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ABSTRACT

This program initiated by the Central Cities Educational Development Center was designed to offer experiences which lay the groundwork for intellectual development and school achievement to underprivileged children two to five years of age. The Center has assumed a somewhat different composition and focus in each of the four years of its operation, beginning as it did as an experimental Title III project, with an enrollment of 182 children, taught by 10 teachers and 40 aides. During 1971-72 the Center was financed locally except for unexpended Title III funds authorized for followup research and had 286 pupils taught by 3 teachers working with 27 aides. Opportunities are provided so that each child may develop academic skills, a positive self-image, and expectations of achievement. Detailed findings from annual evaluation reports indicate that the Center has given young children the means to make significant cognitive and affective gains. (Author/RJ)

Model Programs

Title III--Elementary and Secondary Education Act

Central Cities
Educational Developmer. Center
Fort Worth, Texas

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
National Center for Educational Communication

INTRODUCTION

Childhood's earliest years are acknowledged to be the period of greatest cognitive growth, a time which sets a pattern for future development. But for many poor children, these years are instead almost completely empty of experiences which lay the groundwork for intellectual development and school achievement.

A program initiated by the Central Cities Educational Development Center, Fort Worth, Tex., was designed specifically to offer such experiences to underprivileged children 2 to 5 years of age. Through the center, opportunities are provided so that each child may develop academic skills, a positive self-image, and expectations of achievement.

Detailed findings from annual evaluation reports indicate that the center has given young children the means to make significant cognitive and affective gains.

The various operational arrangements researched and evaluated by this Elementary and Secondary Education Act title III project offer broad guidance to others who may wish to adopt, adapt, or modify this program for their own use.

PROGRAM DESCRIPTION

The Central Cities Educational Development Center for disadvantaged preschoolers, bases its activities on the truism that full participation in American socety demands certain abilities and traits. These include the understanding and use of standard English; the acquisition of basic skills and subject matter content; and the ability to think abstractly. They also include the facility to relate well to others, to participate as a member of a group, and—when the occasion requires—to assume a leadership role.

A program designed to teach different modes of communication, new ideas, and changed values, must be especially sensitive to the cultural background of the pupils involved. It must accept those cultural aspects which are brought to the school. It must also, begin all instruction at a level consistent with each child's experience and then carefully pace additional steps.

CONTEXT

Throughout its 4-year history, the Central Cities Educational Development Center has continued firmly committed to these principles and goals. It has, however, assumed a somewhat different composition and focus in each of its 4 years. The center began, as an experimental title III project, with an enrollment of 182 2- through 5-year-olds, taught by 10 teachers and 40 aides. During 1971–72, financed locally except for unexpended title III funds authorized for followup research, it has had an enrollment of 286 4-year-olds, taught by one head teacher and two supervising teachers working with 27 aides.

Its administrative staff has also changed. Originally made up of a director, a research manager, and coordinators of four program components—instruction, staff development, special education, and parental involvement—it now includes the director, an evaluation specialist, and a curriculum specialist.

The center occupies a former elementary school, located on the edge of the several school areas served by the project. The children are bused in at 7 a.m. to begin a work-play-rest day that continues until 5:30 p.m.. Their schedule is as follows:

7:00 a.m.	Children's arrival
7:15 a.m.	Extended language
7:30 a.m.	Breakfast
8:00 a.m.	Extended language/free play/learning centers
8:30 a.m.	Structured lessons
9:40 a.m.	Snack, restroom, rest
10:15 a.m.	Outdoor activities
11:00 a.m.	Structured lessons
12:00 noon	Lunch and nap
12:40 p.m.	Planning period
2:30 p.m.	Snack
2:45 p.m.	Structured lessons
4:00 p.m.	Outdoor activities
4:35 p.m.	Extended language/free play/learning centers
5:30 p.m.	Departure

The daily schedule provides large group activities, small group interaction, and independent activities. The number of children per class ranges from 15 to 18. Hence, it is feasible to divide them into three instructional groups. The three groups are then cycled through alternating periods of direct instruction and independent activities. Each period is concerned simultaneously with process, content, and attitudes.

ACTIVITIES

The curriculum has been developed to make reasonably certain that pupils acquire the skills necessary for success in school. It is highly structured and based on pupils' individual needs and deficiencies. Instruction falls into four general areas, selected through research on the needs of disadvantaged preschool children as well as on intensive staff observations of the children. The four areas are:

- Auditory training, including perception, localization, discrimination, and memory
- Visual training, including perception and memory
- Motor training, including gross motor, sensory-motor integration, and fine motor
- Language training, including phonology and syntax

The children are taught in small groups of five or six. Each child participates in four such groups each day. Most group lessons are designed to be taught in 15-minute periods. The lessons are organized into approximately 20 units, arranged in sequence according to the degree of difficulty. Basically, each unit is built around one topic. Occasionally, however, a unit will include a lesson not directly re-

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lated to the unit topic. The units begin with an initial introduction to school and proceed by focusing on self-awareness, family, home, neighborhood, and surrounding community. The concepts and skills inherent in these areas of study are reviewed and extended by the children as specific units are re-examined during the year.

At the end of each lesson and each unit, children are evaluated on their learning. Those who have not achieved the expected developmental gai undergo individual remediation.

A large part of the school day is also given to unstructured activities in which the teachers, too, are involved on a planned but flexible basis. These activities center around learning centers, language instruction (an extension of the structured language lesson), inside and outdoor games, free play, and breakfast, snack time, and lunch, naptime, and rest.

Finally, in addition to structured and unstructured lessons, the Central Cities program provides activities in music, movement, and art.

STAFF AND TRAINING

As the program has been implemented, the head teacher is the instructional leader for the center. Each of the two supervising teachers administers one floor of the center, assisted by two aides per classroom.

During the center's 3 experimental years, staff members had the benefit of special consultants and summer seminars for training in detecting certain characteristics in young children. Also,

team study and training took place daily, for 1½ to 2 hours, during the children's rest periods. Currently, this time is used by the supervising teachers to meet with their aides and help them analyze any special problems they may be facing in each classroom. The time is also used by the aides in becoming thoroughly versed in the planned activities and procedures set forth in the instructional guides.

MATERIALS

Schools wishing to adopt the program or a modification thereof will have the benefit of a series of instructional guides produced as a result of the extensive research and development during the project's title III funding.

The instructional guides carry lists of materials, including both commercial and household items, used for every unit of the center program. Most of the materials used are normally found in kindergarten rooms and can be obtained commercially.

PARENT INVOLVEMENT

As initially conceived, plans for this project called for extensive parental participation; but because many of the parents worked and there was no midday transportation to the center, it was found impossible to have large groups of parents continuously present. Instead, parent study/discussion groups and night classes were organized in elementary schools nearer homes, and periodic visits to the center, by bus, were arranged on a rotating basis.

The night classes serve two purposes: they upgrade parental skills and in so doing benefit the child, both directly and indirectly; they present opportunities to bring in speakers for the parents and to have discussions and interaction which provide information and further understanding of child-rearing practices.

Over an 8-month period, activities for parents, planned to complement and enhance the program for children, were as follows:

- October—Getting Acquainted with Parents, Film: "Characteristics of Children"
- November—Lesson Demonstration Using Children
- December—Selecting Educational Toys and Using Them To Develop Concepts
- January—Slides of Center Children, Their Progress and Their Needs
- February—Discussion with Each Parent About His or Her Child (While Other Parents Are Involved in Making Toys or Other Resource Materials)
- March—Group Discussion: Each Parent Tells How He Works with His Child
- April—Film—To be selected
- May—Group Discussion: Where Do We Go From Here?

At classroom meetings, the teacher presents each parent with a list of concepts and skills already taught the children. In addition, parents are given a list of specific activities recommended to reinforce the concepts and skills.

COSTS

During the experimental development period, costs for this project were approximately $3,000 per year per pupil. Those costs included the four program components—curriculum development, staff development, parent involvement, and research. They also included fees for consultant services for the Southwest Educational Development Laboratory. (A high proportion of adults to children was necessary in order to validate the developmental curriculum.)

In the operational stage, costs have been assumed by the school district, using other funds. They run approximately $800 per pupil. Included in program costs are food—breakfast, snacks during the day, and lunch—and dental and medical care. Emphasis has been given to blood testing and early detection of sickle cell anemia.

The center now relies upon paraprofessionals to a far greater extent than it did in its experimental phase. The program's director and its professional staff nevertheless expect it to be fully as successful as it was earlier in terms of pupils' achievement. This expectation is supported by the facts that the staff is well trained, there is continuing emphasis on staff development, and the structured curriculum developed during the project's first 3 years makes it possible to use paraprofessionals with optimum results.

EVALUATION

Evaluation of this early childhood program was designed by the Southwest Educational Development Laboratory, Austin, Tex., which also performed the ensuing statistical analysis. In the evaluation, a series of tests was administered to children at the center and to comparable children at day care centers. Thirty hypotheses were tested the first year and condensed to nine related evaluation questions during the second. Detailed findings and conclusions have been given in two annual reports, for 1968-69 and 1969-70. (A third evaluation was being processed by the laboratory at the time this assessment was being made.)

At the beginning of this project, neither the children in the program nor their controls in day care centers had achieved the level of development ordinarily expected in middle-class children. In the 7 months between pretesting and posttesting, however, the center children's intelligence distribution had approached a normal curve, and they made a mean gain of 10 points in IQ on the Slosson Intelligence Test. These findings were supported by results of the Peabody Picture Vocabulary Test.

Children at the day care centers achieved no measurable gain on the Slosson and 4.4 points on the Peabody.

During the second year of the project, the mean gain for 2-year-olds was 10.1 IQ points and 9.9 IQ points for 3-year-olds, as measured by the Slosson. Children who had been in the program the first year maintained previous gains and stayed at or above national norms but did not attain major new gains, again as measured by the Slosson.

The project 5-year-olds, however, made statistically significant gains on all three subscales of the Caldwell Preschool Inventory during the second year, demonstrating improved performance in personal-social responsiveness, associative vocabulary, and numerical and sensory concept development. The Auditory Test of Language, substituted for the Peabody during the second year, showed significant mean score gains as well.

One assessment of project instructional intervention indicated that project children 2, 3, and 4 years of age, who had not previously received any developmental aid, achieved substantially greater, but not statistically significant, gains than did day care children of the same age. Project 5-year-olds made greater gains than did both day care children and children in a target area public school kindergarten.

During the first year of the program, 40 children were identified as having "learning disabilities." These children made a mean score gain as measured by the Slosson of 12 IQ points. During the second year, the learning disabled children showed significant mean score gains in the Auditory Test of Language, substituted for the Peabody. They also demonstrated considerably improved articulation of consonants, as measured by the Goldman Fistoe, and eye-motor control, as shown by a subscale of the Frostig.

The Caldwell Preschool Inventory, administered to all 5-year-olds in the center, private day care, and public school kindergarten programs, indicated that project children scored above the 50th percentile on middle-class norms. Project children with learning disabilities were less successful, but their mean score was above that usually expected for pupils from disadvantaged backgrounds.

Data from tests administered by Fort Worth teachers to entering first grade pupils from the target area, including pupils with 2 years of experience in the Central Cities project, show that these "graduates" are ready when measured by scores on the Metropolitan Readiness Test or the Primary Mental Abilities Test, and that their state of readiness considerably exceeds that of their classmates who did not participate in the program.

A broad range of other significant data comes from center research. Among them are the following:

- Test results demonstrated in 1968-69 and again in 1969-70 that intervention is essential if disadvantaged children are to have a reasonable opportunity to be ready for school.
- These children can be given necessary language and cognitive skills and show significant improvement in attainment levels in tests measuring these skills.
- Intervention employing the Central Cities instructional program is more effective in producing cognitive and language enhanced performance than that of conventional day care programs or public school programs serving children from the same socioeconomic and ethnic backgrounds.
- Greater performance improvement is achieved by 3-year-olds than by 4-year-olds and by 4-year-olds than by 5-year-olds, indicating the need for early intervention. Moreover, improvements achieved at the earlier ages are retained by the pupils as they continue in the program, at least through age 5.
- According to the Minnesota Teacher Attitude Inventory, teachers who were more authoritarian appeared to be associated with higher gains in IQ development than were less authoritarian teachers.
- Results obtained from testing with the Caldwell Preschool Inventory, the Metropolitan Readiness Test, and the Primary Mental Abilities Test, suggest that most "graduating" 5-year-old pupils were ready for the first grade in terms of middle-class norms.
- Results with the learning-disabled pupils demonstrated the value of this diagnostic and prescriptive intervention program. While the mean scores of these groups are unlikely to surpass those of children not thus handicapped, the program can be expected to raise these children into normal levels of performance and readiness.
- When project children were separated into two groups based on whether or not they had been preceded in the program by older siblings, analysis indicated that those who had been preceded had higher posttest performance in intellectual development but not in language or physical and social development.
- When pupils were divided numerically on the basis of the level of education attained by their mothers, their initial IQ showed a difference but there was no significant difference in performance as measured by posttests.

REPLICATION

A first step for an adopting school would be a determination of the number of children to be involved, with limits set according to whether the program is to involve only underprivileged children or is to constitute a preschool program for all children. Location—whether of a facility such as a center or of a number of smaller more centrally located facilities, each of which could house parts of the program—must also be decided. In some instances, smaller facilities housing only parts of

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Since a preschool program means an expansion of the regular school budget, it must also be determined whether funds can be found for staff salaries, including professional members, aides, cooks, secretaries, and janitors.

A realistic timetable should be established, taking into consideration orientation, consultant input, selection of an interested staff, and training. During the planning period curriculum guides from the Central Cities program should be obtained for their guidance in training, required materials, and familiarization with the instructional process. Wherever possible, teachers in the new program should visit the Fort Worth center to observe the program operations. A staff exchange for a brief period of time would also prove beneficial.

Phasing in the program could be managed in several different ways. It might be initiated with a limited number of children, ages 2 through 5, and expanded in number during succeeding years. Or, it might begin with children aged 2 or 3 years, with a new group added each year until a complete program, ages 2 through 5, is reached. Children with learning disabilities may be taught with the other children or separately, or this aspect of the program may be postponed or not included.

The Central Cities curriculum guides are divided into developmental levels A through D, and thus offer various natural divisions of the total program and various alternatives in implementation.

Size and degree of experience and competence of the staff are open for experimentation and determination by the adopting school. One point, however, should be stressed: continuous inservice for staff development is vital and plans should be made accordingly.

Costs of the instructional guides and other written materials developed by this project will be determined when they become available for general use in the fall of 1972.

Further information on the center may be obtained from:

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