbalization (e.g., use of commands vs. questions); reinforcement strategies (relative use of affirmation and negation, praise, criticism). Child: cooperation; spontaneous verbalization; classification ability.*

Mother
X

<u>Data Collection Method:</u>	<u> </u> Group Test	<u> </u> Interview
	<u> X </u> Individual Test	<u> X </u> Observation

Estimated Administration Time (min.): 10-30 minutes (modal, 15 minutes)

Brief Statement of Procedure: Following a standardized instruction period for the mother conducted by E, the mother is observed attempting to teach her child to divide a group of toys into 3 groups by the criteria of kind (cars, spoons, and chairs) and of color (red, yellow, green) and to explain the reasons for these groupings. The mother is encouraged to use any method she desires and to manipulate the toys as she wishes. She is encouraged to take as much time as she wants, continuing to teach until satisfied with the child's learning. Upon concluding her teaching, she is to summon E who will test the child's knowledge of the task. The test will be a repetition of the task, but the mother will no longer be allowed to assist the child in any way. Mother and child speech will be recorded. E will unobtrusively observe the interaction, tallying certain variables on the spot

Minimum Requirements for the Administrator-Observer:

Female; college level ability; specifically
ability to: Give standardized instructions
 Establish rapport with adult
 & child
 Learn a coding procedure
 requiring careful observation

while rating others immediately afterwards. The child's test performance will yield placement and verbalization scores. At the beginning and end of the interaction period (with child absent) the mother will be asked to assess how well the child will do, and did do, compared to his age group.

Supporting Statement: (See rationale for Eight-Block-Sorting task.) The major purpose of this task is to give the subjects a general acclimation to sorting tasks and to allow the mother to establish a routine in her functioning as teacher. In addition, however, it enables differentiation in the mother's teaching style when she is given a task that might be considered "natural" to her as it requires responses closely identified as school-relevant behaviors.

*Cross-reference--Mother: linguistic variables; individuation; motivation (e.g., persistence).
Child: social motives; impulsivity; distractability; anxiety; response to frustration.

Experimental Tell-A-Story

Child's Name _____
Class _____
School _____

I. Number of words

Number of Words	Picture #1	_____
Number of Words	Picture #2	_____
Number of Words	Picture #3	_____

Total _____

II. Total lines of typescript _____

III. Syntax Structure

a. Coordinate Clauses (CC)	_____
b. Subordinate Clauses (SC)	_____
c. Infinitive Phrases (I)	_____
d. Noun Clauses (NC)	_____
e. Participial Phrase (PP)	_____
f. Number of Modifiers (M)	_____

SYNTAX INDEX

IV. Number of Questions Asked

Picture #1	_____
Picture #2	_____
Picture #3	_____

V. Number of Sentences

Complete Sentences

#1	_____
#2	_____
#3	_____

Total _____

Incomplete Sentences

#1	_____
#2	_____
#3	_____

Total _____

Brown IDS Self Concept Reference Test

Instructions to Subjects and Administration Procedures

Prior to photographing S the following standard instruction should be given by E:

"Well now, we're going to take a picture of you. Get ready...When I count to three I'll snap your picture. Are you ready now? 1, 2, 3..."

(Notice that no instruction to "smile" etc. has been included. This is purposefully left ambiguous in order to obtain a spontaneous facial expression, and is especially important since giving this instruction would clearly bias responses to the happy-sad item.)

After the exposure has been made, E waits fifteen seconds, then pulls the developed print from the developer compartment of the camera. During this time interval, E may speak with S to establish rapport. After fifteen seconds, E says to S:

"Well look at that (pointing to print). That's a picture of you. That's a picture of (child's name). Isn't this a nice picture of (child's name). This is really you because you are (child's name) and there you are in the picture."

(E points to S's image in the photograph.)

To ascertain the effectiveness of the instruction, E then asks S:

"Can you tell me who that is in the picture?"

(E must obtain a response indicating that S knows that it is he in the photograph; either "That's me," or child states his own name or simply points to himself. If S does not recognize himself in the picture E repeats induction above. E must obtain a statement from S indicating that he recognizes himself in the picture before proceeding further.)

E seats S at a table suitable in height and size for a young child, and places the photograph on the table top, directly forward of S and beneath his head in about the same position as a dinner plate is usually placed. Since the recently developed print will tend to curl, it will be useful to use two small pieces of tape at the top and bottom edges of the print, fastening it to the surface of the table. E should seat himself directly opposite S at the table and then say the following:

"Now I'd like to ask you a few questions about (child's name)."

E then points to the picture, placing his own finger on it and proceeds to ask the set of questions in the context of the "self" referent. E must restate the introductory stem before asking each question and must point to the photograph each time he asks a question.

"Now can you tell me, is (child's name) happy or is he sad?"

E proceeds through all items in the "self" referent in this manner. It is important that E explicitly point to the picture before asking each question, thereby repeatedly directing S's gaze and attention to it. It is also important to continually restate the question stem in the objective case: "Is (child's name)...happy or is he sad?" This procedure establishes a set in which the child is induced to "stand back from himself," and to gain a perspective of himself as an "object" in the photograph. This should also assist S to assume the role of another toward himself.

After responding to all items on the "self" referent, the "mother" referent is introduced by E:

"Now that was very good (child's first name). I'd like to ask you a few more questions. This time I'd like to ask you a few questions about (child's name) mother. Can you tell me...Does (child's name) mother think that (child's name) is happy or sad?"

E proceeds through the entire set of items in the "mother" referent context. Again, E must point to the photograph and repeat the appropriate stem before asking each question. The fourteen items asked under the "mother" referent are identical to those asked under all other referents. Only the referent itself is to be varied.

At this point, S will have completed two referent scales. The "self" referent scale, and in the case illustrated above, the "mother" referent. Total administration time for these two referents, including time spent in taking the picture, should run to approximately 15 minutes. Since there is a problem of limited attention span among young children we have found it useful to stop at this point.

Woolner Preschool Self Concept Picture Test

Administration and Scoring

In the testing situation, each subject is examined individually. After establishing rapport with the subject, the examiner states, "____ (child's name), we are going to play a game. We are going to pretend, to play-like, you are the ____ (boy or girl) in the striped shirt ____ (pants or dress) in the pictures I show you. I will ask you two questions. You point to the picture that answers each question. You may choose either picture you want. Do you understand the game? Do you know how we are going to play the game?" If further explanation is needed it should be given.

When the examiner is satisfied that the subject understands the directions, he or she should show the child Plate 1 and ask, "Which boy (girl) are you? This one or that one?" (Pointing to the picture A and then to picture B on Plate 1). After the child has responded by pointing to a picture, the second question should be asked, "Which boy (girl) would you like to be?" Each time pointing to picture A and then to picture B. Record the child's responses on a prepared answer sheet. Follow same procedure with subsequent plates. The plates are shown in sequence; e.g., Plate 1, then Plate 2, then Plate 3, and so on until responses are recorded for each plate. Although the test is not a timed one, the average time for administering is fifteen minutes. Answers to the first question represented the child's self-concept, who he is; answers to the second question represented his ideal self-concept, who he would like to be. Discrepancies between these concepts reflected incongruence between self- and ideal self-concept, dissatisfaction with self. The greater the percentage of agreement the greater the degree of satisfaction the child has with himself.

This test provides the following data:

1. The attitudes children have toward themselves--their self concepts.
2. The image children have of who they would like to be--their ideal self-concept.
3. The attitudes or personal characteristics children would like to alter--incongruency between self- and ideal self-concept.

APPENDIX C

SAMPLE LESSONS FOR PLACEBO TREATMENTS

Suggested Parent Discussion Topics
And Methods For Workshops

1. The Head Start Daily Activities Program
2. The Early Childhood Education Curriculum
3. Guides and Techniques for Working with Children
4. How to be a Member of a group; a Group Leader
5. Growth characteristics of Pre-School child--ages and Stages--Personality Development--Individuality
6. How to and why observe children
7. Understanding Ourselves
8. Children's literature--Storytelling
9. Music for Children
10. Physical Fitness and Keeping Healthy
11. Language Development--Speech Problems
12. Values of Play--Understanding Play
13. Discipline: Punishment and guidance
14. A wise choice of books, toys, magazines, records
15. Special Problems:
 thumb sucking, bed-wetting, eating, sleeping, etc.
16. Sibling Rivalry, Family Relationships
17. Children's Emotions: Anger, Fear, Jealousy
18. Shyness
19. Health and Safety--The Sick Child
20. Nutrition
21. Budgeting, Family Finance
22. Developing Responsibilities, Chores, etc.
23. Neighborhood and Community Resources & Problems
24. Current Issues: Community, local, state, national
 and international
25. Fathers Role
26. Preparing Your Child for Kindergarten

Workshop III - Nutrition

Food is Good

Objectives

To learn which foods need to be eaten regularly,
to foster optimum growth and health.

To learn new ways of preparing inexpensive foods
that are nutritious, attractive and easy to
prepare.

To learn the relationship between good habits
of sleep, rest, play and their effect on the
enjoyment of good foods and the amounts which
are eaten.

To learn that long term nutrition is necessary to successful parenthood and good adult health.

Nutrition - Handouts

Extension Bulletins:

No. 613 Changing Food Habits
 E-26 Nutrition for You
 500 Counting Calories
 Bone-Up on Meat
 Follow the Food Guide Every Day
 Food Record
 Recipes
 Religious Influence

Mothers met with County Home Economics Extension Agent. She discussed appropriate eating habits, nutrition, food budget problems, and meal-planning. The second half of the meeting was spent in preparing a meal. Children joined their mothers for the meal.

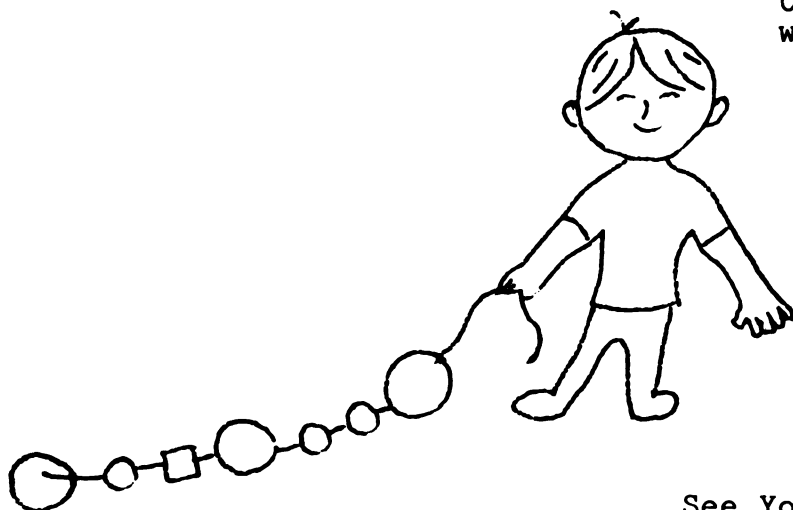
PARENT PROGRAM
 Thursday, February 20, 1969

TOPIC

"Guiding The Young Child"

Dr. Vera Borosage, Dept.
 Child Department, M.S.U.
 will join us.

Enjoy:
 Excitement
 Humor
 New Learnings



See You There - Bring a Friend

Fathers Welcome!

Time _____

PARENT PROGRAM

Guiding the Young Child

Dr. Vera Borosage

Objectives

- To provide some general principles to consider when disciplining children:
 - Preservation of child and adults self respect
 - Acceptance of feelings
 - Purposes of guidance
- To educate the parent in the value of limits:
 - Prevention of bodily harm
 - For health and well-being
 - For social awareness
 - For a feeling of security
 - To give the child alternatives
- To educate parent in terms of positive approaches for setting limits:
 - Through speech
 - Through action
 - Through reasoning

GUIDANCE AND DISCIPLINE

- I. What do we mean by Guidance and Discipline.
- II. Types of guidance.
- III. Guidance in the nursery school implies:
 - A. Understanding the purposes of guidance
 - B. Knowing how children grow to learn
 - C. Being aware of some factors that may cause undesirable behavior
 - D. Being flexible
- IV. Implementing guidance through:
 - A. Physical setting
 - B. Balance between sharing experience with and directing the child
 - C. Adult's example
 - D. Adult's acceptance:
 - of personal feelings
 - of child's feelings
 - E. Positive approach in setting limits:
 - through speech
 - through action
 - through reasoning
 - F. Preparing the child for changes that will occur.

VI. Limits needed

1. To prevent bodily harm
2. For health and well-being
3. For social awareness
4. For a feeling of security
5. To give a child alternatives

VII. How learning takes place:

1. Child behaves
2. Adult acts
3. Child responds
4. Child learns

Therefore:

- B. When taking action
 1. Accept feelings of child
 2. Set necessary limits
 3. Provide some release
 4. Encourage and support the child

APPENDIX D

SAMPLE LESSONS FOR

STRUCTURED TREATMENTS

Structured Group - Lesson II

Objectives

To summarize many ways in which parents teach.
To analyze a teaching situation (message, motivation, feedback).
To establish an atmosphere of learning together, parents and teachers.
To have parents practice teaching each other.

Techniques

Helping Headstart, Parent Teaching by Jean Fargo - Univ. of Hawaii 16 mm film.
Presentation of elements of effective teaching.
Demonstration of parent teaching a child.
Role-playing of similar situations by the parents.

Content

Summary of the many ways parents teach.
Elements affecting success of teaching

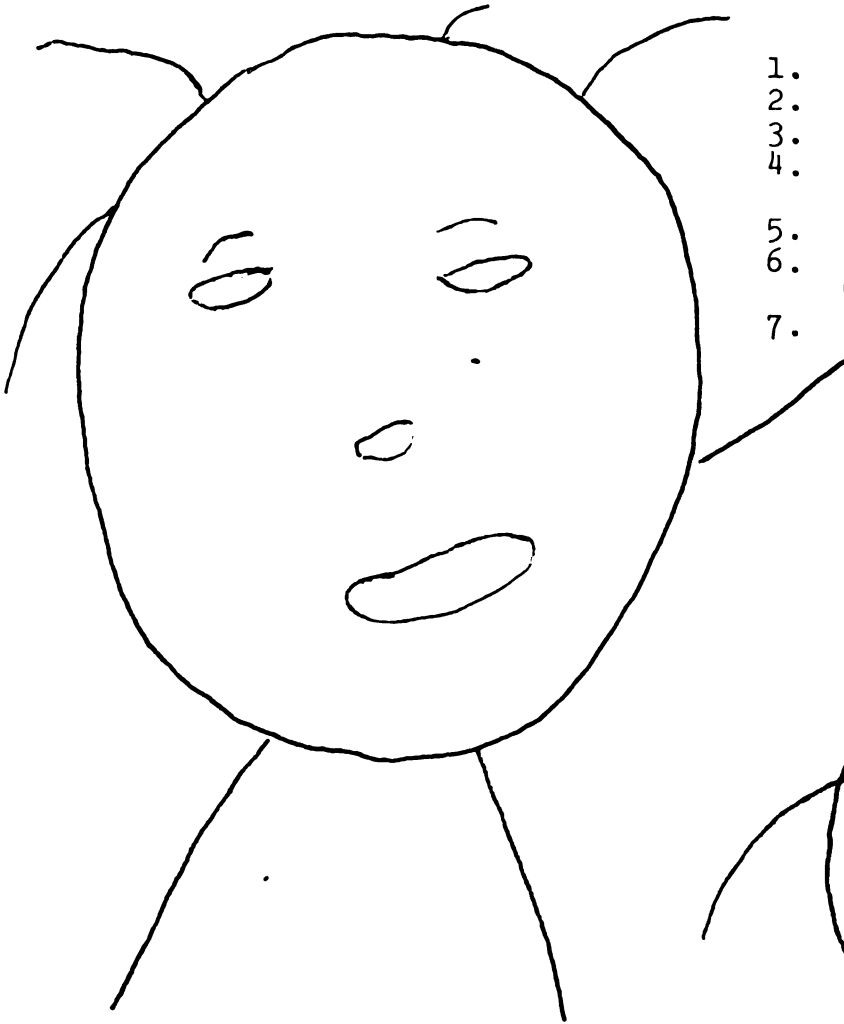
1. Attention
2. Explanation of the whole task
3. Use of elaborate code so all necessary details are included in the message.
4. Motivation (Getting the child to complete the task he has started.)
5. Feedback (Allowing ample opportunity for the child to question and then altering procedures as indicated.)
6. Praise (Use at the completion of a task as well as during the task. It is important the child realize what specific behavior he is being rewarded for.)

Role-Playing

The teacher plays the mother and her aid the child. Their performance is deliberately not a perfect example of good teaching. Parents are then encouraged to evaluate this teaching situation and role play their own "situations."

MESSAGE

1. NAME OBJECTS
2. TELL WHAT THEY ARE NOT
3. GIVE COLOR, SHAPE AND SIZE
4. GIVE GROUP TO WHICH IT BELONGS
5. GIVE IT'S LOCATION
6. GIVE HOW IT SMELLS, FEELS, TASTES, OR SOUNDS
7. GIVE IT'S FUNCTION OR USE



SENDER- MOTHER

RECEIVER- CHILD

1. GET THE CHILD'S ATTENTION
2. EXPLAIN THE WHOLE TASK
3. GIVE ALL THE NECESSARY DETAILS IN THE MESSAGE
4. GET THE CHILD TO START AND CONTINUE THE TASK
5. GIVE THE CHILD A CHANCE TO ASK QUESTIONS AND CHANGE TEACHING IF NEEDED
6. GIVE THE CHILD A CHANCE TO PRACTICE
7. PRAISE THE CHILD UPON COMPLETION OF THE TASK, SO HE WILL WANT TO DO IT AGAIN.

1. Using Books With Our Children
 Look at the pictures.
 Name the objects, actions, or events.
 React to picture in a physical way, such as
 eating the ice-cream or patting the dog.
 Encourage a dialogue concerning the pictures.
 Have the child repeat a line after you.
2. Practice in Labelling
 That is attaching the right word to things in the
 world around him.
3. Practice in describing objects and events.
4. Practice in simple counting.

Sample Interaction

Parent (pointing to a picture): "What is this, Tom?"

Child: "This is an airplane."

Parent: "Can you tell me something about the
 airplane?" (If no answer, the parents should
 be more specific in his questioning.)

Parent: "Is the airplane big or small? Is the
 airplane fast or slow?" etc.

Structured Group IV

Objectives

1. To continue the emphasis on the value of parent teaching.
2. To provide the mothers with sufficient time to discuss any specific difficulties they might be having in using the material.
3. To provide review experiences for teaching the "What is this not concept."
4. To assist parents in the construction of the "Go Fishing Game": that emphasizes labelling and discrimination of colors, objects and categories.

Game: Go Fish

Contents:

Samples of 6 fish

Additional material needed: 1 fishing pole about
 2" long, string, magnet on end of string.

Rules for Go Fish

The game may be played in many ways depending on
 what the particular lesson objective is. The

children can fish for those having the same color, same number of objects pictured, same category, or any combination of these criteria.

Materials needed for construction

colored construction paper
pictures of small objects or crayons to draw objects
paste
scissors
paper clips
fishing pole stick
string
magnet

Rationale: Use to discriminate colors, objects, and categories

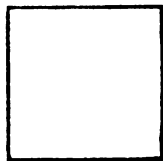
Ask the child to fish for all the orange fish or all the fish that have pictures about animals, or vehicles, or all the fish that have pictures of 2 objects, or all the red fish that have animals on them. Ask the child to identify the fish he has caught. "I have blue fish" or "I have 5 fish with animal pictures."

Make 5 red, 5 orange, 5 blue, 5 yellow, 5 green, 5 purple fish

Put pictures of animals on red
furniture on orange
food on blue
clothes on yellow
toys on green
vehicles on purple

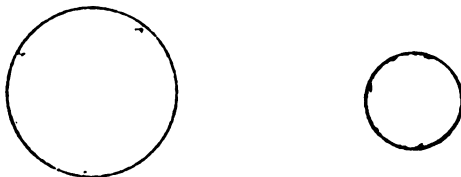
On several of the fish put 2 or 3 pictures on them.

Review "What is this Not"

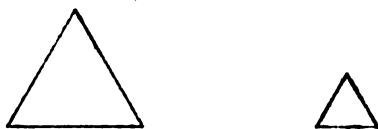


Mother: "This square is not big" (mother colors in little square) "Say it"
Child: ("This square is not big.)
Mother: "Is this square big? No this square is not big. Is this square big?"
Child: ("No, this square is not big")
Mother: "This square is not what?"
Child: ("This square is not big.")

Mother: "What is this square not?"
 Child: ("This square is not big.")



Mother: "This is a circle. Say it - - ." (Color in big one)
 Child: ("This is a circle")
 Mother: "Is this circle big?"
 Child: ("Yes, this circle is big.")
 Mother: "This circle is what?"
 Child: ("This circle is big.")
 Mother: "Which circle is big?"
 Child: ("This circle is big.")
 Mother: ("Tell me about this circle.")
 Child: ("This circle is big.")



Mother: "This triangle is not big." (Color in small one.)
 "Say it!"
 Child: ("This triangle is not big.")
 Mother: "Is this triangle big?"
 Child: ("NO this triangle is not big.")
 Mother: "This triangle is not what?"
 Child: ("This triangle is not big.")
 Mother: "Which triangle is not big?"
 Child: ("This triangle is not big.")
 Mother: "Tell me about this triangle."
 Child: ("This triangle is not big.")

Continue using Candy-Land books and other lessons.

APPENDIX E

SAMPLE LESSONS FOR

DEVELOPMENTAL TREATMENTS

DEVELOPMENTAL II

Books

Objectives

- To continue to provide a cooperative atmosphere for learning together--parent and teacher.
- To emphasize the importance of experiences with books and stories for the young child
 - a. through increased curiosity and interest in books.
 - b. through increasing perceptual, conceptual language development.
 - c. through enjoyment and broadening of the range of the child's general knowledge
- To help parents understand their role in providing story experiences for their child.
- To discuss practical guidelines for selection and use of books and encourage a commitment to read to their children, trying out these suggestions.

Developmental

- I. Introduction importance reading with your child--
See Purposes - short
- II. Show Films - discuss
 - A. What kinds of things in this story appeal to the young child.
 - B. Discuss handout "Using Books With Children"
- III. Role Play - Teacher
 - A. Choose 3 mothers to act - do demonstration stressing "Thoughts on Reading"
- IV. Refreshments - Browse through books available
- V. Role Play - Individuals
 - Mothers practice with each other
- VI. Mothers check out books
 - Encourage them to read once a day.
- VII. Songs & Finger Plays

Reading With ChildrenPurposes for Lesson

It is crucial to emphasize the importance of experience with books and stories for the young child. Secondly, we must help the parent understand their role in providing experiences with books for their children.

When a parent is reading to his child, he demonstrates an interest in books and knowledge. More important, however, is the personal attention given which helps the child feel worthy of his parent's time, interest, and love.

Hearing a story, talking about it, is a sharing experience and worthwhile in itself. In addition, these kinds of "happy" experiences have great reinforcement potential for the learning available:

- through books and conversation
- through increased curiosity and interest in books
- through perceptual, conceptual, and language development
- through enjoyment and broadening of the range of the child's general knowledge

If we can help the parent consider the specific, positive influences which reading with children has upon a child's development during the early years and later implication for success in school, a cooperative atmosphere may be enhanced. It is interesting that some parents see books as important but not as pleasurable and beautiful in themselves. Some parents may never have developed positive attitudes toward books. Negative attitudes, we would hope, will become positive as parents explore the wonderful world of children's literature, the old and new, varying in shape, style and content.

It is the purpose of this meeting, then, to stimulate curiosity, excitement, and desire in the parents to read to their children.

We will do this through use of 2 delightful filmed children's stories; through discussion of practical suggestions for selecting and using books with pre-school children; through providing an opportunity for them to try these suggestions; visit to local library.

THE YOUNG CHILD'S FAVORITES

<u>Title</u>	<u>Author</u>	<u>Publisher</u>
A Hole is to Dig	Ruth Krauss	Harper
All Kinds of Babies	Selsam	William Scott, Inc.
Animals Everywhere	O'Aulaire	Doubleday
Ask Mr. Bear	Marjorie Flack	MacMillan
Blueberries for Sal	Robert	Viking
Make Way for Ducklings	McCloskey	Viking
Caps for Sale	Exphyr Slobdkina	Scott
Choo Choo	Virginia Burton	Houghton
The Little House	Virginia Burton	Houghton
500 Hats of Bartholomew	Dr. Seuss Cubbins	Vanguard
Goodnight Moon	M. W. Brown	Harper
George, the Gentle Giant	Hall	Golden Press
Happy Lion	Louise Fatio	Whittlesey
I Want to Paint my Bathroom Blue	Krauss	Harper
Inch by Inch	Leo Lionni	Obelensky
Let's Go Outdoors	Huntington	Doubleday
Millions of Cats	Wanda Gag	Coward
Mike Mulligan and His Steam Shovel		Houghton
Over and Over	C. Tolotiv	Harper
Story About Ping	Flack	Viking
Wait for William	Flack	Houghton
White Snow - Bright Mon.	A. Tresselt	Lathrup
Where The Wild Things Are		

THOUGHTS ON READING WITH CHILDREN

Choose stories you like--you can make them live. Read the story before reading it to your child. Be familiar.

Make sure your child is "ready" for a story. Say or do something to gain his interest.

Hold the book at the child's eye level with pictures facing him.

Children love to be told stories as well as to be read to. Better yet, let them help you make up a story.

The child needs to learn to listen attentively to stories so make allowances for their wandering, short attention spans. Keep a positive enthusiasm for the story.

Books do not always have to present new information but can re-create the world the child knows and strengthen his understanding of it.

Children's experiences are broadened and enriched through books related to experiences.

Stories that appeal to young children are short, simply written, and have many colorful pictures.

A magazine can be used to stimulate discussion with the child.

The child may color a picture and he and mommy make up a story about it.

USING BOOKS WITH YOUNG CHILDREN

- I. Arrangements and techniques which foster children's use of books:
 - A. Good light.
 - B. Table at comfortable height.
 - C. Books in good condition.
 - D. Adult listens to child's comments about books and stories.
 - E. Adult reads stories to children.
 - F. Permit children to use books alone.
 - G. Have small reading groups.
 - H. Provide uncrowded and comfortable space for using.
 - I. Arrange books attractively where they can be seen.
 - J. Vary the selection.

- II. Generally young children like stories which have the following characteristics:
 - A. Experiences which are familiar to them.
 - B. Some repetition and rhythm.
 - C. Words which appeal to the sense of sound.
 - D. Action words.
 - E. Clear, simple pictures.

- III. Characteristics to consider when selecting books for certain general age groups:
 - A. The two-year old:
 - 1. It is recognition of the familiar, not novelty, that gives thrill.
 - 2. Likes to imitate familiar sounds.
 - 3. Like stories that repeat his own experiences
 - 4. Has favorite books, to introduce a new one, use the favorite subject for bridge to new story.

 - B. The three-year old:
 - 1. He is interested in people and things outside the home.
 - 2. Responds to words such as "different", "surprise", "secret."
 - 3. Likes books about something he's seen or adventures with familiar things.
 - 4. Interrupts to tell his experiences and point to the pictures.
 - 5. Likes books that permit participation.

 - C. The four-year old:
 - 1. Better listener-he does not need physical contact with the book.
 - 2. Likes books that include his qualities of exaggeration, imagination, bubbling humor, new words, and/or preoccupation with how and why.
 - 3. The humor and fantasy need firm anchorage in reality.
 - 4. Likes everyday life told with a light touch and a bit of verse.

References:

Hartly, Ruth; Goldenson, Robert--The Complete Book Children's Play, Thomas Y. Crowell Company, New York, 1957.

Read, Katherine--The Nursery School, W. B. Saunders, Philadelphia, Pennsylvania, 1955.

DEVELOPMENTAL III

Flannelboards to Facilitate Language Development

Objectives

1. To explain the use of the flannelboard as a versatile educational tool for enriching the language of their children.
2. To assist mothers in construction of a flannelboard and materials to use with it.
3. Provide the mothers with exemplary demonstrations and guided opportunity to experiment with the materials.
4. To provide specific activities that develop
 - a. Visual discrimination (Special Animal Games)
 - b. Concepts of specific community places (Pretend Time) and people (Thinking Cap Games)
 - c. Auditory sequencing (Story Cut-Out) (Finger Plays) (Songs)
 - d. Auditory discrimination (Silly-Funnies Game)
5. To encourage mother to listen to child, pay particular attention to his questions and build her activity from there.

SPECIAL ANIMALS:

The children are presented with pictures of animals which are special in some way.

Mother asks her child to tell what makes that animal so special. After child does this, ask him to tell you something else about the animal. (e.g. size, shape, color, texture, etc.) Add to game with magazine pictures backed with flannel.

Elephant--trunk, tusks, gray
 Giraffe--his long neck, legs
 Zebra--black and white striped
 Skunk--odor

PRETEND TIME:

Mother begins by telling her child a story something like this. Jimmy, we will go on a trip together, see if you can guess where it is. We walk into a building, and

we see shelves with canned food on them. Then we come to a table with lots of bananas, apples, pears. Vegetables are piled up there, too. Do you see meat piled up in the corner over there? What kind of a place do you suppose I was talking about?

(Grocery Store)

Gas Station--tires, cans of oil, big pumps.
 Fire Station--trucks, hoses, hats.
 Post Office--letters, packages, mailmen.
 Shoe Store--shoes, all kinds.
 Bakery--rolls, pies, cakes, cookies.
 Library--books and magazines.

Reverse the game--put a picture of the place on the flannel board, then ask the child to sort through the flannel cuts and put all the things that belong in that place on the board.

THINKING CAP GAME:

Using the policeman hat, the fireman hat, farmer hat, nurse hat, say to child, "Jimmy, here is Mr. Doodle-punk. Look at his hat. You tell mommy about Mr. Doodle-punk. What kind of work does he do?"

Another day use the hats and board to make up a story.

STORY CUT-OUT:

Use an inexpensive Golden Book of the Three Bears, or something similar. Cut out pictures, back with flannel and use to tell story to the child. After he has heard it once or twice, have him tell it to you.

SILLY-FUNNIES:

Mother: I'm going to tell you a funny story about you and your friends. Listen and see if you can tell me some "silly-funnies" in my story.

Once upon a time three children came to school. Their names were Debbie, Tony, and Tom. They were all boys and they were 50 years old. Their teacher was a baby named Spot. Every day the children rode to school in a boat. When they got to school, they put on their pajamas and went to bed. When they woke up they had supper. Then they colored pictures on the ceiling and took them home. When school was over, a fire engine came to get them.

SHAPES, COLORS, SIZES:

Prepare different colored triangles, squares, circles, and rectangles that may also vary in size.

Work with your child very informally by having him make a "picture" with them calling his attention to color, shape and size.

FIVE RED APPLES:

Five red apples in a basket by the door
 Little Agnes took one and then there were ____?
 Four red apples were still enough for me
 Ann picked one up and then there were ____?
 Three red apples and what did I do?
 I baked one in a pie and then there were ____?
 Two red apples. Before this story's done
 I'll make some juicy apple sauce and that will
 leave ____?
 One red apple, I'll put it in a sack
 I'll take it off to school and eat it for a snack.

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