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ABSTRACT

The Attention and Classification Curriculum, which was developed for four-year-old children, is described and its implementation is discussed. The curriculum consists of a sequence of 40 lessons and a set of materials used to carry out the lessons. An evaluation of the curriculum was conducted following its use in nine participating centers. General and specific findings are presented. It is concluded that the successful implementation of the Attention and Classification Curriculum provides evidence that early childhood centers can incorporate curricular input when several criteria are met. The content of the curriculum has been found appropriate for the majority of children who were mostly three- and four-year-olds; the five-year olds in several of the centers needed a greater challenge.  
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Implementation of Attention and Classification  
Curriculum in Day Care and Early Childhood Centers\*

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Nationally, attention has been focused on what kind of program as well as custodial care is being provided in day care centers and early childhood centers. Boards of directors, center directors, and teachers have shown interest in providing an educational program, but frequently have little knowledge of or experience with curricula for the young child. Research has shown that the young child is capable of acquiring significant knowledge when appropriate stimulation is provided (Weikart, Deloria, Lawser, Wiegerink, 1970; Sigel and Hooper, 1968; Earhart, Sigel, Boger, Melcer, 1970a). Data concerning the implementation of educational programs in day care centers are limited.

Fowler (1971) and Elkind (1970) state that young preschool children need both the cognitive and socioemotional processes stressed. Since the cognitive and affective aspects of human development are so closely interwoven, individuals assuming responsibility for these rapidly developing young human beings must be cognizant of these needs as they plan appropriate organized experiences for them.

Program Needs in Day Care and Early Childhood Centers

Day care licensing personnel, day care center directors, and teachers of young children in Michigan have also expressed, perhaps in less eloquent

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terminology, their desire to provide the preschool children in their centers with the kinds of experiences which will prepare them for what they will learn later. The preschool years are important ones in the child's mental development because, as Elkind (1970) has said, "mental growth is cumulative and depends upon what has gone before." Kagan and Whitten (1970) reinforce the teachers and directors who wish to upgrade their programs with their statement that "the child needs a basic set of concepts and rules that acts as an anchor to which he refers all new experience."

Expression of these program needs was vocalized when several day care directors and teachers in Michigan attended a two-week workshop on campus during the summer in which all aspects of operating a day care center were considered. At one session, the Attention and Classification Curriculum, which had been developed for and field-tested with four-year-old children in Head Start classes in several locations, was presented (Earhart, Sigel, Boger, and Melcer, 1970b). The curriculum is designed to help the child modify his thinking skills so that he can successfully deal with new information he receives. Several of the teachers and directors wanted to incorporate the curriculum in their centers as a supplement to their ongoing programs.

Other educators of young children who had also asked to use the curriculum in their classrooms included a teacher in a cooperative nursery, the coordinator of the four-year-old units of the campus preschool, the

to work in the therapeutic preschool, and a kindergarten teacher who was working with many migrant children in her classes.

Since the previous field testing had been conducted only in Head Start classes (Earhart, Sigel, Boger, & Melcer, 1970a), further experimentation in a variety of settings with young children would provide information regarding the suitability of these materials for day care and other early childhood groups. The questions which needed to be answered were:

What adaptations would be needed in varying situations?

Could other paraprofessionals and teachers interpret the explanations of procedures and translate them into action?

What problems would be encountered when organizing for and working with small groups of four children?

Is the content of the curriculum appropriate for other age levels such as three-year-olds and five-year-olds?

#### Description of Participating Centers

The participating centers in this curriculum implementation were identified as a result of interest expressed by the teachers and/or directors. A variety of locations throughout the state was represented by the nine centers involved, one located one hundred-ninety miles from campus. One center was situated in an inner-city area, two in suburban low-income areas, two in cities and patronized by lower-middle income and middle-income families, one near the university campus served middle-income families, and three centers were associated with the university.

... nine participating centers presented a wide variety of program types. Five of the nine centers were all day programs and termed day care centers. One center was a cooperative nursery, where parents participated on a scheduled basis. One center, the therapeutic preschool, served children who had special problems which prevented them from attending other regular programs. The four-year-old unit of the Institute for Family and Child Study served as a training unit for preservice teachers and functioned like a traditional nursery school. The kindergarten was a usual half-day session attended by a number of children from migrant families who had settled in the area.

#### Curriculum Implementation

The Attention and Classification Curriculum developed for four-year old children consists of a sequence of 40 lessons and a set of materials used to carry out the lessons. The curricular program is based on extensive earlier research investigations by Sigel (1971) which focused on classification skill development and later on attention training (Shantz and Sigel, 1967). An intervention study comparing the attention training and classification training (Boger, Sigel, Melcer, Earhart, and Walters, 1970) convinced the authors that the attention training should precede more complex grouping activities included in the classification training.

The primary curriculum which the children will experience in the early studies, includes three units - Exploration, Attention, and Classification. In the exploration activities new materials are introduced and children investigate them in manipulative experiences by using the senses of hearing, seeing, and touching. In the Attention Unit, characteristics of objects are observed, likenesses and differences are identified, models are built, and the scanning strategy is employed to find an object like the example. After a sequence of experiences in manipulating and attending, the more complex level, classification, is introduced. The children group objects according to form, color, size, texture, relationship, or function. A number of categories are introduced and experiences in multiple grouping are presented after numerous opportunities to group based on a single attribute. A guided discovery method is used in training the child to detect and recognize relationships for himself. Divergent thinking is encouraged by accepting unique and unusual groupings when an appropriate reason is verbalized by the child.

Each participating center was equipped with the Teacher's Manual, describing the objectives, materials required and procedures used for each of the 40 lessons, and a complete set of materials needed to carry out the lessons. The materials included toys such as parquetry blocks, pegboards and beads, and categories of objects such as miniature tools, plastic fruit, clothing items, small farm and zoo animals, family members and vehicles. The young child's interests and needs were high priority considerations when the materials for the lessons

The teachers in the centers were instructed to use the materials and lessons in sequence but to make any adaptations which would benefit the children in their center or would simplify implementation. As long as the objectives of the lesson were achieved, variations could be incorporated. Each center was requested to attempt working with small groups of four children or less. The materials were to be introduced to the children in small groups first, then made available periodically in the classroom for free-choice activity time. During free activity periods, children could use the materials as they wished. Teachers were to observe how the materials were used, creatively or in activities similar to the lessons. The lessons and materials were to be a supplement to the ongoing program, not a substitute for it.

#### Data Collection

The investigator met with the teachers and directors in each center several times during the experimental period which varied from five or six months in some centers to one year in others. At this time, questions were posed by the personnel in the centers regarding procedures and/or materials. Audio-taped interviews and notes made by the investigator during and after these meetings provided sources of data for the study. Many teachers also responded in writing to a questionnaire at the end of each of the three units. The questions

...with the children ... the appropriateness of the material used, and any suggestions or adaptations required. In several centers, the teachers shared specific notes made on each lesson with the investigator.

#### General Findings

The feedback received from the various centers was unanimous in supporting the proposition that the lessons and materials were suitable for a variety of early childhood centers. The flexibility provided was most frequently reported as a strength of the program. The detailed instructions were easily interpreted for most of the lessons and the paraprofessionals as well as the teachers enthusiastically and successfully executed the sequence of lessons.

Varying organizational patterns were utilized to meet the needs of the centers. In several centers, a screened corner in the classroom was used for small group time. In other centers, no particular separation was deemed necessary. The class was split into several small groups for activity time in one center; one of the groups participated in the lessons. The children were taken to a separate room for small group time in other centers.

Children ranging in age from two and one-half to six years were in attendance at some centers. The early more simple lessons were found useful with the three-year-olds and some younger children. The time period needed to be shortened for some of the young children at

... activities and provided the challenge needed for the older five-year-olds. Some centers requested more activities of a complex nature to stimulate the older children.

#### Specific Findings

Since the centers, from which data were collected, differed in location, clientele, and personnel, some specific findings are worthy of documentation. Some of the specific findings suggest approaches or techniques which could be adapted by other early childhood centers.

Cooperative Nursery The teacher of the cooperative nursery group had expressed a desire to try some specific curricular input with her children. In a special introductory meeting with the parents, the curricular materials and objectives of the program were presented by the investigator. The parents supported the curriculum implementation as an experiment to see how their three-year-old children, who had rich backgrounds of experiences, would respond to the lesson activities. The teacher presented the first lessons and found that the children enjoyed the special attention they received in the small group sessions.

Gradually the parents who were assisting the teacher began to present the lessons to the children. The lesson instructions were discussed with the teacher prior to small group time. The parents were encouraged to incorporate their own individuality, but felt a security in having a basic lesson to follow. The parents found that

learning can be fun and experienced success and enthusiasm in their interactions with the children. Several mothers reported that they used the techniques from the Attention and Classification Curriculum at home with all their children. The teacher indicated that the parents become more aware of individual differences in all children, and as a result, were more attuned to recognizing and meeting the needs of children in all areas of the program. In this situation the teacher felt that the curriculum served as a parent education program as well as a child education program. The parents were considered as "teachers, too" by the children. The children would proudly announce, "My mother is doing group time today." One little girl told a little boy, who had recently entered nursery school and was hesitant about joining the small group lesson, "Oh, you don't want to miss group time today. My mommy is teacher."

The children responded positively to participating in small group time because they enjoyed the new materials and new games. The attention span of the children increased from less than 10 minutes to 40 minutes or longer during the lesson sessions. The teacher, who had taught groups of three-year-old children for several years, felt that the growth in attention span was greater than she had previously experienced and that the growth was attributable to the Attention and Classification Curriculum program.

New Day Care Center The board of directors and the day care center director-teacher wanted to implement the curriculum in their

program. The director-teacher experienced many problems in organizing the total program and the space to include the small group time. Her responsibilities were too numerous as an administrator to allow time for consistent curriculum implementation. The center began with a few children, but grew rapidly in an area where quality day care was in great demand. The materials from the curriculum were frequently used by the children in free choice activity periods, but daily small group interaction was limited. The investigator has concluded that the curricular input is probably more feasible for a somewhat stabilized center which has the organizational problems reasonably well controlled rather than a brand new center operating with minimally trained staff. A recent communication from the director of this center, where the curriculum is successfully being implemented during the second year of operation, confirms the foregoing conclusion.

Established Day Care Programs One of the established day care centers had incorporated planned small group activities for their four-year-old children in their morning program. The Attention and Classification lessons were used as one of the small group activities by a trained teacher who skillfully implemented the sequence. She encouraged creative expression in manipulation of the materials and in verbalization. Evidences of concept development are revealed in the verbatim conversations she recorded. For example, one child completed a design construction task and commented, "I used squares and rectangles. It looks like a bridge. I'm going to crawl through."

The teachers and director decided that the curriculum material included in the set would be reserved for the late afternoon time period, which is often a hectic and difficult time in all-day programs. These materials were viewed as "special choices" by the children since this was the only time in the day that they were available to them on a free choice basis. Not all toys were available each day, thus interest was maintained at a high level. The practice of reserving special materials and activities for the late afternoon hours should be carefully considered by other centers as an approach to coping with the problems encountered.

The Memory Game (Milton Bradley) was a favorite with the children in an OEO funded day care program. The game included with the set of materials was so frequently used that it had to be replaced near the end of the experimental period. The children were challenged by the task and developed their memory and ability to concentrate. The teacher in this center expressed enthusiasm for working with small groups of children in the curriculum program by commenting that the children were more attentive in small groups than in one large group, and that she could identify special needs and abilities more accurately in the small group situation. This response to working with small groups was echoed by the teachers in many of the centers.

In another center, the teachers used the lesson activities as springboards to mini-units. A lesson in which plastic fruits are used to establish a category, and the subgroups within the category,

stimulated the teacher to take the children to a grocery store to purchase some real fruit. The real fruit was handled, described, classified in varying ways such as color, texture, and shape and, finally, eaten. The experience was reported by the director as a "huge success."

Kindergarten The children in the kindergarten classroom responded with unusual enthusiasm because they enjoyed the materials and games, were successful in the activities, and were learning new concepts. The teacher summarized the gains made by the children as learning to discriminate colors and shapes, develop coordination and motor control, verbalize thoughts, and develop memory processes. The children regularly asked the teacher, "May I work with you today?" The teacher's written comments at the end of the experimental period express her feelings, "The program is so right for the children in every way - toys, small group, personal attention, and success which comes without pressure."

Therapeutic Preschool The teacher of the therapeutic preschool reported that the interesting materials provided an inherent satisfaction for these children who had adjustment problems. Frequently she personalized an introduction to the lesson for them. The children responded to the lessons in differing ways, depending upon their individual problems. The hyperactive children who revealed emotions readily, thoroughly enjoyed role playing using family members and less structured activities. In contrast, the withdrawn children who

were characterized by solitary play responded well to structured lessons where an obvious response is expected. The withdrawn child did not wish to reveal his emotions by role-playing or participating in imaginative verbalization activities. The lessons using parquetry blocks were difficult for these children who, in many cases, had some learning disabilities as well as emotional problems.

Four-Year-Old Campus Nursery School The children in the four-year-old unit of the Institute for Family and Child Study were attending nursery school for the second year. The coordinator and teachers wanted to stimulate concept and thinking skill development, and chose the Attention and Classification Curriculum as the vehicle. The children participated eagerly and referred to the small group sessions as their "meeting." When the class went on field trips and time did not allow for a small group session, the children would ask, "How come we didn't have our meeting today?"

The teachers sometimes worked with larger groups, seven or eight children, when additional materials were available. Since these children had previously worked in small groups, the larger groups were considered effective. The lessons in which verbal response from individual children was expected were least successful with a larger group because the children found it difficult to wait to respond.

A number of college students, who are in training as preschool teachers, participate as teacher assistants in the four-year-old unit. The teachers often delegated the responsibility for teaching a

small group to one of the teacher assistants. By reading through the lesson procedures and briefly discussing any questions with the teacher, the students could effectively carry out the small group time. Work study students, who were not necessarily training to become preschool teachers, were also able to read the lesson instructions and execute the activities.

The favorite materials in these classes were the parquetry blocks. The lesson activities and games involving parquetry blocks were challenging for this more advanced group of children. The teachers reported that the sequencing of activities was very appropriate, in that children learned basic concepts in early lessons which were needed for later problem-solving activities.

#### Implications for Early Childhood Centers

The successful implementation of the Attention and Classification Curriculum provides evidence that early childhood centers can incorporate curricular input when several criteria are met. First, the center should be stabilized organizationally. The day to day functioning of the center should be settled enough that additional curricular input can be regularly included in the day's activities. Second, the teachers, director, and governing body should express interest in including the additional curriculum and should be convinced it will be beneficial to the children. Teachers, in particular, who believe a program will be worthwhile, tend to be more enthusiastic and work harder to successfully carry out the program. Third, the

curriculum should be written with detailed instructions which can be easily read and understood by the staff members of day care centers and other early childhood centers. Since many of the staff members in day care centers have very little training in early childhood education, detailed instructions, without educational jargon, provide guidance in how to ask questions, introduce a lesson or a new material, execute the lesson activities or encourage a hesitant child. Fourth, the curriculum must be flexible enough that the implementer feels free to adapt or revise the activities to meet the needs of the children and to be congruent with his own philosophy and approach in teaching. Objectives can be accomplished much more readily by some teachers when given the flexibility to proceed with variation.

A small group of children working together with a teacher using materials in specified activities has been deemed an effective technique for program implementation. The teachers find that working with a small group is satisfying experience in which they interact with the children regularly and are able to identify children's strengths and weaknesses. Children benefit from the experience in a small group by gaining social skills as well as cognitive skills. Fowler (1971) articulately summarizes working with small groups as an approach in which one capitalizes "on children's delight in identifying and interacting with peers, yet groups are small enough to permit continuous individualization of attention for every child." Early childhood centers which utilize the small group procedure in

incorporating curricular programs should find it efficient and effective.

The content of the Attention and Classification Curriculum has been found appropriate for the majority of children in the early childhood centers in this study who were mostly three and four-year-olds. The five-year-olds in several of the centers needed a greater challenge. To satisfy the broader range of ages, found in many early childhood centers, the activities should be expanded to include more complex classification experiences. Older children could classify using several characteristics and could respond to pictures and symbols. Most of the lesson activities in the experimental sequence used concrete objects and materials. A series of lessons to follow the experimental sequence are currently being developed. Further experimentation would help determine how effective the follow-up sequence will be in meeting educational needs of more advanced children attending early childhood centers.

Early childhood centers can provide more than custodial care for the children who are entrusted to them for several hours each day. An educational program which is more appropriate provides a range of choices and situations for the child, both indoors and outdoors. One reason the Attention and Classification Curriculum has been readily accepted by the personnel in the centers is the fact that the curriculum is a supplement to an ongoing program, not a substitute for that program. A center appears to have less difficulty meshing

a supplemental curricular input with other important daily activities than instituting a complete change which may eliminate some of the program considered most important by the staff.

Many centers report that parents are exerting pressure on the staff to teach their preschool children academic skills such as reading and arithmetic. The centers can provide an educational program, which prepares the child for reading and mathematics, without formally teaching reading and arithmetic. When the child learns basic skills of observation, discrimination, and classification, he has a solid basis on which to build when he encounters formalized reading and mathematics. Tinker (1971) states that a child who has not had help developing visual discrimination skills may arrive at kindergarten accustomed to noting only gross visual differences. Without visual discrimination skill, he will not be ready for reading instruction. The Attention and Classification Curriculum was designed to emphasize skills which are basic to learning and provide a firm foundation for later learning. The activities in the curriculum are also much more suited to the developmental level of the young child than is formalized reading and mathematics. The personnel in early childhood centers are encouraged to carefully evaluate their programs. Are the children appropriately stimulated so that basic learning skills are being developed? Formalized rote learning of words and number facts may be rationalized as meeting the parental pressure, but could actually build negative attitudes toward learning.

The young child deserves to experience that learning can be fun. Early childhood centers should make every attempt to make learning fun for the children. Findings in this study support the proposition that day care and early childhood centers can successfully implement educational curriculum and that the children who participate thoroughly enjoy the experiences.

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