



THE CAROLINA
ABECEDARIAN
PROJECT

Frank Porter Graham Child Development Center



ABECEDARIAN

ˈab-ə-se-dar-i-ən \ā-bē-(i)sē-ˈder-ē-ən\ *n* [ME *abecedary*, fr. ML *abecedarium* alphabet, fr. LL, neut. of *abecedarius* of the alphabet, fr. the letters *a + b + c + d*]: one learning the rudiments of something (as the alphabet)

Researchers have long recognized that many children from low socioeconomic backgrounds fall victim to developmental retardation. Project Headstart, the first national program directed at this problem, attempted to compensate children for their social handicaps through an enriched early education program. Recent examinations of Headstart's failures, however, indicate that intervention must begin earlier in the deprived child's life.

The Carolina Abecedarian Project examines the effects on cognitive and social development of a longitudinal intervention program that begins with the infant. This program at the Frank Porter Graham Child Development Center (FPG) was initiated by Dr. Craig Ramey in September, 1972.

The major components of the Project include:

- A demonstration day care program;
- Health care coupled with health research;
- Development of a model curriculum for infant stimulation;
- Basic research into the intellectual, social and motor development of high-risk infants.



Dr. Craig Ramey

THE CHILDREN

Even before a child is born, warning signals indicate he may face developmental retardation. Project staff can detect these signals during the mother's last months of pregnancy from pre-natal records on file at N.C. Memorial Hospital in Chapel Hill. Multiple criteria are used for choosing infants to participate in the program. They include:

- (1) The last year of school completed by both parents;
- (2) Maternal attitudes and I.Q.;
- (3) Family income;
- (4) The family's social history.

Recommendations and observations are often drawn from local social workers in choosing Project participants.

Parents of both day care and control group infants are offered incentives for their children's participation in the Project. Parents are compensated for time spent in testing and interviews. Transportation for all project activities (day care, control group testing, maternal interviews) is free. All infants are provided free nutrition, health care, and disposable diapers not only as an incentive to the parents, but also to remove differences of health between the two groups that could undermine experimental findings.

Fourteen infants are expected to be added to the Project's day care program each year, in addition to a like number participating as a home-reared control group. As of January, 1974, a total of 56 infants were enrolled in the program.



An Early Morning Arrival

DAY CARE

The FPG Center building was completed in 1971 and provides a unique collection of laboratories, child care space, and observation areas. A section for infants from the age of four weeks through one year is provided on the fourth (top) floor of the Center. The nursery contains a crib for each infant, two playrooms, and a large hallway for feeding and the infants' play activities. It is staffed by four teachers and a supervisor.

Depending on his rate of development, a child will transfer to the Center's Demonstration Day Care Program at about one year of age. An open classroom for children through four years of age is located on the Center's second floor. Five teachers, a supervisor, and several student assistants staff the classroom.

Abecedarian research and administrative areas are located on the third floor of the Center. Six rooms comprising 750 sq. ft. of space are equipped with video tape recorders, a sound system, and electronic measuring devices used in experimental research.

The children's daily schedule is not rigid, but provides a predictable and comfortable routine into which novelty can be woven. Except for additional emphasis on group activities, the schedule for the preschool children is similar to that of the infants (four weeks to one year of age).

The daily schedule is designed to integrate the Project's activities in stimulation, research, and curriculum development. According to Dr. Ramey, "The design of the day care program for high-risk infants is one that is geared to discover and produce the optimal environments for early effectiveness."



Sample Daily Routine for Four-week to One-year Olds

A.M.

- 7:30 Arrival of children. Each child is greeted individually and parents are talked with. All children are changed and allowed a free play period within the large group.
- 9:00 Children are divided into groups; teachers play with groups.
- 10:00 Curriculum items, such as perceptual or motor training.
- 10:30 Nap time for the youngest infants. One-to-one game playing for the older infants. The "talking game", "Peek-a-boo", and other games used to provide contingency and object permanence awareness.
- 11:00 Change, clean-up, and serve lunch.
- 11:30 Lunch continued.

- 12:00 Nap time. Staff members eat lunch.
- Noon Short staff meetings occasionally.

P.M.

- 12:30 Teachers maintain daily records for each child. Accomplishments, emerging interests, etc., are recorded in short narrative form.
- 1:30 Individual attention for awake children.
- 2:30 All children gradually awakened.
- 3:00 Floor play or outdoor play.
- 4:00 Children begin to leave.
- 4:30 Individual play with remaining infants. Staff members begin to leave.
- 5:15 All children picked up by parents or taken home.

CURRICULUM DEVELOPMENT



The home life and surroundings of disadvantaged children are frequently unstimulating, contributing to the child's developmental retardation. And many day care programs that attempt to provide stimulation are unable to demonstrate that they have aided the child's development.

Abecedarian researchers are developing a curriculum for children under three years of age in which each item has been proven to accomplish specific objectives in the child's development. When complete, the curriculum will be inexpensive and easy to use.

Curriculum items are developed with five criteria in mind:

- Consumer opinions: what parents want for their children.
- Developmental theory.
- Developmental facts: standardized observations of infant behavior.
- Adaptive sets: behavioral styles that generate success.
- High-risk indicators: warning signs of deficits to be overcome.

One item, for example, encourages a young infant to lift his head. The infant is placed on a specially-designed pillow so that he will see his reflection in a mirror when he raises his chest. Research staff measure the success of the item in encouraging development and prepare an instruction sheet. Both the item and instruction sheet are pilot tested before final inclusion in the curriculum.

Over 150 curriculum items now have been developed for infants under one year of age. Project plans include development of items for children through three years of age.



RESEARCH:

Health

The motor, cognitive and social development of children depends heavily on their general physical health. Children from low socioeconomic backgrounds face a high risk for developing not only mental retardation, but also respiratory disease and complications such as meningitis.

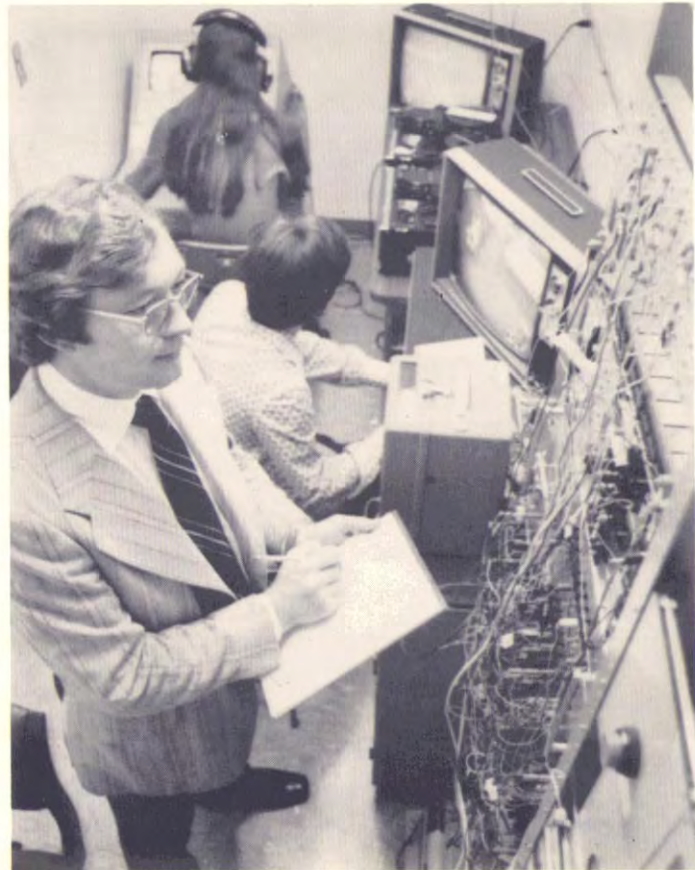
One of the primary responsibilities for the FPG health program is to provide good medical care for the Abecedarian Project infants in an effort to eliminate the effects of disease on the child's development. In addition, the health program provides data which can be used to develop better health care techniques for other day care programs. Studies already completed at FPG indicate that children over one year of age participating in day care programs which observe basic principles of sanitation show no higher incidence of respiratory disease than do infants who remain at home. Infants under one year show a slightly higher incidence. Research into the causes and consequences of respiratory disease is continuing.

RESEARCH:

Social

The effects of the infant's peer and family relationships on his development have not been fully identified. Certainly the success of any stimulation program will depend in part on the pattern of relationships which the child brings with him to the day care center.

The Abecedarian Project uses both the interview and experimental techniques to map these relationships. In one study, a mother and child are placed for one-half hour in an observation room furnished like a home living room. The frequency of the mother's interaction with her child and characteristics of the child's behavior will be compared with data taken from previous interviews with the mother and from a random sample drawn from the local community. It is hoped these observations will identify characteristic styles of interaction and determine what influence early day care has on the mother-child relationship.



Staff Record Data. . .



. . . Of Infant Learning

Cognitive Development

Experiments provide data in three developmental areas:

- instrumental learning;
- visual and manipulatory exploration;
- vocal and communication skills.

These studies are aimed at discovering how an infant can be helped to learn that he can control what happens around him. This principle is thought to be particularly crucial among high-risk children, many of whom develop a belief early in life that they are helpless to change their situations.

Interviews and Standard Assessments

In order to evaluate the long-term effects of the Abecedarian Project, staff take careful measures comparing the day care group with the control group. The Bayley Scales of Infant Development are administered to each child every three months during the first year, and semiannually thereafter until other standardized tests become more appropriate. Parental attitudes are measured by scales developed by Dr. Earl Schaefer of the FPG staff. Other measures include: Parent-Child Information Interview, Rotter Internality-Externality Scale, and the Home Stimulation Inventory.

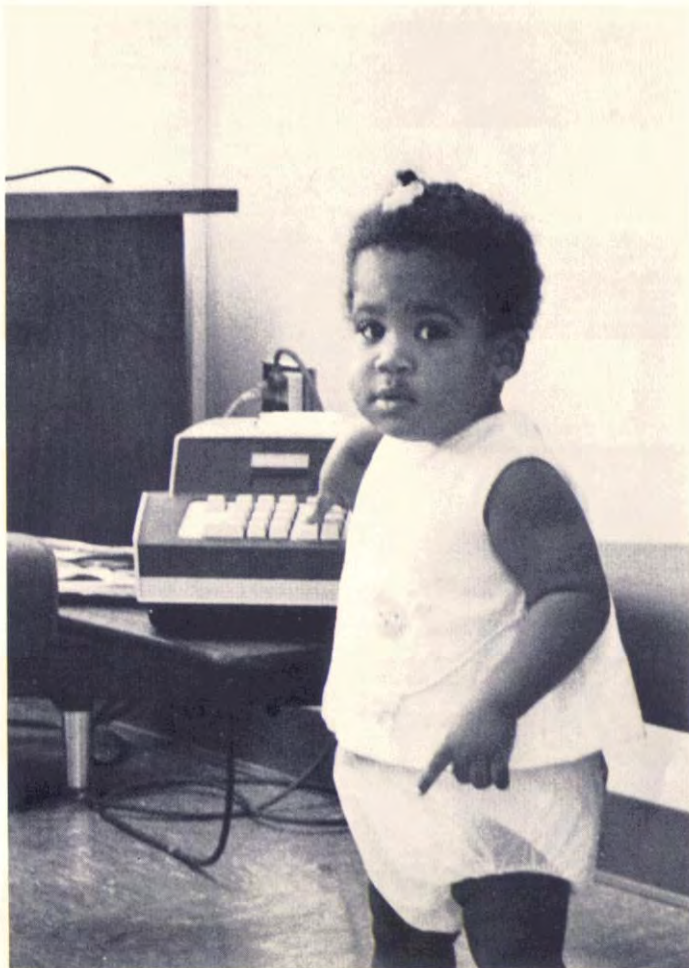
CONCLUSION

It is hoped that the Abecedarian Project will provide more complete knowledge on how to prevent developmental retardation that falls most heavily on the poor. Through a demonstration day care program, the development of a model curriculum, and experimental research, the Project is intended to deal comprehensively with the issue of how children can be helped to develop to their full potential.

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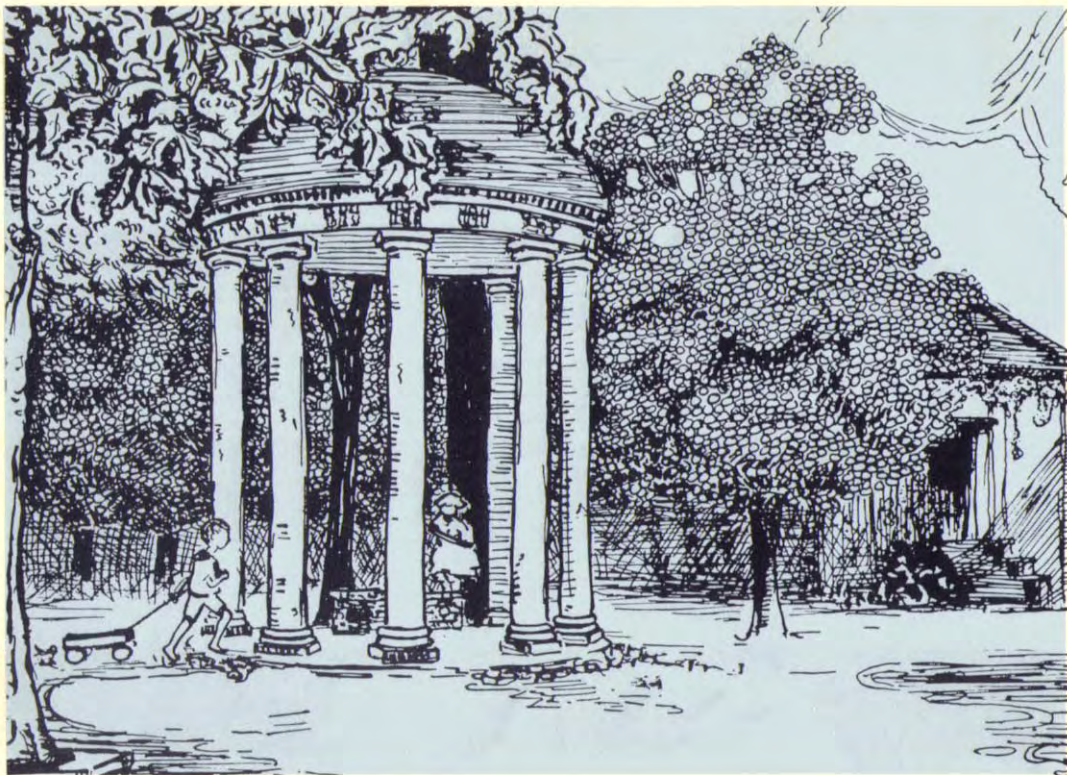
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