

ED 027 941

PS 001 570

By-Filep, Robert T.

Supermarket Discovery Center, Pilot Study, May - September, 1968. Initial Report.

Institute for Educational Development, El Segundo, Calif.

Pub Date 15 Sep 68

Note-49p.

EDRS Price MF-\$0.25 HC-\$2.55

Descriptors-Developmental Tasks, *Discovery Learning, Paraprofessional School Personnel, Parent Education, Parent Participation, *Pilot Projects, Preschool Children, *Preschool Programs, *Student Teachers, Tactual Perception, *Tutorial Programs

The objectives of this research pilot project were (1) to train 3- and 4-year-olds in cognitive and tactile discovery tasks; (2) to provide guidance for parents, enabling them to reinforce and review the concepts taught; and (3) to establish training and employment, as tutors, for central city high school and junior college students. A "discovery center" was established in a Los Angeles supermarket, where children were tutored 45 minutes to 1 hour once or twice a week while parents shopped. Tutors instructed on a one-to-one basis, using instructional sequences especially designed to teach basic concepts. The population consisted of 58 parents and 68 preschoolers, predominantly Negro, with five percent Mexican-American. Three junior college students were hired as tutors. The limited pilot study generated parental acceptance and community enthusiasm and indicated that the program was viable on a large scale. Procedures and minor modifications were suggested for a full scale discovery center demonstration and evaluation. (D0)

ED 027941

U. S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE
PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION
POSITION OR POLICY.



Initial Report

SUPERMARKET DISCOVERY CENTER

Pilot Study

May - September, 1968

PS 001570

INSTITUTE FOR EDUCATIONAL DEVELOPMENT

SUPERMARKET DISCOVERY CENTER
PILOT STUDY

May - September, 1968

Initial Report
September 15, 1968

Robert T. Filep, Ph.D.
Director of Studies

INSTITUTE FOR EDUCATIONAL DEVELOPMENT

999 N. SEPULVEDA BLVD. • EL SEGUNDO, CALIFORNIA 90245

ABSTRACT

A pilot Supermarket Discovery Center was operated to evaluate the feasibility of a program designed to bring pre-school tutoring to children in disadvantaged urban areas. The program was three-fold: (1) to train three and four-year olds in cognitive and tactile tasks, (2) to provide guidance for parents enabling them to review and reinforce the concepts taught, and (3) to establish training and employment, as tutors, for central city senior high school and junior college students. The Discovery Center was located inside a market in South Central Los Angeles where children were tutored for forty-five minutes to one hour once or twice weekly while their parents shopped. During the pilot, the tutors instructed sixty-eight children on a one-to-one basis, using instructional sequences especially designed to teach basic concepts such as half/whole, same/not same, etc.

A warm atmosphere of adult acceptance was created where the children were supported in their verbalizations of what they were doing and of what they had done and were encouraged to manipulate, describe, explore and discriminate among many objects, usually supermarket products. The tasks were readily adaptable to the home environment so that the parents could reinforce the tutoring, thus stimulating much-needed parent-child communication and enabling the parents to contribute to their children's education. This limited pilot project identified that the program is viable on a large scale. It generated enthusiastic community response and suggested procedures and minor modifications for a full-scale Discovery Center demonstration and evaluation.

TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| Part One: Introduction | 1 |
| Part Two: Relevant Research | 5 |
| Part Three: Population | 13 |
| THE PARENTS | 13 |
| THE CHILDREN | 13 |
| THE TUTORS | 13 |
| THE PROJECT STAFF | 14 |
| Part Four: Procedures | 15 |
| OPERATION OF THE CENTER | 15 |
| Parent Participation | 15 |
| Children Participation | 17 |
| The Instructional Sequences | 17 |
| THE TRAINING AND MODE OF OPERATION OF THE TUTORS | 19 |
| Part Five: Results | 21 |
| LEARNER DATA | 21 |
| PARENT DATA | 22 |
| Part Six: Conclusions | 31 |

| | <u>Page</u> |
|--|-------------|
| Part Seven: Postscript | 35 |
| Part Eight: Personnel Participating in the Project | 37 |
| Part Nine: Selected Bibliography | 39 |
| Part Ten: Appendix | 41 |

LIST OF TABLES

| <u>Table</u> | | <u>Page</u> |
|--------------|--|-------------|
| 1 | Relationship of Age and Task Completed | 23 |
| 2 | Number of Center Visits by Age | 23 |

LIST OF FIGURES

| <u>Figure</u> | | |
|---------------|--|----|
| 1 | Pattern of Parent Participation in Relation to Days of the Week and "Pay Days" | 24 |
| 2 | Parent's Homes in Relation to the ABC Market | 27 |
| 3 | A Group Picture Taken at the Discovery Center with Participants | 29 |
| 4 | Bidding a Parent Goodbye | 30 |

Part One

I N T R O D U C T I O N

The need to provide children with pre-school experiences that encourage them to enjoy learning and to learn by themselves is generally accepted. The role that parents can play in this process is also well documented. The high level of parental attention to these endeavors is supported by substantial sales of popular books about the topic. The degree of interest in central city parent-child relationships can also be measured by numerous social intervention projects being conducted in urban areas. Consequently, the focus of this project is consonant with current concerns.

While designing this feasibility project, a major question was the determination of a site or situation, other than the home, where parent and pre-school child might be found simultaneously. The weekly shopping expedition afforded an opportunity to provide instruction for both. Placing a Discovery Center in a supermarket provided the service of freeing the parent from child accompaniment while shopping. In addition, the need to provide employment for teenage students in the central city suggested another positive component of this instructional system: the utilization of older students as tutors for the pre-school children.

Therefore, this project was undertaken with the following principal objectives:

- ° To train three and four year olds in cognitive and tactile discovery tasks.
- ° To provide guidance for parents enabling them to reinforce and review the concepts taught at the Supermarket Discovery Center.
- ° To establish training and employment, as tutors, for central city senior high school and junior college students.

The secondary objectives of this preliminary study included:

- Evolution of instructional sequences and criterion measures to assess short term gains from training three and four year olds.
- Development of methods for brief counseling of parents and preparation of parent home guidelines and procedures for working with their children.
- Design of training techniques which would enable young adults rapidly to become proficient in a structured tutoring approach to teaching three and four year olds.
- Examination of methods for motivating central city parents to participate in the program and also for gaining community support.
- Preliminary exploration of standard and unobtrusive measures for the evaluation of such an effort.

The origin of any project has many phases. There is the creative research and development model which presents a new idea based upon a synthesis of prior experiences. This model is then discussed with a number of people and refined before it is tested. To Dr. Emily Willerman of the Institute's New York Office goes credit for the idea of locating a parent teaching activity in a shopping area.

Alfred North Whitehead has suggested "Ideas won't keep, something must be done about them", thus signalling the logical second phase - application.¹ Here the idea is examined and buffeted by reality and then reshaped on the basis of analysis of outcomes and observations. This project's goal was to test the viability of such a preliminary model. The next and future step in the research and development process would be a full-scale assessment of the revised model involving a demonstration Discovery Center incorporating extensive evaluation of a major application of the model.

¹ Dialogues of Alfred North Whitehead as recorded by Lucien Price, New York: Mentor, 1956, p. 16.

The pilot study recently completed could not have been realized without the financial support most generously provided by Mr. Gordon Beaham, III, President of Faultless Starch, Inc., Kansas City, Missouri, in behalf of his organization. To our kind host, Mr. Paul Kodimer, President of ABC Market Corporation, Los Angeles, and his staff, warm appreciation for their willingness to explore the Discovery Center concept with us and for space, support and materials for the project. The assistance of Assemblyman Bill Greene of the 53rd California Assembly District and his Administrative Assistant, Jim Williams, was most helpful. To Dr. John L. Kennedy, Vice President of IED goes a kudos for keeping the Discovery Center "pot" boiling and for stirring and salting the concept as required. Many of the professional staff members of the summer project received only token remuneration for their efforts and their "volunteer" assistance was vital to the project's accomplishments.

Part Two

R E L E V A N T R E S E A R C H

The Discovery Center pilot project was designed to test some ideas regarding social intervention, and was not an all-inclusive research endeavor. Consequently, a selected group of prior investigations seemed particularly relevant to this effort.

It is generally accepted that we must initiate compensatory pre-school education to offset the progressive retardation frequently seen in urban disadvantaged children during their schooling. Bloom (1964) has stated that a child reaches one-half of his general intelligence by the time he is four years of age, and by the time he is six, he has reached two-thirds of his adult intelligence. It is no wonder, then, that many disadvantaged children fail by the end of the first grade and by the end of elementary school have fallen two or three years behind children from more favorable backgrounds. This intellectual failure must certainly corollate with the failure of these children to develop a positive attitude toward the enjoyment of learning.

The capsule review of relevant research which follows centers around three aspects of the pre-school education of disadvantaged children: (1) the deficiencies that lead to educational retardation that are typically found in these children, (2) the methods being employed in compensatory pre-school education, and (3) the training of the parents of these children to help them aid in the education of their children.

The deficiencies that most often lead these children to fall behind in school can be grouped into four general categories: cognitive style, perception, behavior and attitude, and language development. Hess and Shipman (1966) suggest that early experience is the time in which children learn to order and sort the information coming to them from both internal and external sources, and that the adult

must give the child categories of thought and ways of dealing with information so that he can make sense from the incredibly large amount of information with which he must deal. They believe that the mother plays a central role in transmitting these "information processing strategies" [p. 4]. They found that "working class urban Negro families have relatively few opportunities and alternatives from which to choose in major areas of family life" [p. 3]. Therefore, they don't encourage children to consider alternatives and learn basic elements of decision making, or to anticipate the consequences of their actions. They tend to develop, therefore, an impulsive, disconnected cognitive style. This theory is underscored by Mumbaur (1968). When she tested thirty-two disadvantaged and thirty-two advantaged children, the Matching Familiar Figure Test and the Childrens Embedded Figure Test indicated more impulsivity in the disadvantaged children. The Los Angeles City Schools instructional bulletin, Characteristics and Needs of Disadvantaged Children (1968), states that these children are, typically, oriented toward present rather than future gratification. In a study by Gray, Klaus, Miller and Forrester (1966), portions of this cognitive style are explained by citing that reinforcement is usually immediate in their homes, so that the child is not taught to wait for gratification.

The disadvantaged child is hindered in the development of his cognitive style possibly because of the spatial and temporal disorder of his home. Gray et al (1966) state that it is difficult for him to see common qualities among objects because of this disorder, and that this is one of the reasons that he has some difficulty discriminating between two objects or events that are highly similar. This corresponds to Shipman & Hess' (1966) finding that children from middle class homes are better able to correctly sort objects and to verbalize the principles by which the sorting was done. The Los Angeles City Schools booklet (1968) states that the typical cognitive style of these children shows more tendency to respond to visual and kinesthetic signals than to oral or written stimuli, that they are not able to learn abstract concepts or to generalize, and that they have never been encouraged to use their imaginations as useful,

creative tools. In fact, reinforcement is more toward inhibiting than encouraging exploratory activities. Consequently, our concern with providing discovery and exploratory tasks as well as incorporating visual and tactile tasks.

One of the major reasons for the language deficiency in the disadvantaged pre-schooler is simply that he is not spoken to very often by adults. His reinforcement is not likely to be verbal, but instead tangible and physical, according to Gray et al (1966). The child is not encouraged to talk about what he does because rarely does an adult listen attentively to him.

All of these deficiencies lead to differences in behavior between advantaged and disadvantaged pre-schoolers. Hess & Shipman (1966) believe that "the poorly-prepared child is not uneducable because he has learned nothing during pre-school years, but because he has learned the wrong things". He cannot meet the demands of public school if he has learned to be compliant and submissive and to regard himself as inadequate in problem solving. Berlin (1966) finds that two kinds of children develop from this environment. The first is the impulsive, aggressive child who needs instant gratification. The second type is the child who is shy, withdrawn, isolate, and who withdraws from the competition of the public school. The Los Angeles City Schools publication (1968) states that the disadvantaged child fails because he expects to fail--that he needs to be helped to establish a favorable self-concept. He often has a negative attitude toward school that comes from his parents' inability to cope with the system, and he has a general disenchantment with any type of book-centered learning.

In discussing behavior, one of the previously mentioned studies (Gray et al., 1966) places emphasis on the difference between the reinforcement patterns in advantaged and disadvantaged families. The disadvantaged child has less adult-administered reinforcement, and the reinforcement

he does receive is not usually directed toward specific acts, but is vague, generalized approval or disapproval. The child has trouble coping with the verbal reinforcement he receives in school because most of the behavior reinforcement he receives at home is tangible and physical. All of these deficiencies--perceptive, behavioral, verbal, and cognitive, combine to retard the educability of these youngsters.

Therefore, the need to focus on a plan to break down these educational barriers is vital. Janet R. Cupp (1967) has outlined a thorough instructional program for developing aptitudes for achievement. It is a well-structured and sequentially programmed instructional program because, as she states, "learning studies have shown that deprived children do not learn incidentally but benefit only from intentional instruction. We cannot assume that in the framework of a traditional program these skills for achievement would develop [p. 5]. The primary focus of the program is not on the learning of specific information, but on the development of skills needed to experience stimuli more fully, to systematically organize experiences, and to verbally communicate thought patterns effectively.

Gray et al. (1966) also offer some specific suggestions (including lesson plans) for teaching the disadvantaged pre-schooler. In order to develop conceptual perception, they emphasize that the environment be ordered and predictable, and rich in objects and situations. They suggest teaching classification and number concepts using fruits and vegetables familiar to the child; classifying the foods by color and origin and counting the items in a class makes the concepts meaningful.

To assist the child's language development, he should be encouraged to relate his own experiences, and that the teacher provide experiences that will make for good discussion. The teacher should also read and talk about stories, have the children participate in simple dramatizations, and practice following verbal commands. In order to help the child learn behavior patterns beneficial to his education, they

suggest that the teacher start with nonverbal reinforcement (patting, hugging, etc.) and concrete reward (candy, toys, etc.) and move toward more verbal rewards, more delayed rewards and putting more value on "bookish" objects and activities (books, crayons, etc.).

Since there is a limit to the potential supply of professional personnel, ways must be found to supplement the number of tutors available to help these children. One answer to this problem is the training of "para-professional" tutors (aides, parents, older students, etc.). However, merely having someone tutor a child does not mean that the child is going to learn. From the research that has been done in the area of tutoring (c.f., Cloward, 1967; Ellson, Harris, Barber, 1968; Harrison & Melaragno, 1968), there are several basic guidelines that can enhance the probable effectiveness of most tutorial projects. First, diagnostic instruments must be developed to obtain certain information about the learner before individualized instruction can be effective. The tutor must be instructed to focus on a specific concept or principle, not merely told that the learner needs help with his reading or his language. There also must be a means of continuous evaluation. The selection of appropriate materials is vital to tutoring. Most of the materials on the market are ineffective when used with disadvantaged because they were designed to be used by middle and upper class children, so they must be altered. The tutor's interaction with the learner must be specified and carefully guided. The following tutor skills are basic to a successful tutoring situation: (a) informing the learner of the instructional objectives and orienting him to the type of responses he will be asked to make; (b) establishing a pleasant atmosphere; (c) informing the learner of the correct response when he makes a mistake instead of telling him that he is wrong; (d) providing sincere positive reinforcement; (e) deciding when to skip ahead or repeat in a planned instructional sequence; (g) deciding when to interrupt the sequence to assist the learner with individual problems. Specific objectives and a means of evaluating them are also prerequisites of a good tutorial program.

The role the mother can play as a tutor can have considerable significance. Because mothers are their children's first teachers, they must be taught that they play a central role in the social and intellectual development of their children, and that they can be taught skills that will lead to their children's intellectual improvement. The Early Training Project (Gray, et al., 1966) worked with the parents of the students to emphasize items that would be of immediate relevance for the children's attitudes and aptitudes in school. Their three major goals were: (1) providing a bridge between the summer school experiences of each year; (2) furnishing the parent with more information on the steps required for school and occupational success; and (3) trying to promote an improved self image in the parents and their children. A home visitor program was initiated to help the mothers learn to be instructors as well. The home visitor taught the mother how to engage in instructional conversation with the child while performing her everyday household tasks. The mother was also taught good instructional techniques, such as regular positive reinforcement. She was taught to read to her children, to dramatize stories, to watch and discuss the changing of the seasons, and to engage in conversation with the children while taking them on trips around the neighborhood to the supermarket, the post office, or the library.

A study was conducted at DARCEE (Miller, 1967) in which four groups participated. In the first group, both the mother and the child received training. In the second group, just the child was enrolled in the program; the third group was visited once a week by a home teacher who worked directly with the mother and used the child for demonstrations, and the fourth group was given no instruction. The training program was provided in four phases: (1) orientation and directed observation, (2) demonstration and role play, (3) classroom participation with minimal structure, and (4) classroom participation, instructional. The partial interim results show that after seven months of intervention, the classroom groups showed a significant gain in intellectual ability. The home visitor group showed an average gain of six points over the same period. The mothers showed an average increase of five WAIS full scale IQ points, and 35% of the direct classroom contact mothers involved themselves in continuing their educations.

It is because of the encouraging results of studies such as this that we were reinforced for incorporating the parent-child aspect in the model. The child, the parent, and also on occasion, other siblings benefited.

Part Three

P O P U L A T I O N

THE PARENTS

Fifty-eight parents participated in the Discovery Center activity. Included in this group were fifty-four females and four males.

THE CHILDREN

The sixty-eight pre-schoolers involved in the feasibility study included thirty three-year-olds, thirty-two four-year olds, and six five-year olds. The children were predominantly Negro, with five percent Mexican-American. Only three out of the total group had been previously involved in any "formal" instruction, two in a church day school and another, a four and one-half year old, in a Head Start center.

THE TUTORS

Participating in the pilot study were three junior college students enrolled at institutions in or bordering the central city. Each female tutor had completed a year of college, one majoring in early childhood education, the other in commercial art. The boy tutor is enrolled as a junior college freshman, also with an interest in commercial art.

We first tried to hire sons or daughters of supermarket employees to be our tutors, thereby again involving the community in the Center. However, the search disclosed that very few market employees had children in the proper bracket, the few who were potential tutors already were committed to other summer jobs. Other rationale for selection included

prior experience working with young children; a warm, outgoing, sincere personality; and a commitment to helping young children learn. Further, suggestions of tutorial candidates were made by the Nursery Education Department, Compton College, and by the office of the local state assemblyman.

THE PROJECT STAFF

The range of backgrounds reflected by the project staff included experience in the operation of a Head Start Center, direction of a nursery education college program, development of pre-school teaching materials, general educational product development and evaluation, training of tutors, and conducting behavioral and child development research.

Part Four

P R O C E D U R E S

OPERATION OF THE CENTER

Parent Participation

The initial procedures for announcing the opening of the Center included placing an ad in the supermarket's weekly flyer, distributing handbills to parents in the market, contacting community agencies requesting that they announce the Center, and having two young adult Caucasian members of the staff contact parents in the market. Bringing the children along when shopping was a normal procedure, so all parents accompanied by three and four-year olds were approached. These contacts were followed by phone calls as were later contacts made by the Center coordinator, an adult Negro staff member.

Prior to the opening of the Center a survey was taken to determine the number of parents who were shopping accompanied by their three and four-year old children. The range throughout the week, during the hours scheduled for Center operation, was between thirteen and thirty-five parents per day.

After the initial introduction to our operation, the parents brought their youngsters to the Discovery Center before commencing their shopping. When the parent returned to the Center she had an opportunity to observe how the tutor worked with her child on a one-to-one basis. The Center supervisor then discussed with the parent how she might use similar techniques with her youngster at home to reinforce and expand the teaching started at the Discovery Center. When the parents returned the following week, they were asked how much they had accomplished in the home. Their report was compared with the results of the pretest for each

sequence administered to their child. The parent was given a home tutoring guide in addition to the guidance at the Center. Some of the suggestions on the guide included:

You can help your youngster at home to continue the teaching started at the Supermarket Discovery Center by doing the following things:

- At meal time, or when the youngster is eating or drinking, you can help him by discussing:

A half of a fruit or cracker/a whole fruit or cracker
- Ask the youngster to identify objects at home that are:

Divided in half (cabinets, windows, rooms, etc.)
- Ask the youngster to point out things that are:

Bigger than or smaller than something else (sisters and brothers, large dogs and small dogs, large chairs and small chairs)
- Every time the youngster does something right, tell him so ... immediately. Never tell the learner, "You're wrong."; instead, tell him the correct answer and encourage him to get it right next time.
- If you have time, let him tell you about the object and whether it is half/not half, same/not same, etc.
- Avoid "tricky" questions. Help him enjoy learning.

Children Participation

As the children were brought downstairs in the market by the parent, they were greeted by the Center coordinator and then introduced to their tutor. Since an appointment was not required of the parent, there were instances when more children than tutors were in the Center. A "holding pattern" play area had been designed to meet this situation. For these youngsters as well as for those who finished their instructional sequences before their parents returned for them, toys, clay, beads, marbles, etc. were available.

Since many of the instructional materials were food items such as oranges, bananas, graham crackers, fruit juices, etc., the children were discouraged from eating these during the instruction but were requested to "delay gratification" until they completed their discovery activity. At that time they were given a little bag in which they could put their items to take home.

The Instructional Sequences

The instruction was provided in a tutorial fashion on a one-to-one basis. The children were encouraged to manipulate, describe, and discriminate among many objects. A warm atmosphere of adult acceptance was created where the children were supported in their verbalization of what they were doing and had done. The fact that a male tutor worked with the children expanded the range of experience for many of the youngsters.

Numerous opportunities to observe and explore were provided in the Center by using many teaching materials and encouraging the student to search out things that had two parts, were divided in half, had rough or smooth textures, etc. Similar guidance was provided to encourage the parent to let the child discover and explore at home. Since a principal aspect of the instruction was to have the child develop feelings of confidence and competence,

the total situation (space, training of tutors, parent involvement, materials, reinforcement techniques) was designed to maximize the possibility for growth of feelings of competence and control and to insure that the youngster would experience enjoyment in the process.

Some of the general objectives for the teaching sequences included those listed below. In addition to the major objectives for which summative criterion items were presented by the tutor, there were enroute objectives and formative criterion items. The criterion items were administered verbally by the tutor. Their presentation was monitored by the Center coordinator for accuracy and level of child performance.

The major teaching objectives for Sequence A (Cognitive) included:

- Given a whole object cut in half, and other objects cut into various fractional parts ($1/4$ and $3/4$, etc.), the learner will correctly select instances of "half of an object."
- Given a number of containers filled to various degrees with different liquids and substances, the learner can correctly identify those which are half-filled and distinguish them from those which are not half-filled.

In addition, the enroute objectives required that the youngster deal with tasks of bigger/smaller, same/not same, one half/same and half/not half. In the case of the sequence on liquids, it required that he pour liquids from one container to another.

Sequence B (Tactile) had the following major objectives:

- Given objects that represent variations in texture (rough, smooth, soft) the learner will correctly identify orally as well as select instances of each.
- When asked to identify objects in the learning area that have rough, smooth, and soft textures, the learner will touch them and state the quality of the texture.

Enroute objectives for this sequence included that the youngster make discriminations between soft/smooth, rough/smooth, and hard/soft. These objectives were reached in part by asking the youngster to touch and select objects with his eyes open and closed, as well as to select objects in the center that felt rough, smooth, soft, hard, etc.

To say that either a Montessori, Piaget, Bereiter-Engelmann, or Behavioristic approach predominated would be difficult. An eclectic approach to the instruction was forged in which a number of viewpoints and philosophies of teaching three and four-year old children were incorporated.

The staff was committed to developing the model based upon the principles and processes of programmed instruction. This meant testing an initial model and conducting revisions prior to its use in the Center. Subsequently, the developmental model was revised during the operation of the Center based upon feedback obtained and observed by the staff. Three major iterations were made of the model during the study, affecting a number of the procedures as well as certain of the instructional sub-sequences.

THE TRAINING AND MODE OF OPERATION OF THE TUTORS

The scope and limited nature of this pilot effort dictated that the training of the tutors be "telescoped." Consequently, three days of training were provided by the project staff in the content and procedures desired in working with the three and four-year olds. A "structured tutoring" approach was taught whereby the tutor was trained to make instructional decisions using information given him relating to previously made curricular decisions. For instance, teaching objectives, pretest items, enroute tasks and criterion instruments had been developed for use by the tutors.

The training sessions were conducted in both group and individualized settings. Role-playing techniques were also utilized, where staff members acted as three and four-year olds being instructed in the discovery sequences. Discussion of appropriate and inappropriate behaviors were reviewed with the tutors.

Following these sessions, two days were devoted to a pretest of the procedures for the pilot project. Three and four-year old children, not used in the pilot, were involved to provide additional practice and coaching sessions for the tutors.

The tutors were instructed how to receive the children in a warm and friendly manner and initially to discuss things in which the child was interested. Considerable emphasis was placed on encouraging the pre-schooler to verbalize what he was doing, to hold and manipulate the teaching materials, and to view the teaching tasks as a game. The training also emphasized reinforcing a youngster for responding correctly.

At first, the tutors performed as they had seen many of their school teachers act, primarily in an authoritarian and stern manner. Slowly, tutors were shaped out of verbally "demolishing" a child by flatly stating that he was wrong. They either provided the correct response or "branched" the youngster to a remedial sequence so that he could learn the correct answer himself. Gradually, as the training proceeded, the tutors smiled more, and review and repetition gradually became a part of their repertoire.

Part Five

R E S U L T S

The results recorded for this exploratory study might be grouped into two major categories: learning gains made by the children in the Discovery Center, and parent participation and interest as evidenced by attendance and follow-up data.

LEARNER DATA

The instructional sequences utilized during the brief fifteen-day operating period were divided into two major areas; one dealing with cognitive tasks, the other with tactile tasks. Each had a number of sub-sequences. Pre- and post-test items were an integral part of each sub-sequence.

In the case of Sequence 'A' (cognitive), five formative evaluation measures were included to coincide with five enroute objectives. Following completion of Sequence 'A', summative criterion tasks were administered. Upon successful completion of these, the pre-schooler proceeded to Sequence 'B'.

Consequently, the pre-schooler could complete a step in the sequence, be administered the post-test items for the sequence and obtain "credit" for completing the module or step. Table 1 indicates the number of children in each age category that completed each step. Any interpretation of these data must recognize that a number of students came to the Center during the third or last week of operation, thus having fewer opportunities to progress through both sequences.

Table 2 identifies the number of instances that children in each age category participated in the Center's program.

As the word began to spread throughout the community, the rate of child and parent participation increased. The pattern of attendance at the Center is reflected in Figure 1. Of those who came only once, sixty percent came during the third week of the Center's operation. Follow-up data indicate that the majority of these parents planned to bring their children back in "week five," in conjunction with the mid-month pay cycle.

On a number of occasions, children who had older or younger brothers and sisters accompanying the parents were observed "teaching" their siblings Center-learned content. Five instances of this type of activity were reported by the parents and six situations were recorded at the Center.

Of the four-year olds who participated, approximately twenty are slated for Head Start programs this fall. A follow-on to this effort would certainly dictate that some assessment of their mental performance and attitudes in a "formal" setting be made.

PARENT DATA

Involving the Parents

The initial announcement of the Center's proposed activities in the weekly flyer was unsuccessful and brought only four parents to the Center. On the other hand, the contacts made through the community agencies were difficult to correlate with attendance. Many parents directly contacted in the store had heard about the Center through these agencies but were not quite sure how to participate.

A large sign announcing the Center had been placed in front of the market. It was not until the word "free" had been placed on the sign did parents come in of their own accord.

After the first series of contact strategies were evaluated for their effectiveness, a second approach was put into operation on an intensive scale. This

TABLE 1

RELATIONSHIP OF AGE AND TASK COMPLETED

| | <u>Total Group</u> | <u>3's</u> | <u>4's</u> | <u>5's</u> |
|-----------------------------------|--------------------|------------|------------|------------|
| <u>Sequence A:</u> | | | | |
| First step | 4 | 2 | 1 | 0 |
| Second step | 5 | 2 | 3 | 0 |
| Third step | 3 | 2 | 1 | 0 |
| Fourth step | 0 | 0 | 0 | 0 |
| Fifth step | 1 | 1 | 0 | 1 |
| Completed | 33 | 12 | 19 | 2 |
| <u>Sequence B:</u> | | | | |
| Completed | 14 | 7 | 4 | 3 |
| Pre-Pilot only | 4 | 2 | 2 | 0 |
| Observer | 2 | 0 | 2 | 0 |
| Didn't understand anything (Age?) | <u>2</u> | <u>2</u> | <u>0</u> | <u>0</u> |
| | 68 | 30 | 32 | 6 |

Previously enrolled in other "formal" programs:

| <u>Age</u> | <u>No.</u> |
|------------|------------|
| 3 | 1 |
| 4 | 1 |
| 5 | 1 |

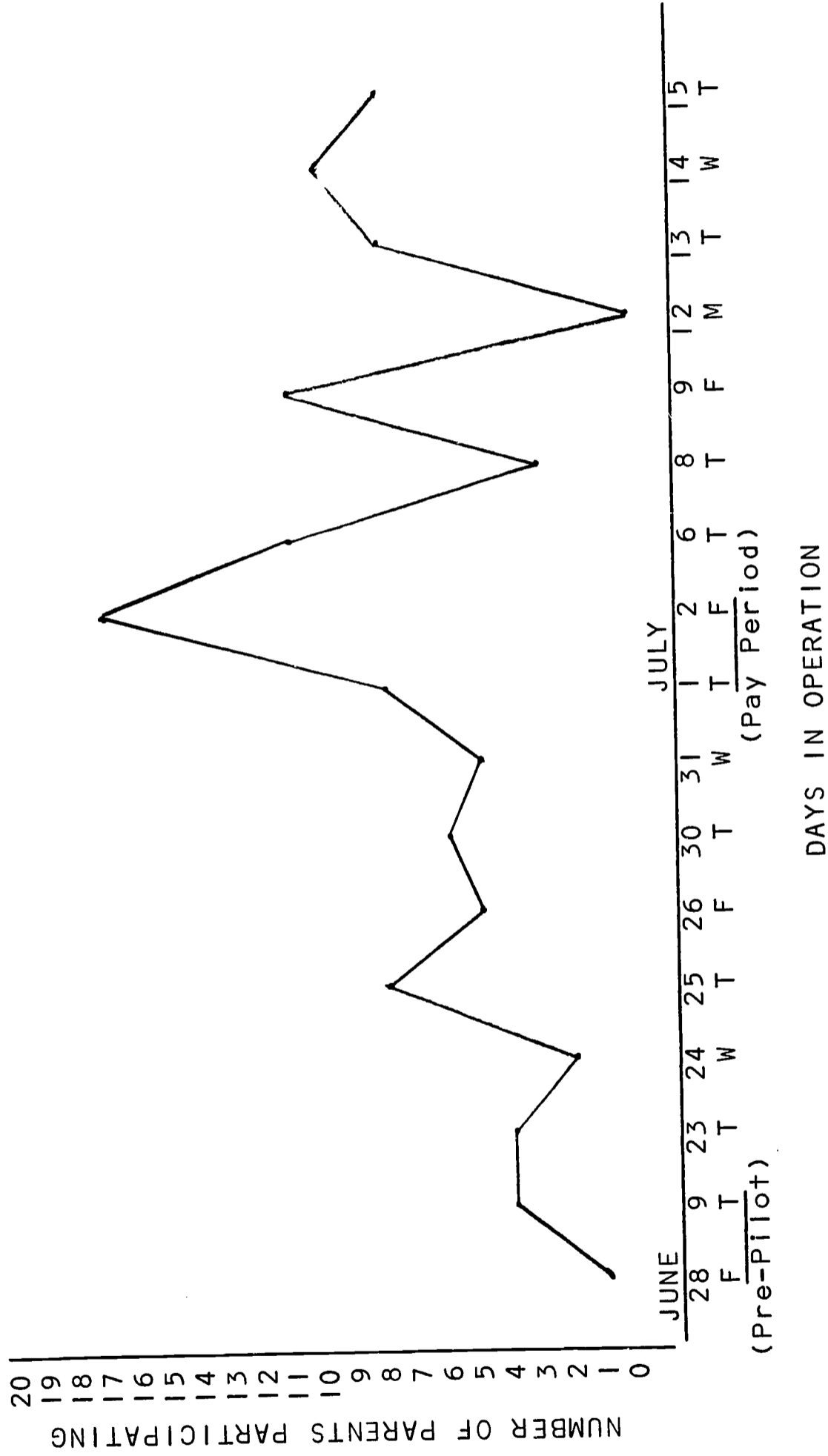
TABLE 2

NUMBER OF CENTER VISITS BY AGE

| <u>Visits to Center</u> | <u>Age 3</u> | <u>Age 4</u> | <u>Age 5</u> |
|-------------------------|--------------|--------------|--------------|
| one | 11 | 13 | 6 |
| two | 11 | 12 | |
| three | 5 | 4 | |
| four | <u>3</u> | <u>3</u> | — |
| Total | 30 | 32 | 6 |
| | 23 | | |

FIGURE 1

PATTERN OF PARENT PARTICIPATION IN RELATION TO DAYS OF THE WEEK AND "PAY DAYS"



approach employed the adult Center Coordinator as a contact in the market. She spoke directly with the parents who were shopping and encouraged them to bring their children into the Center. This contact was followed up by a telephone call early the following week (if they did not participate on the day contacted) reminding them to stop by on their next shopping trip, or suggesting an alternate day for their next experience. Prior to the opening of the Center, contact had been made in the market by a Caucasian junior member of the staff to ascertain approximate shopping times for the parents. Attempts to involve parents by capitalizing on this contact through telephone follow-up proved ineffective. Utilization of the tutors, who were members of the central city area, as parent contacts also proved unsuccessful.

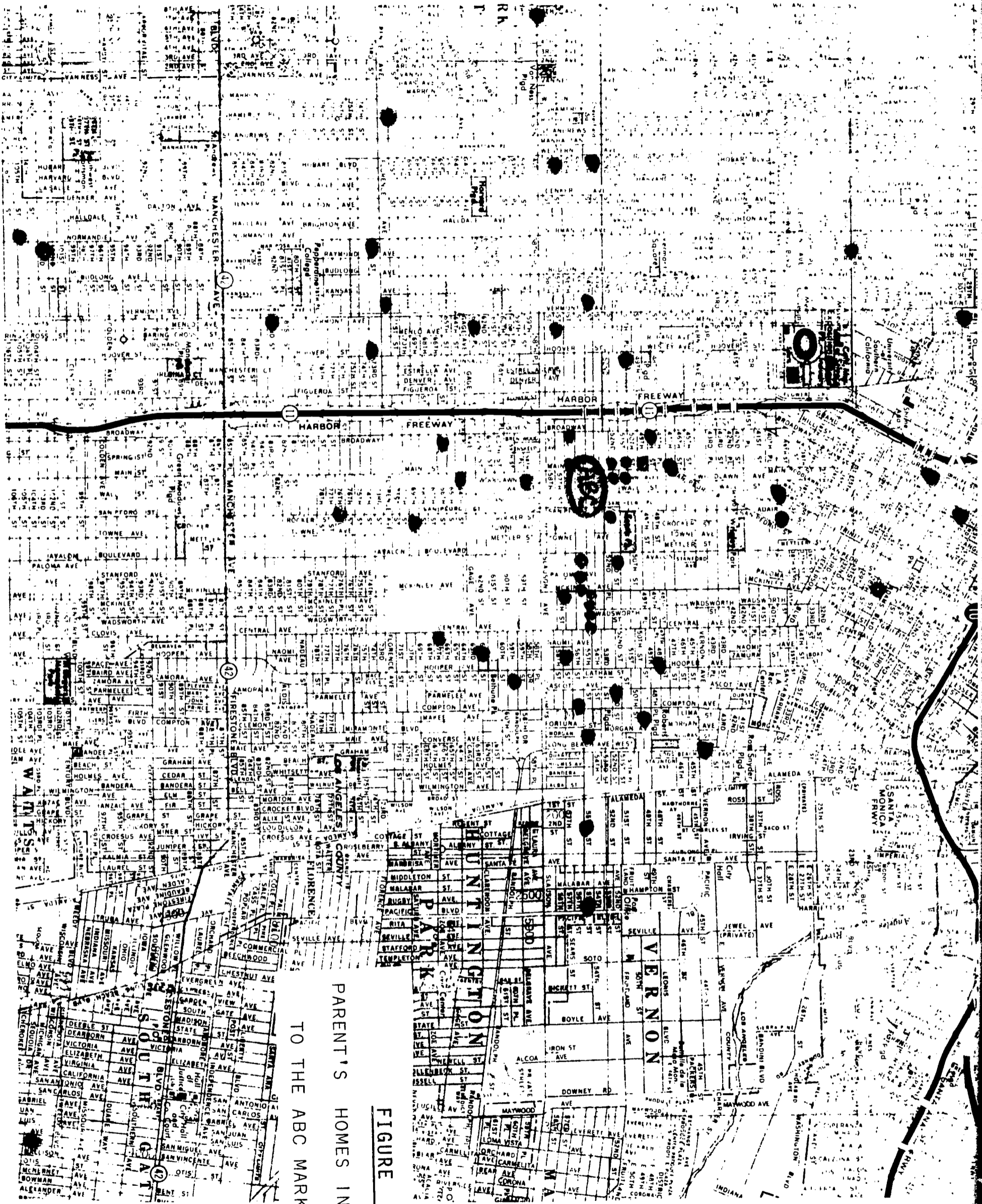
A telephone survey was conducted after the initial feasibility effort to ascertain: (1) if parents would bring their children again when the Center was reopened (this was seen to be an additional measure of satisfaction, attendance rate being the first); (2) how many children were to be enrolled in Head Start this fall; (3) how many parents had come to shop at that particular market because they had heard about the Discovery Center; and, (4) what were their reasons if they had come only one time.

- ° The twenty-seven parents who had come more than once indicated they would return again if the Center was operating.
- ° Those who had participated only once gave the following reasons for their "attendance record":

| | |
|--|---|
| "Went on vacation" | 5 |
| "Were coming back at the next pay period" | 9 |
| "Transportation to the market was a problem" | 6 |
| "Would like a program that ran all day" | 4 |
| "Illness" (Parent or child) | 7 |

- When asked if they had come to shop at this particular market after they learned about the Discovery Center, sixteen replied "Yes." Figure 2 provides a map of the area and the approximate location of their homes. A number did travel a considerable distance to the Center.

- Another aspect of customer involvement in the market due to the Center's existence seemed to be duration of shopping. The market personnel informed the project staff that the average time for shopping was approximately one half hour. The average time for parents participating in the Center was forty-five minutes to one hour. One parent obviously felt so relaxed about not having to worry about her youngster in the market that she went home and then remembered that the child was in the Center. Needless to add, the youngster enjoyed the extra time.



PARENT'S HOMES IN RELATION
TO THE ABC MARKET

FIGURE 2



FIGURE 3 A GROUP PICTURE TAKEN AT THE DISCOVERY CENTER WITH PARTICIPANTS

L. to R.: V. Palmer, J. Williams, R. Filep, J. Moon, P. Kodimer, P. Gillette, M. Wilson



FIGURE 4

BIDDING A PARENT GOODBYE

Part Six

C O N C L U S I O N S

Some general observations can be made regarding this limited and brief feasibility study.

- ° It would appear that learning the discovery tasks did take place within the Center. Children did learn as evidenced by the results on the criterion measures, and also retained the behavior gains from one week to the next. A delayed retention activity measure would certainly be appropriate early in the fall. The learning tasks provided for three and four-year olds in this experience proved appropriate. The children's prior repertoire did not include the behaviors selected for instruction.
- ° Parents found the Center of value as demonstrated by their attendance and also by their expressed preference for returning and participating in the activity, if provided again.
- ° The Discovery Center did attract shoppers to the market for their first visit, consequently the Center must be identified as a potential market "drawing card" as well as being of value to the parents and children.
- ° Specific techniques, such as personal contacts with parents in the supermarket, followed by telephone calls and involvement of community agencies, seemed to be most effective.
- ° The specific approaches to training the tutors seemed to have marked results. However, a much more extensive training period is required to bring the tutors to an acceptable performance level in a shorter period of time. Tutor effectiveness improved noticeably as more experience was obtained working with the children.

It would now seem appropriate to expand the pilot study into an activity of greater duration and scale. Such an effort would:

- Enable present community involvement and interest to continue.
- Give additional insight into the refinement of the instructional sequences for the three and four-year olds, as well as the training for the parents.
- Obtain additional information regarding how the total instructional system may be improved.
- Increase the mobility of the Center by housing it in a small trailer which could be relocated to a number of supermarkets and shopping centers, thus enabling many more parents and children in the central city to participate.
- Contribute to the continuing growth of the children in the enjoyment of learning and also motivate the parents of these children to be more active participants in reinforcing discovery learning.

Some specific aspects of this activity would include:

- Modify and increase the number of instructional sequences in a variety of "content" areas. Examine in greater depth how the teaching in the Center relates to Head Start programs and formal day care and school programs into which the threes might be later enrolled. Continue to provide both structured tutoring and independent play and study for the pre-schoolers. Conduct a follow-up of the summer participants.
- Expand and refine the orientation procedures for the parents. Conduct more extensive training to include home visits in how to encourage "discovery" and exploratory learning, and how to show that learning can be fun. Provide detailed follow-up and interviews of parents to assess carry-over in child behavior from the Center and type and degree of parent involvement.

- Increase the duration of the training, involve additional junior college students, refine and improve the training procedures and selection criteria for these students, examine how the tutors would perform during the academic year while attending school.
- Examine the feasibility of operating the Center in concert with pay cycles and peak shopping days in order to reach greater numbers. Also, place the Center in front of the market making it visible to all shoppers.
- Evaluate the operation of a demonstration Discovery Center over a period of time to provide a thorough and meaningful assessment of this approach and its value to other programs involving pre-schoolers. Follow-up of these children in formal programs could be accomplished, parent satisfaction and performance examined, stimulus value for other types of educational experiences assessed, etc.

Part Seven

P O S T S C R I P T

This brief pilot project attempted to identify a potential instructional-social intervention system which brought resources from a number of sectors, public and private, to bear on one of the central city's major problems.

John Gardner has suggested that such activity is a must to avoid the pitfall of involved professionalism:

"A...subtle exit from the grimy problems of the day is to immerse yourself so deeply in a specialized professional field that the larger community virtually ceases to exist. This is a particularly good way out because the rewards of professional specialization are very great today, so you may become rich and famous while you are ignoring the nation's problems." 2

2 Gardner, John W. No Easy Victories.
New York: Harper & Row, 1968.

Part Eight

P E R S O N N E L P A R T I C I P A T I N G I N
T H E P R O J E C T

DIRECTOR

Robert Filep, Ph. D.

DISCOVERY CENTER COORDINATOR

Mrs. Pearl Gillette, B.A.

PROJECT ASSOCIATES

Mr. Grant Harrison, M.A.
Mr. Fred Niedermeyer, M.A.
Miss Sharon Polse, B.A.
Mrs. Ella Mitchell, M.A.
Mrs. Maryanne Levine, B.A.
Miss Maren Christensen, B.A.

TUTORS

Mr. John Moon
Miss Virginia Palmer
Miss Marie Williams

SECRETARY

Mrs. Phyllis Lessin

SUMMER STUDENT ASSISTANT

Miss Mary Clarkson

Grateful acknowledgement for their assistance is extended to:

Mr. Russell Weller of Colwell, Hopson and Associates, Los Angeles

Lucia and Peter Pearce, Pearce Research & Design, North Hollywood

Mr. Ted Curtis, Neighborhood Adult Participation Project (NAPP), Los Angeles

Rev. A. Rberson, Paradise Baptist Church, Los Angeles

Rev. Jesse Rowe, Evangelical Community United Baptist Church, Los Angeles

Mr. C. Jackson, Playground Director and Teacher, Main Street School, Los Angeles

Part Nine

S E L E C T E D B I B L I O G R A P H Y

- Berlin, S. N. Special learning problems of deprived children. NEA Journal, March 1966, 23.
- Bloom, B. C. Stability and change in human characteristics. New York: John Wiley & Sons, 1964.
- Cloward, R. D. Studies in tutoring. The Journal of Experimental Education, 1967, 36, (1).
- Cupp, J. R. An instructional program for 3 and 4 year old disadvantaged children. DARCEE Monograph, 1967.
- Ellson, D. G., Harris, P., & Barber, L. A field test of programmed and directed tutoring. Reading Research Quarterly, 1968, 3, (3).
- Gray, S. W., Klaus, R. A., Miller, J. O., Forrester, B. J. Before first grade. New York: Teachers College Press, Columbia University, 1966.
- Harrison, G. & Melaragno, R. Training students to tutor. Paper presented at the American Educational Research Association 1968 Annual Meeting, Chicago, Illinois, February, 1968.
- Hess, R. D., & Shipman, V. Maternal attitude toward the school and the role of pupil: Some class comparisons. Paper presented at the Fifth Work Conference on Curriculum and Teaching in Depressed Urban Areas, Columbia University, Teachers College, June-July, 1966.

Hess, R. D., & Shipman, V. C. Cognitive elements in maternal behavior. Monograph. University of Chicago, 1968.

Los Angeles City Schools. Instructional Bulletin of the Los Angeles City Schools. Characteristics and needs of disadvantaged children. Division of Instructional Planning and Services, Instructional Planning Branch, 1968, EC-246.

Miller, J. O. Research, change, and social responsibility: Intervention research with young disadvantaged children and their parents. DARCEE Papers and Reports, 1967, 2, (3).

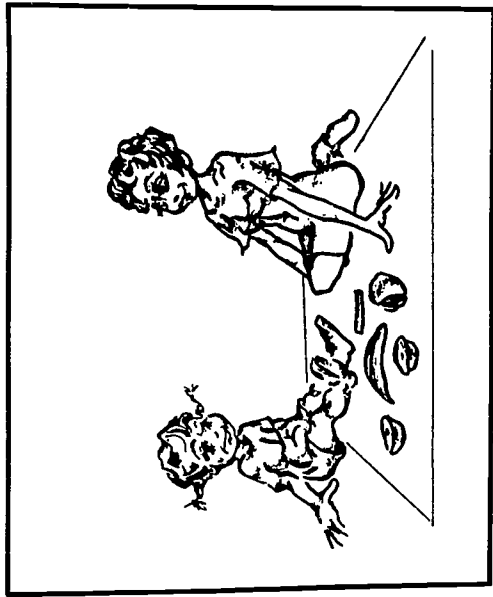
Mumbaur, C. Deprived and advantaged compared by Mumbaur on cognitive style. DARCEE Newsletter, 1968, No. 3.

Shipman, V. C. & Hess, R. D. Early experience in the socialization of cognitive modes in children: A study of urban Negro families. Paper presented at the Fifth Annual Conference on the Family and Society, April, 1966.

Part Ten

A P P E N D I X

STRUCTURED TUTORING SEQUENCE

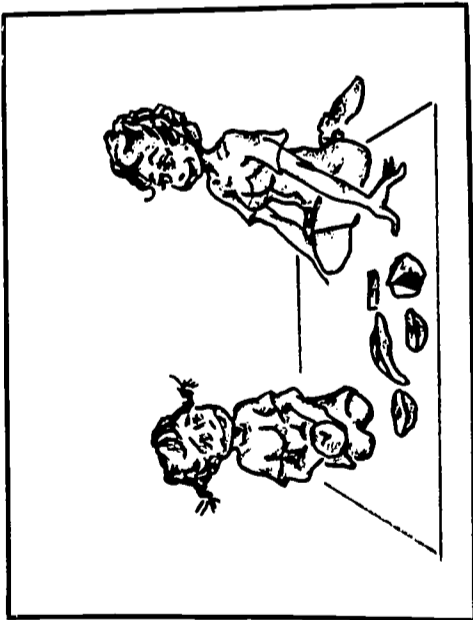


FAMILIARIZATION



TUTOR DEMONSTRATING IN
DISCRIMINATION TRAINING

SKETCHES OF ONE PORTION OF A TEACHING SEQUENCE



STUDENT MANIPULATING MATERIALS



CRITERION TASK