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ABSTRACT

The first of seven conference papers on early childhood education considers environmental influences and environmental space planning as related to early childhood education centers. New teaching roles in early education of handicapped children are defined and implementation of programs in the public schools for aurally handicapped children under the age of 3 years is discussed. Additional papers focus on home based learning programs for handicapped preschool children, parents as educational change agents for infants in a home visiting intervention program, the effects of a token system on inappropriate talk-outs and out-of-seat behaviors in a third grade class, and special education for normal kindergarten children with subtle developmental learning delays.

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Exceptional Children Conference Papers:
Early Childhood Education

Papers Presented at the
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Council for Exceptional Children

**ENVIRONMENT &
EARLY
EDUCATION**

Gloria Small and Walter M. Herip

CASE WESTERN RESERVE UNIVERSITY
DEPARTMENT OF EDUCATION

Council for Exceptional Children
Environment and Early Education

Educators are constantly talking of the process of learning as one which involves the "interaction of a learner and his environment." Many observers of early learning, including the famed Rene Spitz, in his studies of "hospitalism" have demonstrated the drastic effects which maternal deprivation can have on young infants. More recently, cases of "masked maternal deprivation" or "failure to thrive" have been diagnosed for infants who, although being raised at home, have been deprived of appropriate emotional and environmental stimulation.

The word "environment" holds as many different meanings for individuals considering the word as the disciplines in which they are trained. For the ecologist, it may recall a balance between the world which man has created and that of nature; for the psychologist it may describe the effect of humans and physical objects in the immediate world on adults and on children; for the anthropologist it may describe a cultural milieu. For the teacher in an early learning center it may describe a complex interaction which occurs in the classroom setting involving ways in which children relate to each other, to the teacher or other adults, and to the equipment and toys which have been installed in the center as tools for teaching or for free discovery and use by the children.

We are using the term "environment" here today to refer to the physical setting of an early learning center, both indoor and outdoor, whether it be a nursery school, head start center, day care center, or preschool for children with developmental and emotional problems. What we will present today is the

background of a program entitled alternately "environmental space planning" and "environment and early education" presently being conducted at Case Western Reserve University, under the auspices of the E.P.D.A. program at the Education Department, and in part funded by a private foundation in Cleveland, The Martha Holden Jennings Foundation. We will discuss the background of the program, the hypotheses upon which the present program is based as well as its aims, a description of the program, which will be illustrated by rather comprehensive slides of one of the centers at which we are working. We will conclude with a discussion period for questions and observations -- and will be available later to meet with those of you who are particularly interested in the topic (to present an observation form which we have developed.)

The background of the current program is roughly this: In the fall of 1970, after a visit to a local preschool for children with developmental and emotional problems, it occurred to us that, although the educator could pay lip service to notions of effective physical facilities and appropriate environments, that the issues of environmental design could perhaps most effectively and naturally be dealt with and explored by designers, by artists, and by architects, whose working knowledge included such understandings as the psychological effects of color on people, as the varied effects of manipulating shapes and objects in space, and whose skill in designing were basically skills of problem solving.

A project was begun with four fifth year industrial design students at the Cleveland Institute of Art, who worked in close collaboration with the staff at the Mental Development Center Preschool (the facility visited)

and in conjunction with the Education Department at Case Western Reserve University. The project involved intensive observation of the mentally retarded children at the center, discussion with the teachers of specific needs of the children, library research into problems of educating retarded children, eventually into the formulation of design plans to help the teacher in her work with the children in such areas as self-concept and self-knowledge, gross motor activities, and eye/hand coordination. With financial support from the Associated Cleveland Foundation, it became possible for the students to actually construct their designs and leave the completed pieces of equipment as contributions at the center. The project was completed in June, 1971.

In evaluating the results of last year's work, we felt that we had in fact introduced the designer into a world of social problems where his skills could be utilized. We had demonstrated that teachers, by being able to define their needs, could work with designers. Moreover, the project was not an unqualified success. This was in part due to the fact that the designs were planned with one particular physical facility in mind, but the Mental Development Center was forced to move to new quarters over the summer. We also felt, however, that demonstrating that design skills could be used to enhance an environment, including an early learning center was not as new and startling a bit of information as we might have liked it to be. Also it was not enough since, obviously not every early learning center could have at its disposal a cadre of trained designers to assist. We speculated that if learning is in fact, "the interaction of learner and environment" the teacher could be viewed as the manager of a particular learning environment. We developed several hypotheses which were instrumental in helping us plan for and develop the program we are presently engaged in.. These are:

1. There is no one "right" or "perfect" room for young children to learn in; and any facility which has met local safety and code regulations could be a suitable facility or adapted to be a suitable facility.
2. There are facilities which are more functional than others. This is due to the fact that planning in such locations has included considerations of the characteristics of children, the teachers style, educational goals and curriculum, and elements of design.
3. Design is essentially a "problem solving" activity.
4. Teachers can be trained to be designers of their own facilities through a process of observation, questioning, and introduction to the problem solving method of the designer.

Desirous of broadening the impact of last year's program, and convinced of the validity of the above hypotheses, we developed the program which we shall describe. We were eager to prove that the teacher, in being trained to consider and enhance her own environment could in some positive ways (which we did not elaborate on) effect the equation of Child plus environment equals learning. The present program was designed thus: and is presently being implemented in Cleveland. Four physical locations were found to serve as "model sites." In each case, discussion about the basic hypotheses and aims of the programs were discussed with the appropriate Director. In each instance we found much support and enthusiasm and a desire to participate. The four locations include the following:

1. The Mental Development Center where we had first worked last year (It seemed logical to continue to further the work begun there).
2. A Day Care Center at a public housing facility, run by the Day Nursery Association and supported by federal antipoverty Head Start funds.
3. Two Head Start Centers, run by the Greater Cleveland Neighborhood Centers Association. One, the Goodrich Bell Center, is located in the Cleveland ghetto, or "target area" as it could more politely be termed, of Hough, an area which received national attention as a riot torn area in 1966. It is this center, and the work there, which we shall present to you with slides.

Four teams were set up to work, one at each center. Each team consists of an E.P.D.A. fellow and the teacher employed at that center. Each team is participating in the "on site" project and in seminars which were conducted weekly from September through January, 1972 - and which are now being conducted once a month and will be conducted once a month until the completion of the program in July, 1972.

The "on site" work at each center involves four main phases:

1. Observation of the classroom as initially set up at the beginning of the school year. This, in essence, represents the "before" portion of the program. Observations were recorded on slides and, along with other discussion topics, were analyzed by the total group during the weekly seminars.

2. Rearrangement of the equipment in the setting with no expenditure of funds. After observation and discussion in seminars, furniture was rearranged by a plan worked out in each team, to maximize use for teachers and children.
3. Redesigning the environment, including a budgeted amount of money for each center, again, according to a plan worked out in each team, with our assistance and occasional input.
4. Evaluation and possible adjustment of the designs.

In all of the centers we are presently tackling phase 3, redesign of the environment. This was made possible by a grant from the Martha Holden Jennings foundation mentioned earlier.

The purpose of the seminars, which were and are an integral part of the program, was to consider ways in which needs of children, needs of teachers, and elements of design could be "plugged in" to the design of the physical facilities at each center. Introducing the notion of "form following function," so basic to design and architecture students, we attempted together to analyze needs of each setting and thereby find good design answers which would assist the teacher in her work of guiding, teaching, and managing young children. In each case the old cliché often applied to children, "Find out where they are and then proceed" was adhered to in reference to the teachers. By this I mean that we did not directly attempt to criticize a teacher's notion of child development and education, but merely to include them, whatever they may have been, as part of the total planning considerations. We do feel that some teachers, through what were (we hoped) non threatening discussions about "environment" came to question some of their expressed or implicit attitudes toward children and teaching.

The question is, believing that an effective classroom environment results from the equation: Design plus Teacher plus Child equals effective learning environment, "How do you plug considerations of the elements of good design, the teacher, and the child into your planning?"

The first issue to deal with is that of design. Whether, we are trained artists or designers or not, we are all human, and will react to the design of facilities whether we are aware of what we are reacting to or not. For example, whether child or adult, scale makes us feel a certain way. The adult visitor to Trinity Cathedral or Notre Dame is going to be influenced by scale. The child of two or three in a room planned for giant adults is going to be influenced by scale. Whether we stop to analyze our reactions or not, we would feel very differently in a messy, cluttered room than we would in a neat and orderly one. We have attempted to introduce some design concepts into our work and believe that some information about visual effects on children and adults can be vital to the teacher in planning her effective room. Some basic design elements which we considered are:

1. Visual clutter - the eye is distracted by too many and un-coordinated demands for attention
2. Scale - size relationship of individual to his physical surroundings
3. Space utilization - the size of each room presents its own limits
4. Traffic patterns - the routes or paths of movement set up by placement of objects in a setting.

Next, let's turn to the question of the teacher and to our hypotheses about teachers in relation to environmental design. We believe that teaching is an art, and that there is much of something personal, individual,



perhaps spiritual if you will, in the way the teacher works. We believe that it is valid for each well trained teacher to develop her own unique style which is a combination of professed educational goals and objectives and her personality and techniques for working with young children. Since we believe in individual differences, we wish to allow the teacher the right to develop her art by her own unique combination of insights and talents. We believe, further, that the physical environment, by this we mean areas or units or equipment, installed so that children can learn and play, should work for the teacher as well as the child. For example, in Britain, shortly after the Plowden Report was published many classrooms were converted from what we would call traditional elementary classrooms to "open classrooms." The "traditional elementary school classroom" tended to include (let me refresh your memory), rows upon rows of stationary seats with stationary desks all faced frontward where there was a non stationary teacher's desk placed in front of a blackboard. The open classroom, by contrast, included typically, "learning centers" or interest areas, not rigidly defined by stationary desks. Several small tables and chairs might serve to mark off areas, and articles and objects of interest to children were often on hand. The boom picked up, and we now have in America many "open classrooms" or attempts at them. There is nothing magic about the room arrangement, however. If the teacher is not an "open teacher" but is a more traditional one, the more open room will not be an asset to her in her work. Stories are told about pod type buildings where children are to be working in clusters. However, a visitor to such a place is all too likely to see a traditionally trained teacher redefining her own "territory and almost inventing a "front" and "back" to the room so that she can lecture. For her and her orientation,

the traditional classroom, in fact, would undoubtedly prove more effective. We believe that what is important is a match, that old question of the problem of the "match", this time in terms of teachers and equipment, between the teachers style and what she uses in the way of space and teaching equipment, between the teachers style and what she uses in the way of space and teaching equipment - an agreement, if you will. How does one determine whether there is such an agreement? What we propose is an approach not too unlike that of Curriculum and Instruction people. And in fact, we believe, that in an early learning center, much of the "curriculum" of any center is to be found in the learning material itself. As both Piaget and Montessori have indicated, pre schoolers learn through direct experience with concrete objects. We propose that teachers define their philosophies, goals, and objectives, then question themselves as to how a learning environment could help to further these objectives. Tentative solutions are suggested, implemented, and then evaluated. This is not too unlike the tack which Maria Montessori used. For example, in "The Montessori Method," Dr. Montessori states some of her beliefs about the way children should learn and then goes on to design and plan for an environment and for "didactic materials" to further implement those beliefs. She states that what she is interested in is "the liberty of the pupils in their spontaneous manifestations" and having the child learn "to command his movements": (p. 84) To this end, she says the following:

"The principal modification in the matter of school furnishings is the abolition of desks and benches or stationary chairs. I have had tables made with wide, solid, octagonal legs, spreading in such a way that the tables are

at the same time solidly firm and very light, so light, indeed, that two four year old children can easily carry them about. These tables are rectangles and sufficiently large to accommodate two children on the long side, there being room for three if they sit rather close together. There are smaller tables at which one child may work alone.

I also had designed and manufactured little chairs. My first plan for these was to have them canvas seated, but experience has shown the wear on these to be so great, that I now have chairs made entirely of wood. These are very light and of an attractive shape. In addition to these, I have in each schoolroom a number of comfortable little armchairs, some of wood and some of wicker."

Viewed in one way, then, Dr. Montessori stated educational philosophy and set to work to design an environment and didactic equipment which fit with her basic philosophy. If one's basic philosophy and objectives differ, so may one's notions of, and solutions towards an effective environment.

To further illustrate the point - let's consider two different teachers with different educational objectives, goals and orientations and indicate ways in which their planned environments might vary to help them meet and be "in agreement" with their beliefs and styles.

Educational philosophy number one: Children must learn, most of all, to develop a feeling of independence and competence. This is vital to the development of a healthy self image. It is through control over one's environment, above all, that one develops the sense of mastery and feeling of competence.

The early learning center planned to meet such a philosophy might include one, or many opportunities, for group play. Toys and equipment in

the center might be those which can be shared and used only through cooperative effort (a see saw, for example, might be included).

As for the child, how do you plug in considerations of his characteristics and needs into the plans for an early learning center? What we propose is that, armed with some basic design knowledge, a commitment to certain clearly specified educational goals and objectives, and some tentative strategies for equipping and arranging a facility, the teacher observes individual children at play and at work in the center over a prolonged period of time. Perhaps she records these observations on a chart. In any event, she uses these observations of each child's interaction with equipment as a guide to the children's areas of competence, interest, and perhaps to learning styles.

It is too early for us to assess the full validity of our approach at this point in the program. However, we would like to report that we and the E.P.D.A. fellows have been asked to conduct several workshops for local Head Start staff members, have written two articles for the Cleveland Association of Young Children, and are presently exploring ways in which this "Problem solving approach" to environmental design for early learning can have wider community impact.

MAY 1 1972

NEW TEACHING ROLES IN EARLY EDUCATION
OF HANDICAPPED CHILDREN

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Paper Presented March 24, 1972 at the 50th Annual International
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NEW TEACHING ROLES IN EARLY EDUCATION OF HANDICAPPED CHILDREN

The Need for Teachers of Preschool Handicapped

The past five years have seen a tremendous growth of interest in the area of early childhood education for handicapped children. For many years a few private agencies, groups, and some public schools have maintained early education programs. Only recently have a significant number of states initiated public school classes for the young impaired child. As the result of such legislation in Texas, two administrative arrangements exist whereby programs for preschool handicapped children between the ages of three and six may be established in public schools. School districts may submit a plan for developing a comprehensive special education program (Plan A). State support for early childhood education classes or other services is included once the plan is approved. A special developmental proposal can also be submitted should a school district choose not to implement Plan A. If the special plan is approved, state supported services can be initiated. During the current school year (1971-72), 29 school districts are operating under Plan A and eight have been approved for special developmental programs in early childhood education for the handicapped. A big increase is foreseen for next year, with approval for approximately 62 comprehensive and 12 special developmental programs. The resulting demand for specially

trained and qualified teachers is high and cannot be filled by any teacher training institution in the state at present.

Factors Influencing the Organization of Early Education Classes and the Roles Teachers Will Play

Will a pattern of self-contained classrooms, each with its special teacher and possible teacher aide(s) develop? At least two major factors tend to indicate that this will not happen. The first factor is the likelihood that only some of the educational programs for preschool handicapped children will be under the auspices of the public schools. Should the family so desire, age limitations on eligibility are likely to be swept away and services offered to all children and their families from birth on up to the time for entry into first grade or the academic program. Further, there is a very real possibility that some type of Federally supported day-care services will be authorized. It is likely that the private industry will be heavily involved in providing required services. Special Education Plan A in Texas provides the means whereby private services can be contracted for by the public schools. Doubtlessly a variety of delivery models will emerge in both public and private sectors. Both the lowering of entry age requirements and wide-spread day-care services will tend to militate against a "self-contained classroom" model since there will probably be little resemblance between the activities of the new programs and those that have commonly occurred in special education classrooms. Should the demand for services prove as great as expected it will be impossible, in terms of trained man-

power and finances, to staff these programs with highly trained undergraduate or graduate level teachers. The Office of Child Development has recently introduced the role of the "Child Development Associate", an individual trained at the A.A. level. This conceptualization of the teacher of young children and of the child care worker may signal the prototype for staffing programs.

Yet there will certainly be roles for specially trained teachers at the B.A. and M.A. levels in private sector or social service agency programs as well as in those programs that develop within public school settings. With day-care programs, perhaps a team of early childhood teachers would serve throughout an entire community to work with individual early child development centers in curriculum development; creation of instructional materials; consultation and demonstration teaching for day-care staff; inservice training; and coordination of parent education and involvement. The special education person(s) on the team would have the additional functions of diagnostic teaching with high risk children, direct observation in the regular care setting, development of special instructional materials, and perhaps maintenance of a special care setting for those children whose developmental and learning problems make inclusion in large group care and teaching inadvisable.

A second factor is the current impetus to maintain the handicapped child in the mainstream of education by providing a broad range of special supportive services. In order to implement this broad goal the following pattern may emerge in

public schools. Early learning centers could be established either within existing facilities or separately. A full range of semi-professional and professional staff would man the center, e.g. instructional aides, teacher assistants, teachers, resource and coordinating teachers, and diagnostic teachers. A special early education resource and coordinating teacher would serve as a helper and consultant to regular teachers in the areas of: a) assessment of children's needs; b) educational planning; and c) selection and development of instructional materials. Such a teacher would be doing inservice education with other teachers. He or she could also maintain, as necessary, a specialized learning environment for small groups of exceptional children. At times this special class could serve a diagnostic function for children about whom special questions arose. Coordination of the entire learning center's parent education and involvement efforts might be another responsibility. Such a role is seen as supportive to and integrated with the regular educational program rather than separate from it. Experience has shown that there are some children who will need specialized placement for at least a considerable period of time. The special preschool resource and coordinating teacher should be able to provide this service also.

Location of the program with regard to proximity of sophisticated ancillary services to the possibility of maintaining a centralized educational center for preschool handicapped children also has something to say about the types of

programs that will evolve. In the larger urban areas, specialization may occur so that the special preschool resource and coordinating teacher might be charged with coordination, supervision, and inservice training of other personnel who work with the preschool handicapped. In rural areas the program could be comprised of itinerant home teachers-parent trainers. Another possibility would be a parent cooperative early learning center in which a special education preschool teacher would function primarily as a parent trainer and coordinator with special emphasis on inservice education in the areas of curriculum, teaching practice, and early child development.

In summary, two major factors indicate the development of a variety of roles in the field of early education of handicapped children. These forces are: a) the inevitable development of a variety of new models for delivering publicly supported services; this field will not be the exclusive domain of public education, and b) the impetus to avoid labelling and segregating the exceptional child. Consequently, there will be a high demand for teachers and other educational specialists in early childhood education of the handicapped who can fill supportive, specialized roles. The various possibilities of programming have been allowed for in the Special Education Plan A in Texas.

Training Resources and Coordinating Teachers

At The University of Texas at Austin, the Staff Training Program, Department of Special Education, has been developing

and defining the roles of individuals whom we might call resource and coordinating teachers in early education of the handicapped. The roles have been broadly conceptualized as coordination of teaching efforts of others; serving as consultant and resource person for less highly trained or less specialized early childhood personnel; serving as a diagnostic or clinical teacher for children about whom there are special concerns or questions; and serving as a teacher for children who need temporary or long term small group placement in order to meet their special needs. The following general functions of a resource and coordinating teacher give further illustration to the role: a) to understand and use the framework of child development to develop educational settings and experiences for children; b) to develop procedures for assessing children's developmental level and learning skills; c) to use information regarding children's developmental level and special learning needs to develop general curriculum for the group and an individualized educational program for the child; d) to educate for and to involve parents in the early stimulation and education of their children; e) to select published materials and to create new adapted materials to instruct the preschool handicapped child; f) to know and to use the ancillary resources of the community (e.g. social work, psychology, medicine, child advocacy, public health); g) to understand and apply small and large group dynamics to the roles of adult education (inservice education of peers) and coordination of teaching efforts; h) to understand and apply interpersonal skills in parent, child, and staff relationships; i) to understand and

apply research utilization skills and to understand and apply principle of program evaluation and feedback mechanism; and j) to develop the attitude that continuing education is essential in programs that dare to attempt to change the course of human development.

In order to train individuals to serve in roles such as master teachers, teacher consultants, resource teachers, inservice trainers of teachers, educational specialists, coordinating teachers in the area of early childhood education for handicapped children (the specific role depends on the administrative structure of the special education program in the school system which employs the trainee and local, idiosyncratic needs) a graduate level training program was established at The University of Texas at Austin during the 1970-71 school year. We have referred to the trainees as master teachers-facilitators of training. This is an awkward title, but it is one which does connote the two domains of skills: a) diagnostic-prescriptive, resource teaching and b) consultative teaching, inservice training which we are attempting to develop.

Our approach is, in general, consonant with certain trends in teacher education in special education as discussed by: Delp (1968); Glavin, Quay, Annesley, and Werry (1971); McKenzie, Egner, Knight, Perelman, Schneider, Garvin (1970); Sabatino (1971); Schwartz (1971). More particularly in the same spirit as Stephen Lilly's discussion (1971), we feel that special educators can best serve education and the special needs of children, best avoid the negative effects of labelling or categorizing the child, best accomplish financial cost effectiveness

if they, the special teachers and other special education personnel, serve as inservice trainers. Such a role implies that they themselves have assessment and teaching skills with both individual children and groups of children. It also implies that these individuals must develop a sensitivity to group dynamics and interactions. Most importantly they must have considerable interpersonal skills in bringing to bear their own resources in the most effective ways so as to facilitate educational innovation and individualized programming for the young handicapped child.

The program can be described in general terms as one in which: a) practical experience and theory are integrated from the beginning of training; b) training is interrelated; practical experience is provided in a setting where trainees can deal with educational and family problems of young children who demonstrate a variety of developmental and learning disorders; and c) we attempt to develop generalist skills in assessment; group and individual teaching; parent and family education and involvement; and interpersonal skills (individual and group). We also try to develop professional identity, utilization of community resources, and research utilization and program evaluation skills.

The training sequence is organized as a graduate level program leading to the Master of Education or Master of Arts degree in one full year of study. This amount of time to completion presumes sound background in special education, early childhood education, or child development. For individuals who already have a Master's level degree in some related area, we

provide a year of work which can lead to professional development credit, certification, or a special certificate developed by the program which indicates the nature of training and the types of competencies achieved.

Organization of the Program

Orientation. An orientation period is directed at an overview of special education as a profession and various considerations of study in the field. Goals, objectives, and procedures of the training program are explored. The structure of public education, state laws, and federal laws are considered. The various university-based resources for use during the year are identified. Journals, national meetings, state meetings, ERIC, the various indices, are all presented with emphasis on research utilization and information seeking strategies. As opportunities permit, trainees make their first home visits to interview parents and observe children who are applicants for our special preschool classes.

The Fall Semester. Course work during the Fall consists of a block of 12 semester hours taught or supervised as part of the experimental program.

Classwork

- 1 hr. equi.* - early childhood education information base
- 1 hr. equi. - early childhood education for handicapped base
- 1 hr. equi. - child development base
- 2 hr. equi. - parent education and involvement correlated with practicum

* hr. equi. = semester hour equivalent

Classwork (cont'd.)

- 1 hr. equi.* - developmental assessment
- 2 hr. equi. - individualized teaching skills and behavior modification techniques

* hr. equi. = semester hour equivalent

Practicum

2 hrs. of practicum (minimum of 1 1/2 hrs. per day, 4 days per week). This experience is managed in the Project's special preschool and is coordinated with parent education and involvement, developmental assessment, individual teaching skills, and behavior modification.

2 hrs. of group dynamics and inservice education principles.

Fall Semester Practicum. The Project operates a non-categorized preschool for exceptional children ages two to six. All types of developmental and learning disorders are represented in the classroom. Thus trainees are exposed to a variety of problems representative of those which they may find on the job. At present there is a total enrollment of 20 children in the morning and afternoon sessions. During the Fall term, students observe, participate as teacher assistants and teacher aides, and are responsible for parts of the daily program and organize parent education and parent support activities. Trainees each complete a number of individual behavior modification and prescriptive teaching projects. The events and experiences of the practicum serve as a basis for discussion in weekly staffing

meetings and in course work. Course work includes, in addition to the 12 hour block described above, one course in one of these areas: special education survey; early education survey; language acquisition; personal and social development; cognitive development; or graduate special education courses in any area of handicapping.

The Spring Semester. Spring course work comprises a six hour block of time allotted as follows:

Classwork

- 2 hrs. equi.* - group teaching skills
- 1 hr. equi. - developmental assessment

* hrs. equi. = semester hour equivalent

Practicum

- 1 hr. equi.* - group dynamics and inservice education
- 2 hrs. equi. - practicum

* hrs. equi. = semester hour equivalent

Spring Semester Practicum. Students are organized into two committees during the Spring term. One group is responsible for organizing curriculum; teaching; and maintaining all records, parent education, and support work for the morning class. Another committee serves the same function for the afternoon group. What started as an ordinary preschool class is transformed by students into a specialized class with adapted curriculum, individualized program options and teaching with small groups. We encourage an eclectic curriculum. All students are required

to serve as facilitators for group planning during a two to three hour session once a week. All teach children each week and also serve as teacher assistants. Therefore all have at sometime during the semester opportunities to coordinate and consult with teachers, teacher assistants, and teacher aides. All gain experience as part of the group effort in mounting and maintaining the parent support and education program. The trainees arrange for parent participation in the preschool and parent group education. The other nine semester hours of course work include work in special education, child development, early education, and so forth.

The Summer Semester. During the Summer term all course work is predetermined. The central experience is that of the internship in a work setting outside the program in an early education program, day-care center, clinic, Head Start, and so forth. Those students who are completing degrees write their theses or technical reports, and each trainee is enrolled for an independent readings course related to group work and in-service education. Usually readings are pertinent to the internship experience. One group of graduates has completed the program to date. These former trainees are filling roles such as: a) coordination of volunteer services and parent education in a community agency; b) resource teachers in learning centers for emotionally and behaviorally disturbed children; c) parent cooperative nursery; d) information retrieval and dissemination with our project; e) assessment and parent work coordination with Head Start in a major metropolitan area; and f) resource person

in a university setting - planning, organizing and conducting workshops.

Summary

Analysis of current developments by the staff of our program indicated that present special education organization and structure needed to be reevaluated. To fit into the new structures, new types of educational specialists must be trained. We believe that they should have both specialized teaching skills and capability to serve as the nucleus for involved, inservice education programs in the field of early education of handicapped children. In early education for the handicapped we have an exceptional opportunity to test the integrated, non-categorized, non-labelling approach to educating exceptional children. This opportunity is challenging enough that it should engage the exceptional attention and efforts of trainers in the field of special education for a long time to come.

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IMPLEMENTING PROGRAMS FOR THE UNDER THREE'S
IN THE PUBLIC SCHOOLS

(The Young Hearing-Impaired Child)

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INTRODUCTION

There is a tendency for a great many preschool programs involving the hearing-impaired child and his parents to be short-lived. They are like shooting stars that cross the firmament and disappear. Assessment of the current status of such programs (Northcott, 1971) prompts the conclusion that services and programs are fragmented and exist primarily in the private or university sector which is not legally responsive to an open admissions policy or to certification and program standards established by a state department of public instruction.

At the same time, the rights of a handicapped child are being insured through class action suits in our courts. They focus upon the present exclusion policies relating to handicapped children and demand assurances that all children are eligible to receive services based upon educational needs on the premise that medical labels are often diagnostically and psychologically unsound as a basis for prediction of performance in an educational setting.

It is the inherent right of every hearing-impaired infant to be enrolled in a public school program, or in a facility under contract with the public schools, when the diagnosis of hearing loss has first been established and the psychological needs of the parents are at a peak.

RATIONALE FOR PUBLIC SCHOOL RESPONSIBILITY

If a child is enrolled and programmed by his local district of residence, the cascade of educational services (Deno, 1970) can then be utilized appropriately for hearing-impaired children from infancy through age twenty-one. Each child is assured of an individually prescriptive educational program including partial or full-time integration as his behavioral changes dictate, with continued monitoring by special education personnel to insure mobility from one educational setting to another.

Local School Board acceptance of the principle of accountability will depend upon the hospitable climate provided through state leadership, local and state fiscal support, teacher education and certification, and willingness of day care center staff to make suitable accommodations to receive hearing-impaired children of preschool age.

ASSESSING DEFICITS IN THE SYSTEM

An inventory of deficiencies in the average state reveals the absence of:

1. a census or other systematic means of determining incidence figures upon which to project program and staffing needs,
2. a state plan to mandate regionalization of educational services
3. sufficient professional staff to implement a preschool service delivery system
4. an existing system for the flow of medical and other diagnostic

reports to an educational setting

Basic Premises:

The state Department of Education in your state can serve as a catalyst for innovation and change in the downward extension of public school services down to include hearing-impaired infants below three years of age, if certain basic premises are recognized:

1. Problems arising in the educational management of hearing-impaired infants have multiple causation relating in part to medical and social services. They require interaction of the state departments of health, education and welfare to mandate the pooling of available resources, funding and expertise.
2. Laws relating to early educational intervention have the salutary effect of inferring that procedures and standards exist for their implementation. The absence of an organizational structure invites legal challenge.

IMPLEMENTING A SERVICE DELIVERY SYSTEM

"Help Stamp Out M.A.F.A." is the slogan on a rubber stamp of a colleague in Minnesota - ("mistaking activity for achievement"). It is applicable to the ordering of priorities within a state to insure quality public school service programs for the under three's. The check list should include:

1. Modification and downward extension of state aid patterns based upon current rather than reimbursable formulas, including transportation.
2. A state plan or educational guidelines describing program objectives and standards, required diagnostic evaluations, and the components of a comprehensive instructional program for the young hearing-impaired child and his family.
3. A professional staff member of the State Department of Education with major responsibilities solely for hearing-impaired children, birth to 21. Presently, less than a dozen states in the United States are providing this specialist.

4. Supportive and consultative staff at regional and local levels whose position responsibilities are that of a Consultant or Supervisor, services for the hearing-impaired.
5. Development of innovative and supplemental centers to strengthen infant programs, utilizing federal "seed money" under specialized funding as well as the various Titles of E.S.E.A.
6. Regionalization of educational services through a voluntary coalescence of districts and pooling of available resource specialists to serve the hearing-impaired infant and his family.

MINNESOTA: SPECIAL EDUCATION LAWS AND ASSURANCES

The present laws of the state of Minnesota do assure that the total cost of instruction of handicapped children below school age (birth to four years of age for the hearing-impaired) and support to their parents, regardless of the degree and type of handicapping condition, is funded through a combination of state (60%) and local (40%) effort.

The timetable of events unfolded as follows:

- | | |
|---------------------------------|--|
| <u>Pace-
Setter</u> | 1965 - "An Examination of the Philosophy and Practices Undergirding An Effective Counseling and Guidance Program for Parents of Preschool Deaf Children". A three-day Institute sponsored by the State Department of Education, Special Education Section. (P.L.98-164) for legislators, public school personnel central to decisions concerning planning, initiation and development of public school programs for the young and hearing-impaired child. Purpose: to describe the rationale and cost effectiveness of service programs of early intervention. |
| <u>Enabling
Legislation</u> | 1967 - "Every school district and unorganized territory may provide special instruction and services for handicapped children who have not attained school age." (Amendment, Special Education laws)

One-half unit, foundation aid; general pattern of reimbursement for special education supplies and personnel. Appropriation: <u>hearing-impaired only.</u> |

State Plan 1968 - EDUCATIONAL GUIDELINES: A FAMILY-ORIENTED PRESCHOOL PROGRAM FOR HEARING-IMPAIRED CHILDREN IN MINNESOTA. Approved, State Board of Education, April 1968. (The author served as Chairman)

The tuition of a hearing-impaired child placed in a private nursery school is routinely paid by the local school district of residence (60% state aid, reimbursable) provided teacher holds n-k-p certification by the State Department of Education and program is monitored.

Inservice training of nursery teachers and site visitation of a nursery school in which the hearing-impaired child is placed are specified responsibilities of special education personnel as one component of the comprehensive infant education program outlined in the Guidelines.

<u>Continuing</u>	1967,-	Annual 3-5 day workshops (statewide) hosted by the
<u>Teacher</u>	68,69	Special Education Section, State Department of
<u>Education</u>	70,71	Education. (The author served as instigator and
	72	director of each.)

Emphasis upon cognition and language; development of logical thinking processes in young children; early child development; offered through lectures by out-of-state specialists. Small group "hands on" learning experiences offered to public school professional and paraprofessional staff including films, video-tapes, role-playing, participation in demonstration teaching and exposure to innovative or proven materials useful with parents and young children.

<u>University</u>	Summer	Graduate Seminar: The Preprimary Hearing-Impaired
<u>Coursework</u>	Session	Child and his Family. Guest lecturers, local and
	1969-71	national (3 cr).

Practicum (3 cr.) Whittier Infant Program: Minneapolis.

Funded, State Department of Education, Special Education (1969: Title VI; 1971, UNISTAPS Exemplary Early Childhood Education Project (P.L.90-538. Handicapped Children's Early Education Act).

UNISTAPS, Exemplary Early Childhood Education Project for Hearing-Impaired Children, 0-6, and their Parents (P.L.90-538)B.E.H.

Funded in July, 1969, for a three-year period (fourth year extension pending). Laboratory (regional) preprimary program: Minneapolis public schools as host district for 116 families and hearing-impaired children; 43 of whom are below the age of 3. 39 school districts purchasing service from Minneapolis.

Landmark Legislation 1971 - Authorization of ½ unit of foundation aid for pre-kindergarten handicapped children, all disabilities.

Position Statement: Preschool Educational Services for Handicapped Children 1971 - Prepared for state legislature. State Committee appointed by Commissioner of Education. Presentation of rationale for early intervention: language, affect, cognition, mental retardation; sensory impairments; emotional disturbance. Legislative recommendations: preschool; educational; daytime activity center legislation.

A Comprehensive Public School Program for the Under Threes

Regionalization of Services

Hearing-impaired infants don't always accommodate program planners by residing near a metropolis, which results in an unevenness of pick-up of school district responsibility for early educational intervention. In the northeast area of the state, for example, Duluth is the host district for a normal "Regional Program for the Deaf and Hard-of-Hearing". Itinerant services by a qualified preschool teacher of the hearing-impaired includes home visitation, selective placement of children in a regular day care or nursery program and a Spring Workshop for the dual purpose of diagnostic re-evaluation and intensive support to parents in daily management of the child. The family's living expenses are underwritten for a two-week period. In more sparsely populated areas, certain speech clinicians function as regional specialists serving newly-identified hearing-impaired infants and family. They have been participants in annual regional and state workshops addressing to the young hearing-impaired child and his family offered since 1967. Their direct service and monitoring roles are arranged through contract between the infant's district of residence and the employing district. These individuals carry a reduced case load of school-age children requiring speech therapy. The emphasis is upon competencies needed by teachers of the under three's, not their professional certification or title.

Six Special Education Regional Consultants (SERC's), one located in each of the Governor's Planning Regions in Minnesota (the metropolitan area of Minneapolis-St. Paul is not included) serve as agents of the State Department of Education. They advise and consult with local districts in cooperative efforts to facilitate the implementation of state priorities and written state guidelines.

Educational Guidelines: Minnesota's State Plan

The population of deaf infants, birth to three years of age, has been labelled as a special entity within the preschool category (Education of the deaf, 1967). The Nashville Conference of 1968 (McConnell, 1968) convened project directors and teachers in the Demonstration Home projects funded by the U.S. Office of Education to discuss educational practices in the management of these infants.

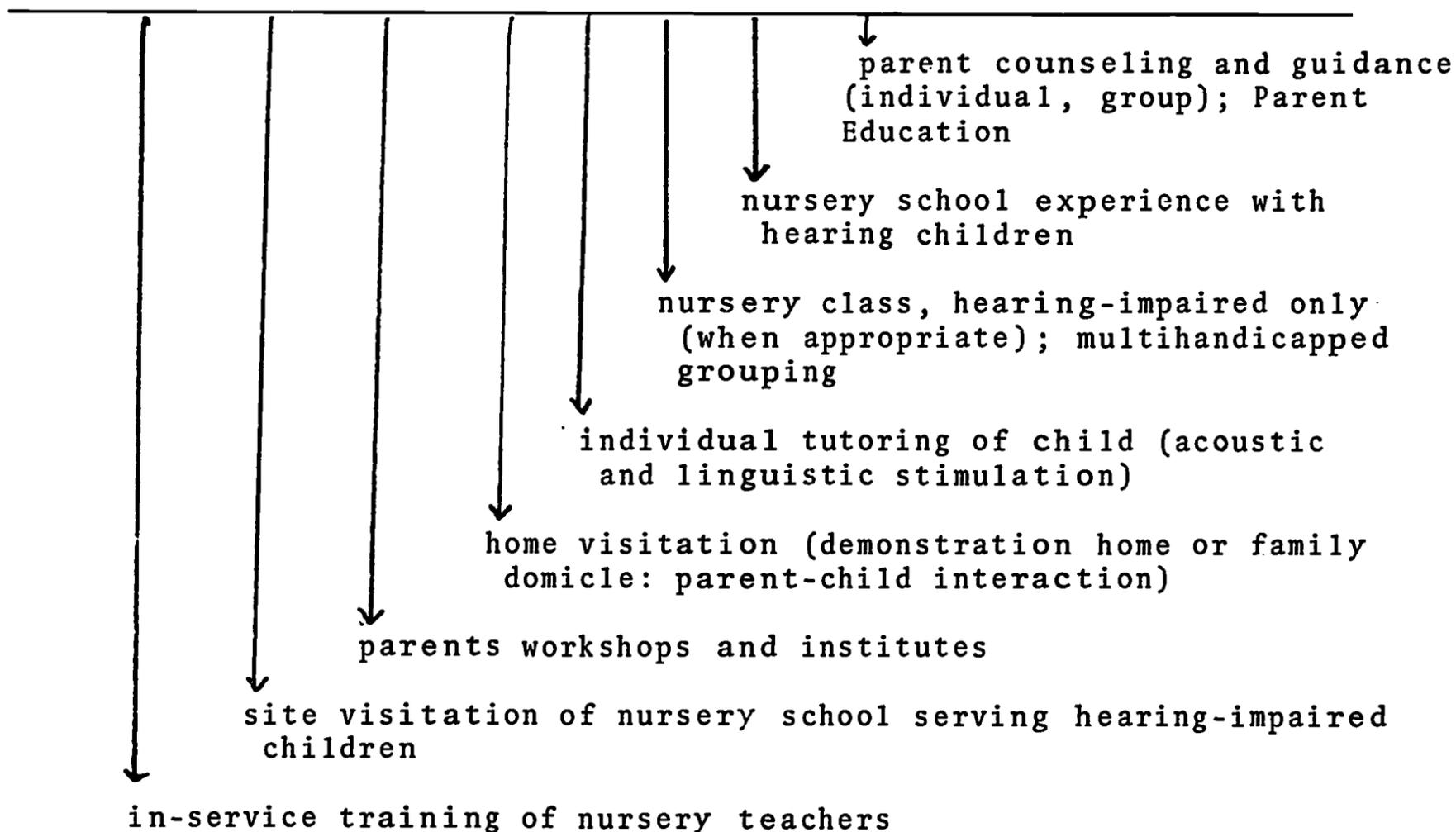
The identified commonalities among these projects mirrored the author's findings during a three-week visit to infant programs for the hearing-impaired in England and the Scandinavian countries the previous year (1967). In turn, they are reflected in the state guidelines which delineate infant education program objectives and educational practices in Minnesota.

The instructional program may be summarized by these descriptors: 1) parent guidance and education 2) oral and aural procedures 3) an experiential, inductive approach to learning 4) early amplification and auditory training 5) group educational experience with hearing children.

An examination of current literature (Caldwell, 1970; Luterman, 1971; Meadow, 1971; Northcott, 1971) supports Minnesota's primary focus upon 1) early identification and home training of the infant 2) parental support to prevent secondary social and emotional stress relating to the defect.

A program including any or all of the following components is eligible for reimbursement. A written contract is required, submitted on a Preschool Form (F65-51) to the Special Education Section for approval by the Hearing Consultant, State Department of Education.

A COMPREHENSIVE INFANT PROGRAM,
0-3½



(Northcott, W.H. Infant education and home training. In Connor, L.E. Monograph Speech for the deaf child: Knowledge and use. Alexander Graham Bell Association for the Deaf. Washington, D. C. p.326.

Objectives: Children, 0-3

The design of an individually prescriptive program for each child is dependent upon the amount of residual hearing, intellectual ability, the relationships between parent and child, and the variety of strengths and resources within the child, his family, and the community. (Guidelines, 1968)

- Medical, psychological, audiological evaluation of each child through agency coordination
- Parent-child involvement in the action of learning
- Individually prescriptive educational program designed for each child
- Development of cognitive, communicative, social, perceptual-motor and self-help skills
- Health parent-child relationships
- Dynamic use of residual hearing
- Increased maturity, intellectual curiosity, improved self-image
- Improved voice quality, pitch and inflections of speech
- Development of reliance upon oral language as a normal means of communication

A Model for Replication

In 1969 the State Department of Education, Special Education Section, was fortunate to receive one of the original 19 planning grants to develop a First Chance Project (UNISTAPS*) to implement a state-wide system of preprimary education for hearing-impaired children. Originally the projects, now numbering 70, were euphemistically labelled by the Bureau of Education for the Handicapped as "Exemplary Early Childhood Education Centers". (P.L.90-538) The author serves as UNISTAPS* Project Director.

The laboratory or service matrix is located in the Minneapolis public schools. The regional Infant Program located at Whittier School offers a demonstration home setting (actually two large classrooms remodelled as efficiency apartments to accommodate two families simultaneously.) Presently, 43 children below the age of 3 and their parents are enrolled.

*UNISTAPS=University of Minnesota, State Department of Education, Minneapolis Public Schools

Replication of appropriate components of the model is encouraged through utilization of the Whittier Infant Program as a service training station for SERC's and professional personnel involved in the continued development of preschool programs for the young hearing-impaired child throughout the state. This includes coordinated studies by University investigators and utilization as a practicum station by the University, Head Start and day care programs.

The UNISTAPS Project has enabled the State Department of Education to offer a replicable system available for examination. This includes a 1) written state plan; 2) curriculum guide, 0-3; 3) evaluation plan handbook defining each of the treatment strategies and listing the instrumentation to be used in evaluation; 4) criteria for placement and continuation in a regular nursery school; 5) video-tapes.

An Instructional Program for the Under Three's

Phillips (1963) and Craig (1964) focused upon current programs for preschool children, 3-5 years of age, in certain residential schools which offered a watered-down elementary curriculum with emphasis upon the quality of phonemic utterances, language drills, a controlled vocabulary and what van Uden (1970) refers to as the "grave of the oral way...the 'baked sentence'." (e.g. The box is on the table, the box is under the table.) The predicted outcome of such research studies was that preschool training did produce significant differences in speechreading and reading skills at age six, in contrast to control groups, but the gains were not permanent.

Today, Dr. Edward Ziegler, Director of the Office of Child Development, warns it is possible to find an expert to support any position in early childhood education. The Minnesota model then, is defensible only to the extent that it has integrity in terms of

internal consistency related to goals, objectives, planned educational activities to meet individual needs of parents and infants, staff-training and an evaluation plan to assess their effectiveness.

The curricular model being utilized in the Whittier Infant Program in Minneapolis can be classified as "cognitive-discovery", a category identified by Dr. Joan Bissell of the Office of Child Development which involves the parent in the child's development (Preschool Report, 1972).

The Parent-Teaching Program

An individual parent-teaching program is offered every family. The goals for the infant are comprehension of language and the development of correct concepts through functional discrimination about the size, shape and purpose of objects he is manipulating.

The goal for parents is the development of confidence and competence to exploit the toddler's natural curiosity for experiencing concepts through motor activities which encourage the development of logical thinking.

Phillips, W.D. The influence of preschool language on achievement in language arts, arithmetic concepts and socialization of young deaf children in residential schools. Unpublished dissertation, Teachers College, Columbia University, 1963.

Craig, W.N. Effects of preschool training on the development of reading and lipreading skills of deaf children. Amer. Ann. 109:1964, p.280-296.

vanUden, A World of language for deaf children. Part I. Rotterdam Press, 1970.

Report on Preschool Education. Vol 4, (1), January 12, 1972. p.5.

Offered in a fixed schedule of visits in the demonstration home rooms at Whittier School, in home visitation or school setting out-state, it involves a developmentally appropriate task inviting cooperative action between parent and child. Initially the counselor demonstrates, and the parent is gradually drawn into the lead role. Through natural conversation ("It's too heavy"...."Pour slowly".... "We need a spoon") and use of auditory cues, the parent provides a model for the child to imitate while also encouraging his attempts at verbalization through reinforcement and expansion. The hour-long session, usually weekly, includes a parent's informal report about identified problems and child behaviors carried forth from previous sessions, as noted on a report form completed by Placement in a Regular Nursery School: the parent counsellor.

Hearing-impaired children in Minnesota are routinely programmed into regular nursery schools, the tuition being paid by the district of residence. This experience with a hearing peer group offers increased opportunity for comprehension of spontaneous language provided by children of similar age and interest levels, as well as a rich environment for discovery learning and individualized instruction. Written criteria have been established for admission and continuation in an integrated program in addition to the required special education support of the nursery school staff and the child's family.

Individual Instruction

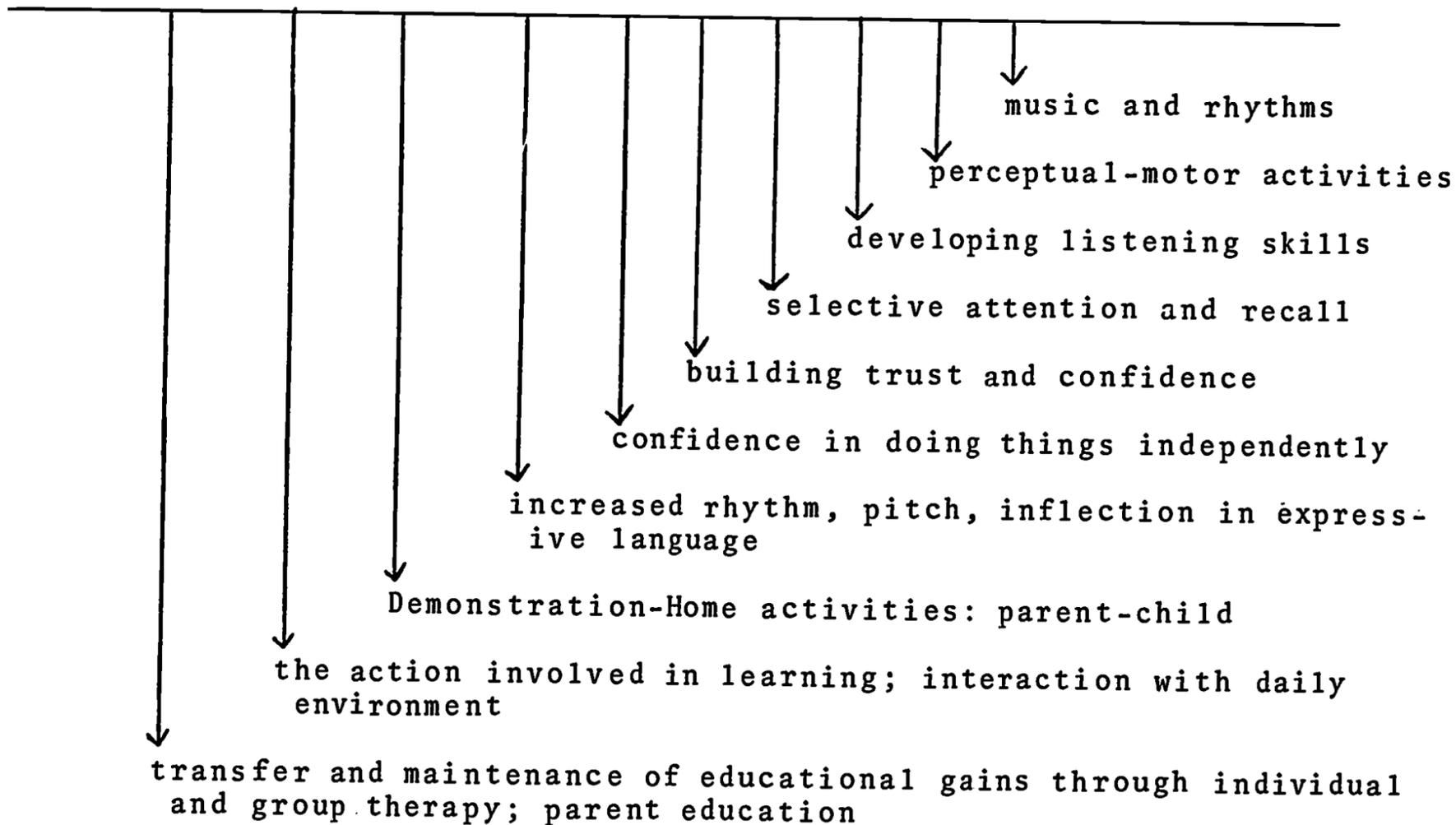
Individual or small group teaching is a mandated supplement to placement in a regular nursery school. The goal is the encouragement of long-term auditory memory through selection of a core of developmentally appropriate listening experiences for each child. This includes localizing the source of sound, distance listening, imitative vocal play as well as discrimination and recognition of functional language presented in sentences of appropriate length and syntactic complexity. Parents are active participants in the child's learning

experiences.

The Toronto Conference (1964) emphasized that every infant is entitled to a program of aural rehabilitation regardless of the severity of hearing loss. The audiogram is not an accurate predictor of performance, which is dependent instead upon parents' ability to respond to guidance in the training of residual hearing in an informal home setting, making use of environmental sounds and language connected with the child's daily activities.

INDIVIDUAL INSTRUCTION

CHILDREN 0-3½
(aural-oral program)



Parent Involvement

A parent observed to Mrs. Tracy, after visiting the John Tracy Clinic for preschool children in California, "I see you take parents, too". Mrs. Tracy is reported as responding, with a smile, "No, we take parents, one, and children, two."

The majority of parents have had no previous experience with deafness. Hence, no initial coping mechanisms for assurance of effectiveness in relating to their hearing-handicapped child.

Minnesota's infant programs are predicated upon the role of parents as active change agents in the total development of young hearing-impaired children. The professional staff provides support to parents in both the affective (attitudes and feelings) and instrumental (stimulation of residual hearing; providing corrective feedback) aspects of their new role to be assimilated (Meadow, 1971). Research findings and independent observations show that "immaturity" is not a necessary consequence of auditory deprivation but depends upon parental expectations and encouragement of a child's unique learning and lifestyle during the first few years of life. (Schlesinger, 1972).

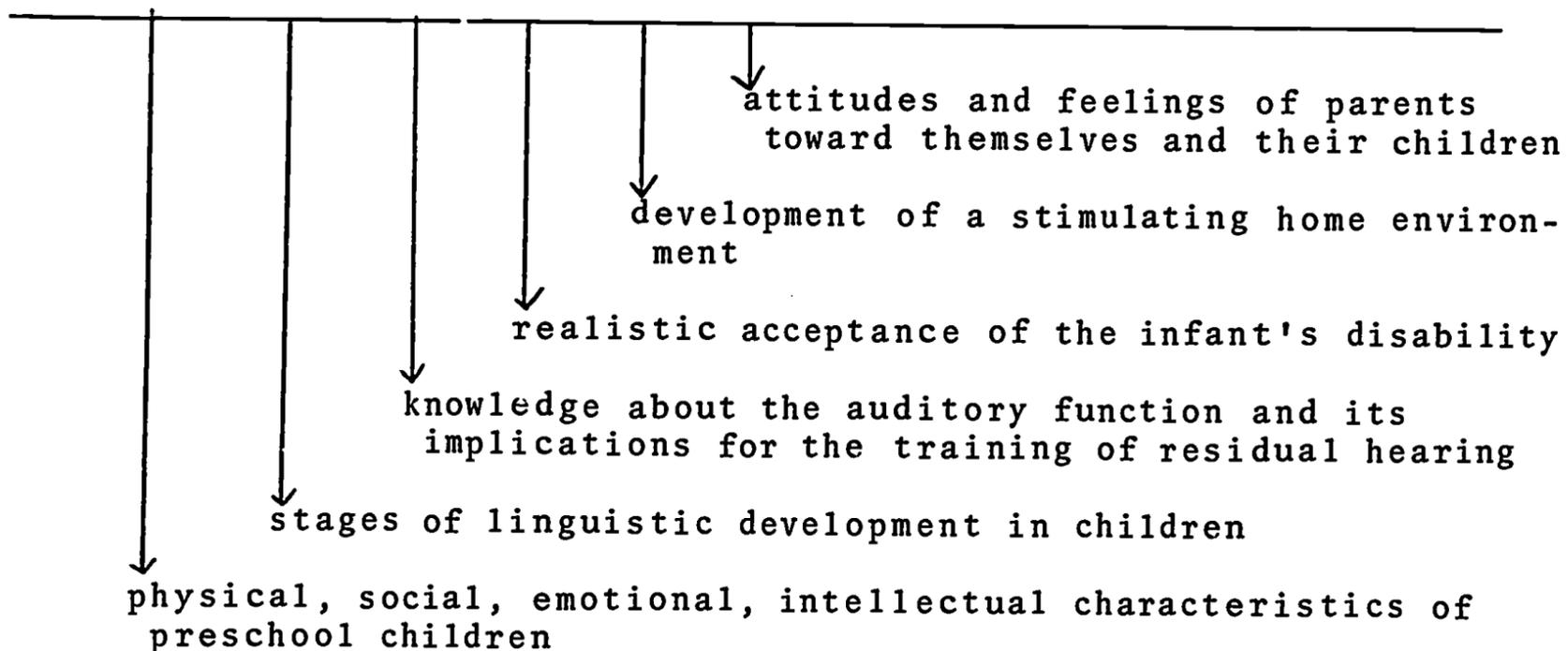
Meadow, K.P. and Meadow, L. Changing role perceptions for parents of handicapped children. Except. Child. 38,(1) September, 1971, p.21-28.

Markides, A. Home atmosphere and linguistic progress of preschool hearing-handicapped children. Teacher of the Deaf, 70(411) January, 1972, p.7-13.

Schlesinger, H.S. and Meadow, K.P. Development of maturity in deaf children. Exceptional Children, February, 1972, 461-467.

Parent Guidance, Parent Counseling

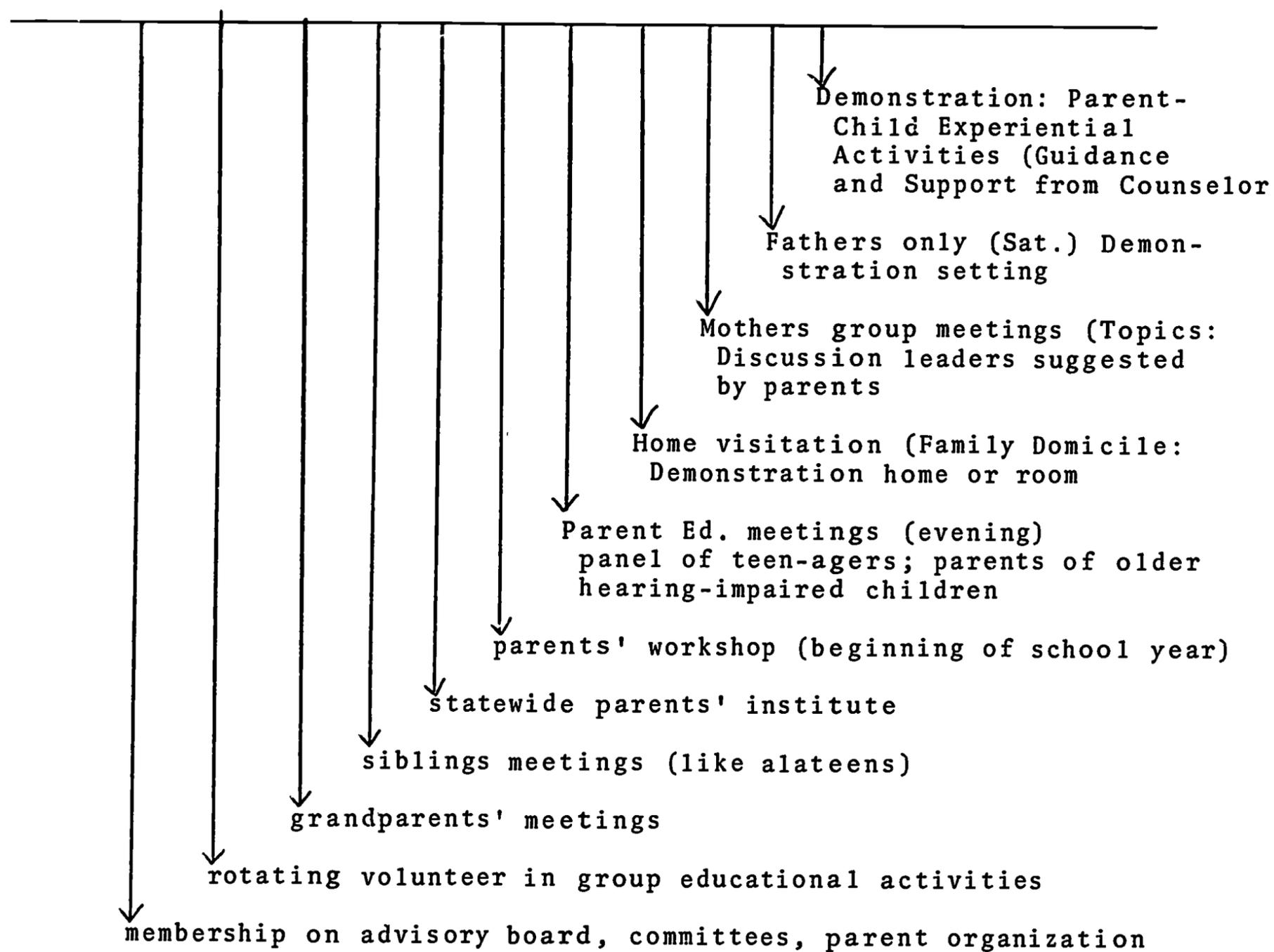
CRITICAL AREAS OF PARENT GROWTH AND DEVELOPMENT



By instinct, parents of handicapped children are often self-incriminatory. They need an opportunity to work out their feelings of grief, guilt and shame through individual and small group therapy. This is not the province of the special educator or child development specialist who provides direct service in the individual parent-teaching program and directs a program of parent group education.

In contrast, individual or group therapy directed to therapeutic problem-solving is limited primarily to the metropolitan areas of Minnesota.

DIMENSIONS OF PARENT PARTICIPATION



Parents take the lead role in identifying topics for future group meetings and participation in choice for discussion leaders. They range from genetic counseling to a panel of deaf teenagers "Telling it like it is."

Fathers' Only meetings began as a male chauvinist "night out" but have expanded to permit an occasional "ms" as speaker and demonstration teacher, in keeping with today's social climate.

It is recognized that parents vary in their ability to profit from the guidance extended to them in or to apply it in daily home care and social experiences involving the infant. Since linguistic progress of very young hearing-handicapped children is correlated positively with a secure and affectionate home environment (Markides, 1972) families with severe social and emotional problems require additional services of a social worker as an additional and vital source of support.

An Interdisciplinary Team

If one accepts the varying roles of a parent as learner supporter (of the schools) teacher program staff member policy-maker (Hess, 1972) then a cadre of support specialists is an essential supplement to the central role of the team member labeled parent counselor/teacher.

The Interdisciplinary Team

- coordinator, 0 - 6 group
- helping teacher
- educational audiologist
- social worker
- parent counselor/tutor
- occupational therapist
- speech and language therapist
- school health representative

Hess, R.D.; Bloch, M.; Costello, L.J.; Knowles, R.T.; Largay, D. Parent involvement in early education. Chapter 9 in Grotberg, E.H. Ed. Day Care: Resources for Decisions. Office of Economic Opportunity, Office of Planning, Research and Evaluation. Washington, D.C. 1972.

The Minneapolis public school district has been able to assemble such a team through a combination of local, state and federal (UNISTAPS) funds. Outstate, regional programs for the hearing-impaired draw upon available public school specialists in speech and language, social work, psychology and public health as consultants to provide resource help to parents.

In the instance of an individual program outstate for a single hearing-impaired young child and family, the services of child development, social work and public health specialists from Crippled Children Services, or the County Welfare office or near-by state college are tapped on an exchange-of-favors basis.

Staff Training

Statewide:

In coordinating a statewide staff training program, the UNISTAPS Project Director, the Hearing Consultant in the State Department of Education and the Special Education Regional Consultants kept in mind three major audiences:

1. Professionals and paraprofessionals serving the very young hearing-impaired child and his family.
2. The parents themselves.
3. Allied resource specialists in health, education and welfare.

From the start we operated on two basic principles:

1. Addressing to the competencies required of individuals serving the preschool child and his parents, not to their titles or state certification.
2. Utilizing travel funds to bring specialists to Minnesota for the combined purpose of:
 - A. Site visitation and consultation to the UNISTAPS laboratory program staff in Minneapolis.
 - B. A distinguished lecture to a statewide audience.

To date, the UNISTAPS Project has hosted three state conferences for parents and seven state workshops for professionals, involving lectures, demonstrations and small group discussions. This kind of activity from the State Department of Education has in turn helped to provoke regional meetings sponsored by S.E.R.C.'s for public school personnel and addressing to language development in young children. We believe this has contributed to the positive climate so critical for expanded fiscal support to preschool programs for handicapped children which was authorized by the legislature in 1971.

Minneapolis Staff Training
(UNISTAPS Laboratory Programs, 0-6)

Four general areas were identified by the Minneapolis staff in 1969 for concentration of effort:

1. Elemental aspects of parent guidance and counseling.
2. Program of auditory training.

3. Evaluation; Writing of behavioral objectives.

4. Integration with non-handicapped children.

A bank of video-tapes is now available featuring the lectures, demonstration teaching, and group discussions based on these four topics. They are being utilized by individuals outstate who may provide service to a single hearing-impaired infant and his family or function as an interdisciplinary team member in a regional program. Requests from the University of Minnesota, state colleges, and private and public agencies are beginning to trickle in.

Research In The Future

Currently, an extremely limited number of certain research studies are being cited in support of the generalization that oral-only preschool programs have limited lasting effect upon children. (Moore, 1971). It brings to mind John Gardner's observation about "unloving critics and uncritical lovers". They furnish answers to questions not even being asked and irrelevant to the assessment of behavioral changes in programs for hearing-impaired infants under three years of age today.

Upon closer examination one finds a spurious emphasis upon IQ scores, and the identification of size of receptive and expressive vocabulary based upon single-word measurement not even presented in a carrier phrase by the investigator. Each study involves a hearing-impaired population above the age of three years which is located,

Moore, D.R., Recent research on manual communication. DCCD, Vol. VIII, (2), Spring, 1972, p. 15.

in four of the five studies, in a residential school setting which limits active parent participation in the educational process.

In the fifth instance McCroskey (1968) reports that even though intelligence and hearing capacity favored the comparison group, Non-Infant Training, the vocabulary size was greater for the Infant-Training group and the sonographic displays of the voice of the Infant Training children revealed a more nearly normal distribution of acoustic energy.

The selection process and educational options are such today that the most oral children are in mainstream nursery schools and kindergartens by age three to five, the population sampled in the earlier preschool studies. It is here that we must look for later validation of the effectiveness of early oral and aural intervention.

The need today is for educational research specialists who are personally objective about the subject of methodology and professionally interested in more than gross measurement of communication skills.

Does early identification, amplification and enrollment of a hearing-impaired infant and his family in a public school program emphasizing home training and utilizing oral and aural procedures result in significant behavioral changes? The development of a video-tape rating scale to examine a five-minute time segment, might identify changes over time in such variables as:

Parents

1. teaching style (expansion and corrective feedback of child's verbalization).
2. management of child behavior.

3. language level (gesture ... complex sentence).
4. utilization of environmental sounds.

Child

1. frequency count (verbalization).
2. change in latency response (to parent's conversation).
3. self-generative verbal response.
4. distance listening.
5. echolalic behavior.
6. auditory discrimination (following sentence command).
7. auditory memory (sounds ... single words ... sentences).

Summary

Every hearing-impaired child under three years of age is entitled to a public school financed educational program of aural rehabilitation which emphasizes active parent involvement. The goal is a self-operative individual living a life that is personally satisfying and socially productive.

At the same time, we must heed Dr. Edward Ziegler who warns, "Beware of the environmental mystique". Not all children will respond favorably to early educational intervention due to cognitive deficits or the nature of their home-environment.

As participating professionals in the evolution of public school programs for the under three's who are hearing-impaired, we must be prepared to answer the serious question facetiously posed by the comedian Fred Allen, "Where were you when this page was blank?"

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Home Based Learning Programs for Handicapped Preschool Children*

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March, 1972

*Paper presented at the 50th Annual Council for Exceptional Children
Convention, March 23, 1972, Washington, D.C.

The efficacy of preschool intervention for the handicapped child can no longer be questioned. Theoretical and clinical research of the past decade presents overwhelming evidence that early intervention can make a real and lasting difference in the handicapped child's performance. (Haring, Hayden, Allen, 1971)

Of particular interest are those programs which have focused on producing observable and measurable changes in critical social, language, motor, and self-care skills. Such programs consider not only the development of the "whole" child, but the development of specific behaviors that will help the child achieve optimal success and happiness. (Cobb, 1970)

We are no longer willing to give more than cursory consideration to labels such as hyperkinetic, retarded, withdrawn, etc. These labels have only served to set limits of achievement on the handicapped child. We have also given up speculating as to what traumas in the child's past have contributed to his handicap. (Allen, 1970) Instead, our attention is directed toward arranging the handicapped child's learning environment so as to produce beneficial changes in specific critical behaviors.

Typically, early intervention takes place outside of the home and is conducted by adults other than the parents of the handicapped child. Since 1968 I have been involved in several learning programs for children which have taken place in the home and have been conducted by the child's parents. (Knight, McKenzie, 1970; Knight, Hasazi, McNeil, 1971; and Knight, Carter, McKenzie, 1972).

The procedures which have been employed in these home based programs generally follow the same pattern. The parent is informed of the availability and nature of the service through a telephone contact. At that time, an appointment is scheduled for the first of a series of weekly home visits. At the time of the first home visit the trainer and the parent define the target behaviors and set up simple procedures whereby these behaviors can be observed and measured on a daily basis. The trainer first demonstrates how the daily measurement procedure is to be carried out and then watches the parent and gives the parent feedback as to how well he is doing. The necessary recording and curriculum materials are left with the parent in addition to a supply of children's paperback books. Each week the parent trainer revisits the home in order to review the behavioral measures, prescribe changes in the learning environment, and give the parent feedback necessary to maintain his participation in the program.*

The case of Todd will serve as an example of one such home based learning program. I'm using Todd as an example because the Mongoloid child has traditionally had limits of achievement set for him. Todd was a five year old Down's Syndrome child attending a nursery school for retarded children. He was referred by his teacher, Judy Mettee, for participation in a home based program designed to develop early reading skills and research the effects of certain teaching procedures. On first visiting the home the parent and the parent trainer defined the target behavior as simply

*These procedures are based on those used by the consulting teachers (McKenzie, 1971).

naming the picture presented daily on a 2½" x 3" card. Ten picture cards were presented daily and the parent was instructed to record whether Todd named the picture correctly on the first try. This constituted the daily measurement procedure. A practice activity followed, in which Todd was again presented with the ten picture cards. This time if Todd did not name the picture correctly his mother would say, "This is a picture of a (horse). Say (horse)."
After Todd imitated his mother by saying horse, the card was returned to the remaining stack of cards to be presented again. When Todd finally succeeded in naming the picture without being told, he was praised, and the card was placed on the table in front of him. In this way, Todd was provided with an unlimited number of opportunities to imitate his mother's correct naming of the picture cards, and one final opportunity to name the picture correctly on his own and without his mother's prompting. When the measures indicated that Todd had correctly named a picture card on two consecutive days he was given the card to place in his "learned box" and a new picture card was added to the stack. At the close of each daily session Todd was asked to choose a book which his mother or father would then read to Todd.

As the weeks went by Todd progressed from picture naming to letter naming and finally to word naming. The first 43 words Todd learned were taken from a favorite book, One, Two, Three, Going to Sea. Todd learned to recognize words in the same manner as he had learned to recognize pictures and letters. His mother

simply provided an unlimited number of prompts until Todd could recognize the word independently and without a prompt. For instance, when Todd did not respond correctly within 5 seconds to the word fisherman Todd's mother said "The word is fisherman. Say fisherman." After he imitated his mother's fisherman response the card was returned to the stack of cards to be presented again. Twice during each session Todd did say each of the ten presented words on his own and without a prompt from his mother. This independent response was followed by mother's praise. "What a smart boy you are Todd." "You got it." or "I'm so proud of you."

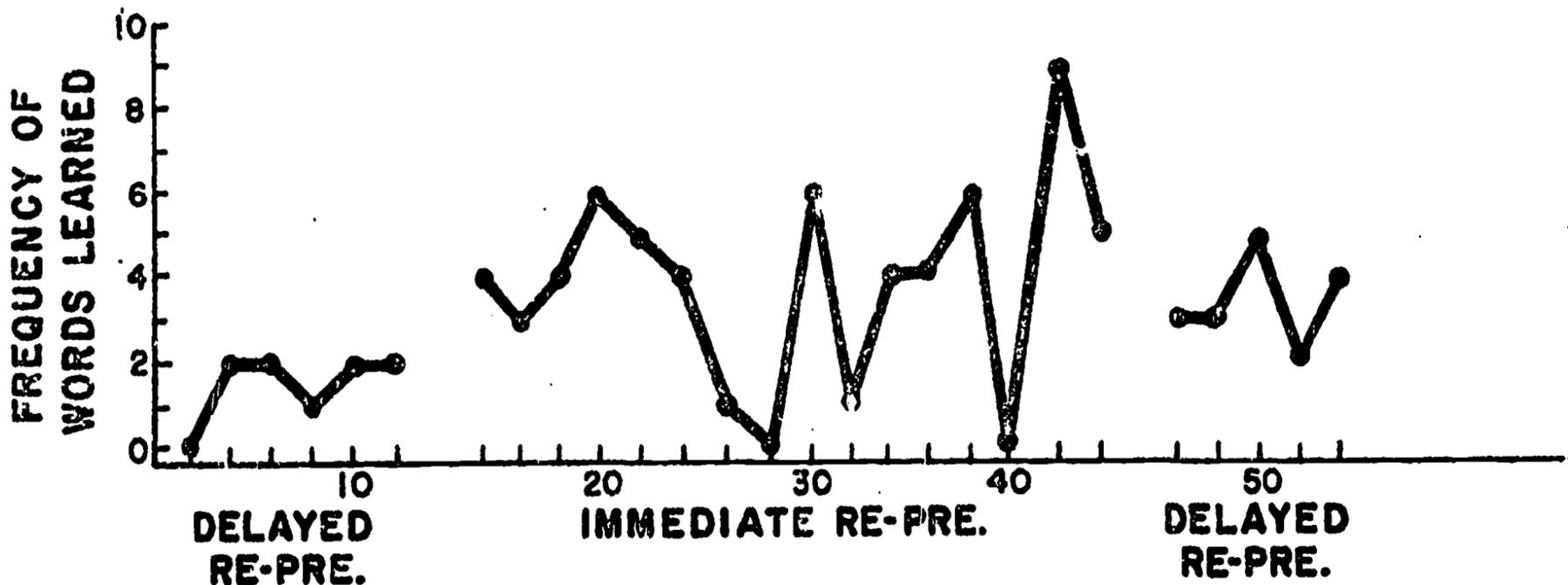
Todd's daily progress was depicted as the number of words learned. That is words which occasioned a correct unprompted response when first presented on two consecutive days. You can see that Todd learned 43 words in his first book in just 32 days. During days 1 - 12, 46 - 54 words which Todd did not recognize without a prompt from his mother were returned to the back of the stack of cards so as to delay re-presentation of the word. During days 14 - 44, words which Todd did not recognize on his own were returned to the stack directly in back of the very next card to be presented. So Todd had an opportunity to see the word again within the next few seconds. This more immediate re-presentation of the words produced a more stable rate of learning and decreased the session time from approximately 7 minutes per session to 5 minutes per session.

Todd has developed a great love of books. His mother reports

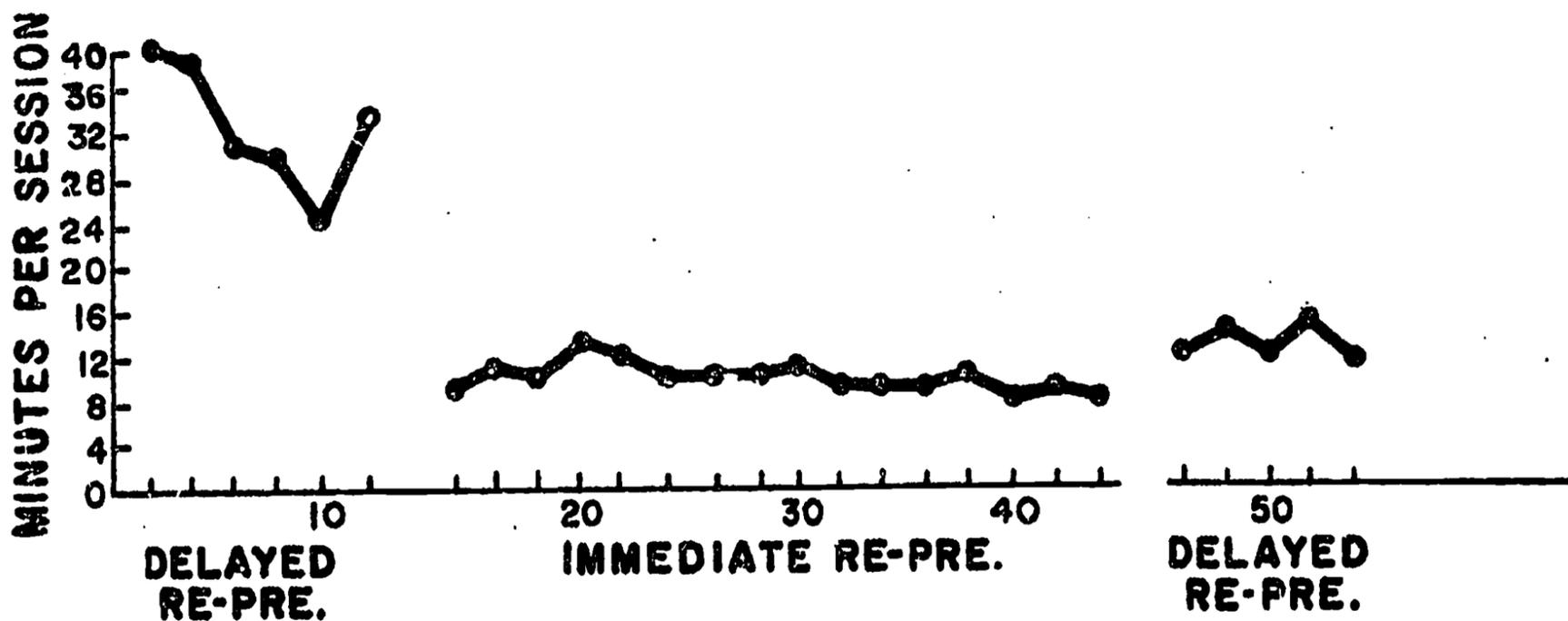
that his new skills have also helped him to develop and maintain friendships with other children in the neighborhood. One of his favorite games is "playing school" using the words he has learned.

Todd is no longer in a school for the retarded. Last fall he was transferred to a level 1 special class in a regular elementary school. His teacher, Mrs. Mary Winslow, is continuing with Todd's academic program in many areas and Todd's mother continues to use the techniques I've described today.

Based on our work with Todd and 7 other preschool children we have begun a small pilot program with an entire school district this year which incorporates identification and service to handicapped 5 year old children through their parents.



RE-PRE. = RE-PRESENTATION



SESSIONS (IN BLOCKS OF 2)

The frequency of words learned and minutes of time spent during consecutive daily sessions across immediate re-presentation and delayed re-presentation conditions.

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PARENTS AS EDUCATIONAL CHANGE AGENTS FOR INFANTS:
COMPETENCIES, NOT CREDENTIALS

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Prepared for presentation, along with slides, at the Annual Convention of the Council on Exceptional Children, Washington, D. C., March 23, 1972, 1:30-5:00 p.m., Symposium: "Infant Programs: What Are the Personnel Competencies Needed?"

The Intervention Study with Mothers and Infants discussed herein was conducted at the Demonstration and Research Center for Early Education (DARCEE) George Peabody College, and coordinated by the author. The author is indebted to: Beulah M. Hardge, Home Visitor; Doris D. Outlaw, Home Visitor; Geraldine P. Brooks, Materials Specialist; and James D. Boismier, Infant Examiner. The study was performed pursuant to Contract Number NPECE - 70-006 with the Office of Education, United States Department of Health, Education, and Welfare, National Program for Early Childhood Education (NPECE). Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgement in the conduct of the project. Points of view or opinions stated do not, therefore, represent official policy of the Office of Education.

Parents as Educational Change Agents for Infants:
Competencies, not Credentials

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Before I begin my remarks this afternoon I would like for you to think with me for a moment. I wonder if you can remember your first teacher. Can you remember her? How far did she live from you? Do you remember any of the things that she taught you? Did she teach you how to read, and write, and count? Was she the same person who taught you how to use a spoon, a zipper, and a toilet? Did she teach you that you were "good," or did you learn that you were "bad?" Did she teach you that help came to your crib when you cried, or did you learn that you could cry yourself to sleep on a dark and cold night? Yes, you must know that "your first teacher" was a parent or a guardian.

The opening question should remind us of the responsibilities of parents for infants from zero to three years of age. And what can we say of parents' credentials? First, let us remember that credential can be defined as "something that gives a title or credit." Infants' birth certificates are credentials, and their parents were issued these credentials before other educational agents came into contact with the infants. Second, we might get a deeper perspective of the role of parents when we realize the amount of time that infants are in the care of parents and parent surrogates. When comparisons are made of the number of hours of care infants receive outside of licensed centers with accredited personnel, we realize the importance of maximizing the efficiency and the effectiveness of parents' involvements with their infants. There is increasing evidence that the quality of parents' interactions with their children is as important as the quantity of interactions with them.

Human infants from zero to three years of age are indeed complex beings. And what can we say are competencies needed in infant programs? The very definition of competencies as "the aptitudes, skills, strength or knowledge sufficient to perform an indicated action," makes us presumptuous to assume that many of us have all of the competencies required to educate infants. Who has a vast store of knowledge of the cognitive and the affective domains of the period of infancy? Who has the talent for talking with infants and has mastered the techniques of involving infants with play materials? And does this same person have the strength to get something from an infant's grasp or the endurance to keep up with infants' activities for an extended period? Rather, it seems necessary in any consideration of competencies to specify several specific behaviors that foster the development of infants. That is to say, this presentation concerns itself with what parents can do with their infants, rather than who the parents are. The remarks and the slide presentation were prepared to show "Parents as Educational Change Agents for Infants: Competencies, not Credentials."

For about ten years now, several of us who work with parents have emphasized the importance of what parents do as their children's first teachers. In 1970, twenty young black and white mothers from low-income homes and their male and female infants who were between seven and nine months of age began the Intervention Study with Mothers and Infants. A home visitor visited each home for one hour or more per visit, for a maximum of twenty-four visits. Infants were between sixteen and eighteen months of age at the end of the study. The mothers' educational level ranged from seventh to twelfth grade, with a median of tenth grade. Credentials from their employment records or their work experiences would not distinguish them as certified in infant education. Many parental competencies were apparent as the staff observed specific maternal behaviors, and as we evaluated specific infant abilities. It was quite clear that the twenty infants had experienced varying competencies by their "first teachers."

The Intervention Study with Mothers and Infants was a home visiting program designed to help mothers become more efficient and more effective in increasing the educability of their infants. It was assumed that skills and attitudes which appear to be necessary for success in public schools have their early development during the period of infancy. The mother's role in facilitating the development of the infant is important because of the many different things that the infant experiences at home, and because the living conditions of the home make a difference in the infant's ability to learn. Two important roles the mother may assume in increasing the educational potential of her infant are as a teacher and a change agent.

Educational change agent thus refers to a person who fosters the educational development of a child by serving as a teacher and a change agent. As a teacher, the mother can recognize that she does teach the infant many things and she can, therefore, decide on the direction that teaching and learning can take. As a change agent, she can structure and change the conditions that surround the infant in meeting his needs and fostering his development. The efficiency and effectiveness of the mother in her roles as teacher and change agent for her infant can be seen in her behavior with the infant. Maternal competencies can be seen in: (1) interaction between the mother and the infant; (2) management of the infant; (3) recognition and facilitation of infant behavior and development; (4) effective conduct of activities; and (5) appropriate selection and development of play materials.

During the conduct of the study, several competencies or skills were outlined that related to interacting with infants, managing infants, recognizing and facilitating infant behavior and development, conducting activities, and selecting and developing play materials. Parents became increasingly involved with infants in ways that promoted the physical, emotional, social and intellectual development of their infants. They facilitated or fostered the gross-motor, fine-motor, cognitive, language and personal-social development of their infants. Fathers were involved in the program, and many aspects of father involvement are presented in a procedural manual. Also presented in the procedural manual is a discussion of the role of the home visitor or the parent coordinator, and her competencies or techniques. The procedural manual, Home Visiting with Mothers and Infants (Forrester, Hardge, Outlaw, Brooks & Boismier, 1971) is available from the Information Office, DARCEE, Box 151, George Peabody College, Nashville, Tenn. 37203.

The primary objective for the remainder of the presentation is to show slides or parents as educational change agents. The slides were selected to show several of the twenty mothers demonstrating a variety of competencies in their involvements with their infants.

(1) During initial visits in homes, the home visitor modeled the skills of presenting toys to the infant. She showed the mother how she could look over the infant's shoulder and provide a model for motor imitation in banging a peg bench, to help him develop eye-hand coordination. The mother watched from the edge of her chair. (2) The mother's undivided attention to the activity, her interest in her son's performance, and her smiles of reinforcement were behavioral evidence that she might potentially become more competent as an educational change agent for her infant. (3) She joined the home visitor and the infant on the floor, became more physically involved with the activities, and progressed on a continuum from dependence on the home visitor to independence in the conduct of activities. (4) During an outdoor activity the same mother showed skills in verbally interacting with her son, and in physically managing him with appropriate control and reinforcement. (5) She held him up as he threw a large ball to the home visitor. (6) Another mother conducted a home activity. She selected polyethylene blocks, and she carefully handed them to her son, as members of the family watched. (7) She monitored his play with smiles, and he proceeded to stack the blocks. (8) The block building activity continued, as he began construction of a train, undisturbed by the spectators and the photographer.

(9) When this little girl was eleven months old, the home visitor had worked with her mother for two-and-one-half months. Like many of the mothers, she wanted her infant "to learn a lot," to be able to feed herself, and to learn to walk. Infant behavior and development desired by each mother was important in the statement of objectives for each infant. With objectives stated, the mother planned and implemented a series of activities to promote her daughter's development. She had learned about pre-walking activities and she was interested in facilitating gross-motor development. (10) She held the infant and let her turn the pages of a picture book--a fine-motor skill, but one basic in orienting the infant toward independent use of books. (11) Behind the mother you can see reusable cans that were presented for the infant to manipulate, and in the foreground a commercially available toy was presented. Presentation of one material at a time increased the probability that standards for performance could be established, different uses could be explored or modeled, and the infant's attention could be maintained. (12) Reading a book to a young child involves many competencies. Effective presentation of picture books can provide unexcelled cognitive and language stimulation. (13) On the morning that the mother conducted activities for the home visitor and the photographer, her patience and her attention to detail were noteworthy. She is shown here carefully instructing her daughter on how to use a spoon, by holding the spoon with the bowl downward, face up, and the handle touching the infant's palm.

Educational change agents must remember the importance of input received by and comprehended with the senses. They can be mindful that what infants see, hear, touch, taste, and smell is very important. The

mothers became more competent in selecting and preparing activities and materials that they could present to infants to provide sensory experiences and sharpen perceptions and discriminations. (14) Here an infant attempted to nest a large and a small round cup, which involved visual discrimination of size. (15) One of many opportunities for auditory stimulation was provided by a durable juice can rattle that the mother made. The can could be filled with bells, sand, paper clips, or gravel--each of which made distinctive sounds, so that two cans with different contents were used in play activities to foster auditory discrimination.

(16) This mother made a foam block covered with terry cloth which her daughter could grasp or squeeze, and that permitted tactile perceptions. (17) "A Baby's Book to Touch" was made from nine pages of heavy duty tag-board, bound together with yarn. (18) Inside the book, there were different textures and a flower with perfumed cotton on the back, designed to promote sensory and cognitive development. Pasted on each of the pages were textures that were hard, soft, rough, smooth, stretchy, feathery, and (as you can see here) furry. (19) The infant could perceive the taste and texture of different foods that were put into a vienna sausage container for him to sample in his first attempts at self-feeding. (20) Mothers learned to make infants increasingly aware of motion by labeling self-locomotion or the locomotion of objects, including parts of toys such as the items on a "Busy Box." Actions by the infant were accompanied by words from the mother, "Open," "Turn," "Spin," "Push," "Pull," "Slide," "Dial." (21) A cuddly pillow, made of wash cloths, foam rubber, and yarn, had a "happy face" which is seen here, and the opposite side showed a "sad face." The mothers labeled the affective concepts of "happy" and "sad" in order to promote early affective perception and discrimination. Mothers learned what materials they could use, and more significantly, how they could be used, and why they should be used. Detailed information was presented in a publication, Materials for Infant Development (Forrester, Brooks, Hardge, & Outlaw, 1971). The Infant Study Staff saw ingenuity, creativity, and competency as mothers fostered the development of infants' input skills by providing stimulation which sharpened the perception of visual, auditory, tactile, taste, motor and affective stimuli.

Specific competencies are needed in recognizing and facilitating optimal behavior and development. (22) One mother, who herself was disabled by an automobile accident, had competencies in watching her daughter's locomotor skills and in helping her stand up with support. (23) She also provided her with open space to move in a safe environment, with some supervision and a minimum of restriction. (24) The gross-motor development of another girl was promoted as her mother encouraged her to carry a picture back and forth from mother to home visitor. (25) The same little girl is directed in a scribbling activity, and is alternately given a crayon and brown paper bag for independent drawing, in order to foster fine-motor development. (26) A peg carton made by this mother facilitated the development of eye-hand coordination. (27) Inexpensive polyethylene blocks favorably influenced cognitive development because of all the manipulations that were possible, and all of the schemas or behaviors he could show with the blocks.

(28) This little boy's putting-in and taking-out was fundamental to quantitative concept development. The visual experiences that he had of "many" versus "few" and "whole" versus "part" were concrete awarenesses of quantity. (29) The potato sack on this page of "A Baby's Book to Touch" is given the label, "rough," as the infant receives the tactile stimulation. (30) This mother was quite proficient at showing pictures to her son, (31) as well as at reading a book to her two children. Another skill in conducting activities with young children is sensitivity to signs of saturation or fatigue. (32) Even the mother's gentle tickle of her son's stomach fails to reestablish his interest, so our story ends. (33) Another mother fosters the development of receptive and expressive language by presenting a real spoon and the picture of a spoon. (34) A toy car is paired with the picture of a car, and the infant has a chance to play with the car--and make "zoom" sounds like a car. (35) A Picture Book was made as the mother bound all of the infant's picture cards. This personalized or individualized first picture book was an excellent learning resource because the mother as an educational change agent could program picture stimuli according to the unique home environment, interests, and level of language of her infant.

(36) Language skills and personal-social development were promoted in activities such as a mother's "telephone conversation" with her son. (37) This eighteen month old girl had the social maturity to be a social partner in a card table activity with her siblings and mother in their home. Outside the home, at the end of the home intervention study, at a Christmas party, there was convincing evidence of the mothers' competence and confidence in handling their children at a social function. (38) The mothers came with physical provisions such as diapers, clothing, bottles, and the like to care for their infants. From the outer circle they unobtrusively monitored their children's involvements with a variety of toys, and they gave attention to a short program. (39) It was quite apparent that with respect to self-care feeding, infants drank from cups and picked up sandwiches, cookies or cake from their plates. (40) Eighteen of the twenty infants were able to come to the party, and the social behavior of each infant was appropriate, and the management or supervision provided by the mother was good.

The slides have shown home visitors and mothers involved in attempts to foster the gross-motor, fine-motor, cognitive, language, and personal-social behavior of infants between seven and eighteen months of age. What were the results of evaluations of infants and mothers?

Evaluation of infant abilities and psychological development was made using the Bayley Scales of Mental and Motor Development, the Griffith Mental Development Scale, and the Infant Psychological Developmental Scale by Uzgiris-Hunt. The results of testing are presented (See Attachment A: Infant Evaluation Results). The experimental group of infants performed significantly better than the comparison group on the three instruments. Analyses indicate that the program was successful in affecting favorably a wide range of functional areas in the development of infants. The experimental group of infants scored significantly higher ($p < .002$) than the comparison group on the Bayley Mental Scale, the Griffith Mental

Development Scale, and the Uzgiris-Hunt Scale. Scales yielding mean differences ($p < .05$) were in the areas of Hearing and Speech, Eye and Hand, Visual Pursuit and Permanence of Objects, Construction of Objects in Space, and Development of Imitation.

What evaluation was made of parents as educational change agents in the program? Clearly, the infant program reaffirmed the premise that it is not who parents are, but what they do with their infants and young children. Mothers gave us continuous feedback as to how they perceived their involvement and the types of involvements that were most meaningful to them. Particularly interesting, written, terminal evaluations of "What the Program Meant to Me" were obtained from each mother, and excerpts from those evaluations are presented in Home Visiting with Mothers and Infants (Forrester, Hardge, Outlaw, Brooks & Boismier, 1971).

One of the mothers stated outcomes for the parents and the infant:

"By _____ being in the program out there has made us more alert to watching her just a little more carefully than maybe we would if she hadn't been in it. By having to write things down that she does, makes us see a few more things and hear a few more things than ordinary we wouldn't see or hear.

The one hour a week makes me see things I know she can do, but it makes me proud to see her do these things and more for (the home visitor) and sometimes for guess too.

I think this program brings out the best in babies and more alertness in the parents."

(Mother's Signature)

ATTACHMENT A

DARCEE INFANT STUDY: INFANT EVALUATION RESULTS

The Experimental Group versus the Comparison Group on three instruments:

BAYLEY SCALES OF INFANT DEVELOPMENT

MENTAL SCALE yields a Mental Development Index (MDI)
 E C (p .001) (Mean 118.60 100.90)

MOTOR SCALE yields a Psychomotor Development Index (PDI)
 E = C (p .15) (Mean 113.75 - 108.20)

GRIFFITH MENTAL DEVELOPMENT SCALE
 QUOTIENT

E C (p .002) (Mean 105.00 96.60)

SCALE A - LOCOMOTION

E = C (p .22) (Mean 107.20 = 104.09)

SCALE B - PERSONAL-SOCIAL

E = C (p .06) (Mean 100.65 = 93.65)

SCALE C - HEARING AND SPEECH

E C (p .002) (Mean 104.60 91.75)

SCALE D - EYE AND HAND

E C (p .0001) (Mean 110.80 99.60)

SCALE E - PERFORMANCE

E = C (p .56) (Mean 97.20 = 93.70)

UZGIRIS-HUNT SCALE (INFANT PSYCHOLOGICAL DEVELOPMENT SCALE)

TOTAL SCORE

E C (p .002) (Mean 91.85 82.50)

SCALE I. VISUAL PURSUIT AND PERMANENCE OF OBJECTS

E C (p .05) (Mean 26.75 23.30)

SCALE II. DEVELOPMENT OF MEANS OF ACHIEVING DESIRED ENVIRONMENTAL
 EVENTS

E = C (p .70) (Mean 20.60 = 21.05)

SCALE III. DEVELOPMENT OF SCHEMAS IN RELATION TO OBJECTS

E C (p .002) (Mean 6.95 6.50)

SCALE IV. DEVELOPMENT OF CAUSALITY

E = C (p .22) (Mean 2.15 = 1.80)

SCALE V. CONSTRUCTION OF OBJECTS IN SPACE

E C (p .03) (Mean 17.10 15.85)

SCALE VI. DEVELOPMENT OF IMITATION

E C (p .0000) (Mean 17.30 14.40)

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SYMPOSIUM

RESPONSIVE TEACHING: BEHAVIOR MODIFICATION PROCEDURES THAT HAVE BEEN USED EFFECTIVELY BY TEACHERS

Presenter: Lamoine Miller, Ed.D.
EPDA Field Representative and Instructor
Olathe Public Schools, Olathe, Kansas

Title: Effects of a Token System on Inappropriate Talk-Outs and Out-of-Seat Behaviors in a Third Grade Classroom

Authors: Wood, Kathleen, and Reith, Herbert

Problem: The teacher felt there were too many talk-outs and out-of seat behaviors in her third grade classroom for her to be teaching effectively.

Population: Twenty-three third grade children in a regular classroom in the Shawnee Heights School District located southeast of Topeka, Kansas.

Measurement Technique: Event Recording

Experimental Design: Reversal

Reliability: At least once during each experimental condition reliability was taken. The percentage of agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. The reliability for this study ranged from 86% to 94%.

Procedures and Results

Baseline 1. For one week the teacher recorded the students' inappropriate talk-outs and out-of-seat behaviors during her 60-minute reading period prior to implementing experimental procedures. The mean number of talk-outs and out-of-seat behaviors during this baseline period was 48.

Condition 1. During this condition, each student was given 5 points (poker chips) at the beginning of each reading period. The students were told these points were of value and could be used to buy 10 minutes of "free time" at the close of the period, if they retained all 5 points. They could retain their 5 points by remaining in their seats and not talking without permission. If the student talked or left his seat without permission, the teacher simply walked by his desk and removed a point. Positive comments were made to those students who raised their hands for permission to talk or to leave

their seats. At the conclusion of the 50-minute period, students who had retained all 5 points were allowed to spin a number wheel. The number wheel designated the number of the activity the child could "buy" with his points during the 10-minute "free time" period he had earned. (See list of Number Wheel activities). The activities on the number wheel were teacher-made or supplied with no additional expense to the school. Students who had not retained their 5 points had to remain in their seats and continue with assigned tasks. During this condition the students reduced their inappropriate talk-outs and out-of-seat behaviors to a mean of 26. Although this was a considerable decrease in inappropriate behaviors from the baseline mean, the teacher was not satisfied with these results and implemented Condition 2.

Condition 2. During this condition, the teacher decided to dispense tokens on a more positive note. Rather than remove points for inappropriate behavior, the students earned points for appropriate behavior. The students were not given points at the beginning of the period, but had to earn 5 points during the period in order to buy the "free time" activities.

The teacher used a kitchen timer set at variable intervals to average 10 minutes in length. When the timer went off, student helpers would dispense points to those students engaged in appropriate behaviors. The results of this condition indicate this procedure was more effective than the procedure used in Condition 1. The mean number of inappropriate talk-outs and out-of-seat behaviors had decreased to 19. Again the teacher felt this was still too many inappropriate behaviors and so Condition 3 was implemented.

Condition 3. Prior to implementing Condition 3 there was a necessary schedule change. The only time available for the "free time" activity was at two in the afternoon, three afternoons a week. The students could buy 30 minutes of "free time" every other day contingent upon appropriate behavior.

As in Condition 1, every student was issued 5 points at the beginning of the day. Additional points were earned throughout the day contingent upon no talk-outs and out-of-seat behaviors. The students could earn these additional points from 8:50 A.M. until 2:00 P.M. It was determined that a minimum of 10 points would be required to spin the number wheel. The teacher dispensed points, with the aid of student helpers, on variable intervals averaging 50 minutes in length.

On Mondays the students could buy 30 minutes of "free time" with a minimum of 10 points. However, on Wednesdays and Fridays, they needed a minimum of 20 points to spin the number wheel.

During this condition the number of talk-outs and out-of-seat behaviors decreased to a mean of 7. This was lower than either Condition 1 or Condition 2.

Baseline 2. Following Condition 3 the points and "free time" activities were withdrawn for one week. The number of talk-outs and out-of-seat behaviors increased during this period to a mean of 14.

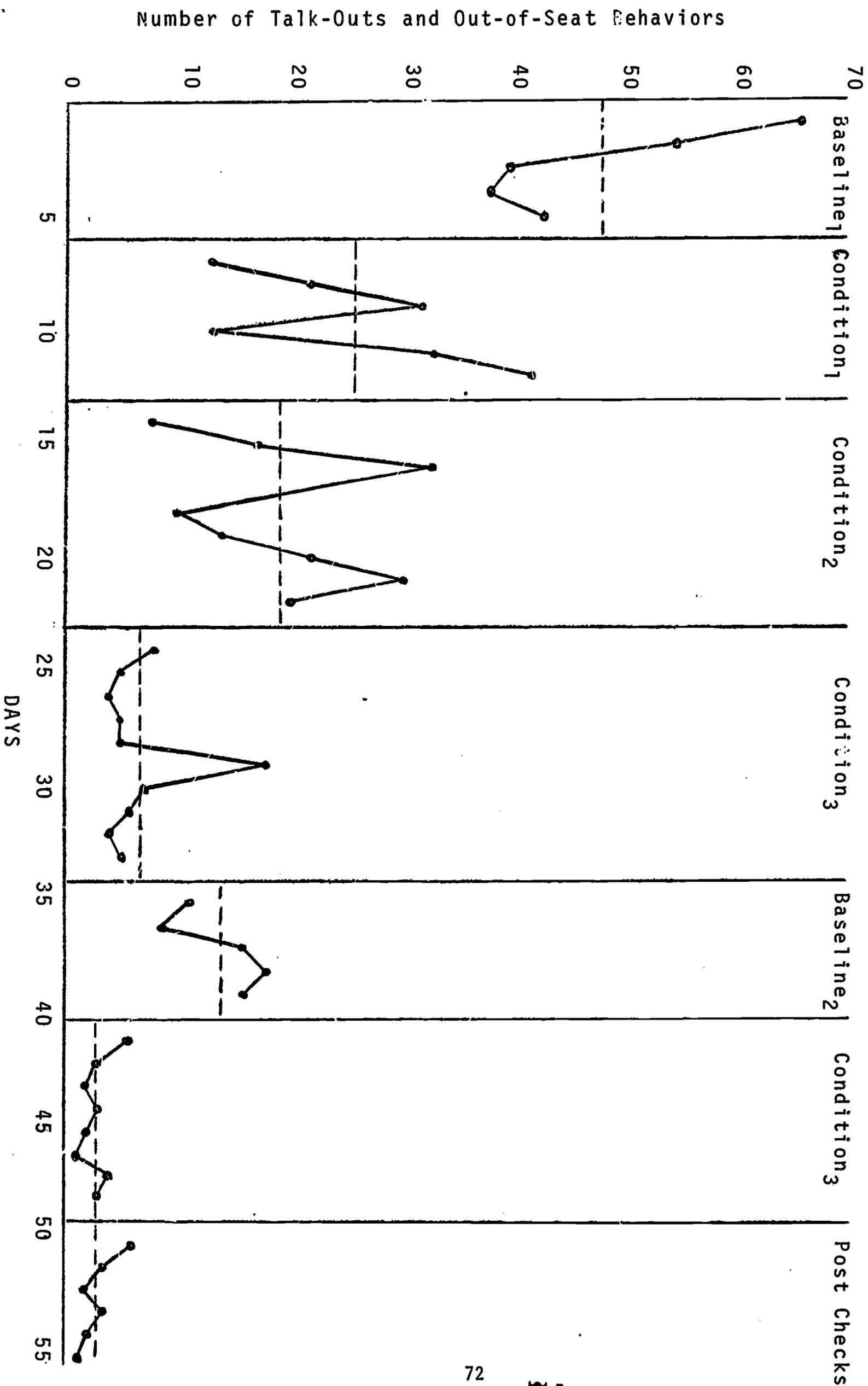
Condition 3 Reinstated. Following Baseline 2, Condition 3 was reinstated. The number of talk-outs and out-of-seat behaviors decreased to a mean of 3.

Post Checks. Post checks have been taken periodically throughout the remainder of the year. The mean number of talk-outs and out-of-seat behaviors during the post checks has remained at 3.

Conclusions:

This study indicates that a regular classroom teacher can effectively use a token system in her classroom to reduce inappropriate behaviors without using a great amount of teacher-time or expense. Previous studies using token systems have almost been prohibitive for classroom teachers to use due to the complexity of the recording technique employed and the expense of the reinforcers. The reinforcers used in this study were reinforcers that are available to almost any classroom teacher.

EFFECTS OF A TOKEN SYSTEM ON INAPPROPRIATE
TALK-OUTS AND OUT-OF-SEAT BEHAVIOR IN A THIRD GRADE CLASSROOM



NUMBER WHEEL ACTIVITIES

1. View a story or film on filmstrip projector (small size for individual use)
2. Cut and paste a picture
3. Color a picture (The teacher suggested a theme such as the most haunted looking house you've ever seen, the ugliest witch imaginable, the funniest clown you've ever seen, etc.)
4. Practice spelling words on the chalkboard.
5. Practice writing name on the chalkboard in cursive.
6. Use overhead projector to practice handwriting, spelling, or math.
7. Crossword puzzles
8. Dot-to-Dot pictures
9. Checkers
10. Story jigsaw puzzle
11. Scribbage (spelling game)
12. Cubit (a form of tic-tac-toe)
13. Read a library book.
14. Go to the library to browse for 10 minutes.
15. Listen to a recorded story with a record player and headsets.

SPECIAL EDUCATION
FOR NORMAL KINDERGARTEN CHILDREN
WITH SUBTLE DEVELOPMENTAL LEARNING DELAYS

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Special Education for Normal Kindergarten Children
with Subtle Developmental Learning Delays

By Lawrence H. Weiner, Ed.D.

ABSTRACT

Kindergarten age children were screened at pre-registration through extensive diagnostic procedures for placement in a class designed for normal children with developmental delays staffed by a Special Education teacher and language therapist. Instruction was prescriptive and individualized. Of the twelve children who were high risk failures at the onset, eight improved to low risk failures at the conclusion with statistical significance. It was concluded that Special Education is valuable for non-handicapped children with developmental learning problems.

Special Education for Normal Kindergarten Children
with Subtle Developmental Learning Delays

By Lawrence H. Weiner, Ed.D.

INTRODUCTION:

Traditionally, Special Education has been reserved for handicapped children. The basic concept of this study was to apply special educational techniques and teaching skills to essentially non-handicapped or normal children who displayed subtle signs of developmental delay. These aspects of developmental delay are very often found on the lower end of a continuum of normal entrants into public school kindergarten programs. The concern for this type of child arose out of the frequency with which a child flounders through a kindergarten program, needing something additional to the customary early childhood education program and the thirty-to-one (30-1) teacher-pupil ratio. At the end of the year, such children face a repetition of kindergarten, social promotion without real readiness or movement to a transitional class. Oftentimes, this child completes first grade before a thorough understanding of his problems has been ascertained, or his attitude toward school has already gone downhill with the eventuality of a learning disability problem emerging.

The aim of this experimental kindergarten, funded through Title I, E.S.E.A., was to select children prior to school entrance, subject them to a smaller teacher-pupil ratio, and provide Special Education awareness and sensitivity to these problems on a daily basis. The idea of giving only handicapped children the services of Special Education was cast

aside for the extension of such educational programming upward to children of normal potential. Unlike customary early childhood programs of a head start nature, a preventative and diagnostic approach was being taken rather than a means to effect a "cure" or to improve skills depressed due to external factors. The concern was to prevent failure in kindergarten due to the structure of admission policies (generally governed by Chronological Age) and the wide varieties of maturational development evidenced within the normal range at this crucial point in a child's academic career. The procedure to accomplish this goal was to stress screening processes, small teacher-pupil ratios, and to innovatively offer Special Education of the traditional type to a usually non-recipient group. The assumption underlying the latter feature is an increased level of training and sensitivity to developmental problems as this is the heart of Special Education.

SELECTION OF SUBJECTS:

The initial step in the process of organizing the class was the selection of subjects. Children who would be five years of age by December 31st of any year would be eligible for entrance into kindergarten in September of that year. The screening process for placement began in the late spring of the preceding school year at preregistration. A diagnostic team consisting of school principal, school psychologist, social worker, psychiatrist, speech and language therapist, school nurse, and Special Education teacher was present at each elementary school. All incoming pre-registrants were interviewed first by the school

principal and then by each member of the team. Often two disciplines worked together, i.e., social worker and school psychologist. Prior to registration, each parent received a form to fill out regarding the child's development. This form was brought to registration and became the entrée to the screening. Simple tests of a guideline nature were utilized such as: figure drawing, spontaneous conversation, behavior control, general health, and brief case histories. In other words, an attempt was made to pre-screen children on the basis of educated estimates based on skilled judgment and non-standardized observation techniques initially. Those children who represented problems through this process as a result of staff conferences were invited back for a final screening. At that time, intensive psychological, social work, language and health evaluations were completed and the class selected. One interesting factor worthy of note was that it was felt by the screening team that trained observation provided a more accurate measure of eligibility for the program than did any specific test or battery of tests. The standardized tests served to confirm judgments in that fourteen (14) children were screened after pre-screening, and ten (10) were retained for the class.

Thus, by definition, the children served in this program were of normal intelligence but representative of subtle developmental delays in language, social and emotional maturity, and perceptual development.

PROCEDURE:

Ten children were selected for attendance in the diagnostic and preventative kindergarten on the basis of the above procedures. Enrollment was for the full school term (180 days) for two and one-half hours per day.

Upon admission to the program, all children were given the Meeting Street School Screening Test for Early Identification of Children with Learning Disabilities. Using the suggested cut-off point of 39 (raw score) and below for lack of kindergarten readiness, all children selected fell into this area or into the questionable area (raw scores 40-44) with the exception of one child who was selected on the basis of emotional problems which inhibited readiness despite an MSSST score of 54. Raw scores and risk levels may be seen in Table I.

Upon completion of the program, the Metropolitan Readiness Test, which has a similar scoring process and risk level, was administered. A different post test measure was used as there are no comparable forms available on the Meeting Street School Screening Test, and as retest processes were held within a 180-day period, concern was for practice effects. Some research exists pointing to the two tests measuring comparable factors as found in the Monograph dealing with this test.* Metropolitan Readiness scores may also be seen in Table I.

The school program consisted of combining an early childhood education program for first grade readiness with special emphasis upon teaching techniques for learning disabilities. Each child received a complete battery of diagnostic tests of an educational and psychological nature in order to determine the specific areas of developmental delay. The teacher then proceeded to plan a model program for each child, working through

*Hainsworth, Peter K. and Siqueland, Marian L., Early Identification of Children with Learning Disabilities: The Meeting Street School Screening Test (Crippled Children and Adults of R.I., Inc., Meeting Street School, Providence, R.I.) c 1969, pp. 17-19.

major modalities such as visual-perceptual motor skills, language development, behavioral and social development, and body awareness or kinesthetic skills. Emphasis was placed on an individualized, tailor-made program for each child phasing through receptive, integrative, and expressive functions in the usual developmental learning areas such as discrimination of form, space, time; associative skills; selection of relevant material; retention skills; sequencing, etc. Basically, prescriptive education was the method with the innovative approach of utilizing a trained Special Education teacher with children who were essentially normal and who would not usually receive this assistance.

Additional supportive help was provided through use of a language therapist to develop communication and language usage skills. Children were worked with individually and in groups with constant reinforcement by the classroom teacher. A combined effort of language therapist and Special Education teacher was the basic process involved.

Finally, all parents were seen on a regular basis by social workers. The progress of the child was discussed. The parental reactions to their children, the program, and the educational and familial process were dealt with in these case work sessions.

RESULTS:

The experimental design of this investigation was devised so as to test the Null Hypothesis that:

H_0 : The probability of a child changing from a high risk to low risk is equal to the probability of a child showing no change at all.

Table II shows the distribution of frequencies in a Fourfold Table for computation of χ^2 .

The results of the analysis between the pre test and post test results yielded a significant chi-square. On this basis, the hypothesis that the probability of change in readiness occurring would be equal to no change in readiness as a result of the program would have to be rejected. It would appear that within the sample contained in this study, the probability of the change from high risk to low risk occurring by chance would be less than five in one hundred.

Additional analysis of the data demonstrated that 62 percent of the children (8 of 13) involved in the program went from a high risk level for success in kindergarten to a low risk level for failure in grade one at the conclusion of the program and were so placed for the following school year. Of these eight children, two were able to be returned to regular kindergarten at the midyear point in the school term. In relationship to this factor, two of the five children who remained high risks received only one-half year of the special program as they were screened and placed in the program at midyear after having been exposed to the regular kindergarten class for the first part of the school year. The total of five children (high risk) were scheduled for placement in K-1 transition classes with full diagnostic data available concerning their learning problems.

Table I
Metropolitan Readiness Test of "C"

Subject	Risk		Raw Score		
	Pre Test MSSST	Post Test METROPOLITAN	Pre Test MSSST	Post Test METROPOLITAN	Letter Grade
1	high	low	40	57	C+
2	high	low	40	52	C
3	high	low	18	45	C-
4	high	low	37	45	C-
5	low	low	54	58	C+
6	high	low	42	50	C
7	high	high	35	38	D+
8	high	high	22	28	D-
9	high	low	43	59	C+
10	high	high	24	36	D+
11	high	high	15	38	D+
12	high	low	41	59	C+
13	high	high	28	42	D+
Totals:	12 high risk 1 low risk	8 low risk 5 high risk	Total: 439 Mean: 33.76	Total: 607 Mean: 46.69	

Table II
Distribution of Frequencies on MSSST and MRT

	Pre Test	Post Test	
MSSST	High Risk 12	High Risk 5	MRT
MSSST	Low Risk 1	Low Risk 8	MRT

$\chi^2 = 4.16, df, 1$
significant at $p < .05$

CONCLUSIONS:

Certain limitations were placed on this study by sample size and test availability. It would have been appropriate to perform test/re-test with the same test (Meeting Street School Screening Test); however, as no comparable form was available, it was felt the practice effect would have produced misleading results within the 180-day school year. Thus, a comparable test (Metropolitan Readiness Test) was utilized. Further, a larger group of children would produce a more favorable sample from which to draw conclusions based on statistical techniques--except that to increase the class size would have defeated the purpose of the program.

Regardless of these limitations, several meaningful conclusions can be drawn. First, it was important to note that no single test or combination of tests were of great value in screening participants. Rather, the skilled observations and judgment of a well-trained, multidisciplinary staff proved more discerning. Secondly, within the sample worked with, a significant level of change was noted by the innovative approach of applying special educational techniques to children who ordinarily do not receive them. This can be seen by the chi-square value and the percentage of change. It was of further interest that of the five children who showed no change (remained high risk), two entered the program at midyear, and all five came from homes with voluminous internal problems acting as an artifact on development as revealed by social case work.

From these factors, some broader conclusions emerge. Support is evidenced for utilizing skillful diagnosticians and their experiential

services in evaluating children rather than seeking a panacea in a particular battery of tests. Also, additional evidence is demonstrated for continuing to approach learning problems at an early level before the child is lost into the mainstream educational program. Finally, Special Education teachers and the techniques available to them by virtue of training and experience should perhaps be made available to a wider group of normal children in order to key in on subtle development and learning problems. Similarly, the regular classroom teachers should be exposed to more Special Education training of a formal or in-service nature to help increase their awareness and skills for dealing with these problems.

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