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Effect of teacher's verbal expression on child's elaborated learning during the free-play period : study of activities.

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EFFECT OF TEACHER'S VERBAL EXPRESSION ON CHILD'S ELABORATED LEARNING DURING THE FREE-PLAY PERIOD: STUDY OF ACTIVITIES

A Dissertation

by

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School of Education

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Dedication

In memory of my father, Onyebuchi Nwokocha, who first showed me that hard work is the key to success, but did not live to see the fruit of his labor.

My mother, Helen Onyebuchi

My husband, Apollos Ihedigbo

My children, Onyinyechi/Deborah
Emeka/Joe
Chimdi/Nathaniel
Ikechukwu/David
Ugochukwu/James

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Finally, I am most grateful to the Almighty God, through Whose power, strength and wisdom, I am able to achieve this goal.

ABSTRACT

EFFECT OF TEACHER'S VERBAL EXPRESSION ON CHILD'S ELABORATED LEARNING DURING THE FREE-PLAY PERIOD: STUDY OF ACTIVITIES

MAY 1992

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The major focus of this study is to identify the effects of teacher's verbal expression on children's learning during the free-play period. The verbal expression of teachers was identified as a form of the adult's reinforcement of the child's performance during the free-play period. This reinforcement of the primary learnings which are the children's ongoing activities, leads to the elaboration of learning into associate and concomitant learnings.

Fifty four-year-old children in ten classrooms were selected and observed. The Child Activity Observation Form designed for 40 minute observations and adapted from Day and Weinthaler (1982) was used to collect the data.

A videotape of two classrooms was used for training twelve teachers for inter-observer reliability. The researcher and the twelve teachers observed the tapes and

Initially video taping of two classrooms was done and used for training twelve (12) teachers for inter-observer reliability measure. After the training session, one tape was watched on one child for twenty (20) minutes. The teacber results were correlated with the researcher results. The percentage of agreement amongst the thirteen (13) observers for all variables was calculated for the activities, and the average percentage for relability percentage was then calculated.

SPSS/PC+V.3.1 -- Statistical Package for the Social Sciences, 1988 was used to analyze the data. Contingency table analysis was used, which shows mostly the frequency distribution and crosstabulation of data.

Scores based on the number of initiation of activities for teacher, and child, shows no significant differences. Teacher initiated activities for child and child initiated activities for self.

In looking at the effect of teacher interaction on the child's achievement of elaborated learnings results shows differences in the role of the teacher in the activity the child is involved in and the frequency of Associate Learnings and the Concomitant Learnings.

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CHAPTER 1

INTRODUCTION

Some Aspects of Child Care

Recent trends from 1977 to 1985 show an increase in the number of working mothers, ages 18 to 44, who use different child care arrangements for children under the age of five. This increase went from 13 percent in 1977 to 25 percent in 1985 (Exchange, April 1989). Child care demands and use have continued to grow rapidly. Today one out of two preschool-aged children in America have mothers in the workforce (Child Care, 1989).

The quality of child care makes a difference. Parents, teachers, and child development experts agree that good child care makes a "positive and permanent difference to a child's development" (Child Care, 1989). Child care that is best for children requires small group sizes with few children per adult caregiver. Children in such settings receive more attention and get more opportunities to improve their cognitive, social, and language skills (Child Care, 1989).

The Statement of Problem

Some teachers and parents regard the free-play period as a "play-time," not really as a learning period. The

attention of parents has been mostly directed to what most of them call "real learning" -- that is reading, writing, and arithmetic. Child educators acknowledge that "mental play" is as important as "physical play" and requires "stimulation and guidance."

Some central questions have been asked over the past several years regarding learning stimulation and guidance in the preschool classroom. These questions have included the following:

1. How does learning take place in the preschool classroom during the free play period?
2. What kinds of learning is a teacher endeavoring to foster?
3. What is the teacher's responsibility in fostering these learning experiences?
4. How should the learning situation be established?

Gaining a better understanding of the answers to these questions is one of the major goals of the study. Manor (1939) in her book, The Early Childhood Education, a major theoretical source for this study examined some of these concerns that existed in the past with regard to children's learning in the preschool classroom. These issues are similar to today's concerns regarding what children do during activity periods. Discussing some of the conditions

that affect learning, Manor (1937) stated that "Activity is not an end in itself." She elaborated on this by quoting the "Teachers Guide to Child Development" (1930):

> We need to recognize that activity is not merely an end in itself, but a means to growth. It is not enough that children be active, the activity must be to some purpose-controlled, directed activity. Nor is it sufficient that children be physically active only. Their fondness for dramatization, construction, manipulation, and imitation should be encouraged. At the same time they should be stimulated and helped to see relationships, to understand significances, to gain insights in regard to their many 'doings.' Mental and physical activity should be closely correlated; adequate time must be provided for both. Mental play is as important as physical play and requires stimulation and guidance.

Early Childhood educators agree that the adults should facilitate children's engagement behavior with appropriate materials and activities. Children's learning should be extended by asking open-ended questions or making suggestions designed to stimulate thinking (Elkind, 1986; Forman and Kushner, 1983; Kamii and Lee-Katze, 1979; Sparling, 1984; ect.). Manor (1937) summarized the teacher's/adult's responsibility as follows:

> Teaching is the stimulation, guidance, direction, or encouragement of learning. It is setting the stage upon which learning takes place; it is giving opportunity for learning to arise. It is the guidance of such spontaneous learning as appears in the natural activities of children.

Reinforcing children's activities in learning situations and elaborating learning into other associated learnings should be a major strategy a teacher follows to foster and enhance growth. Dodge, Goldhammer and Colker (1988) in The Creative Curriculum, illustrated these "techniques" as :

> Describing what children are doing: "I see you have used all the square blocks today." Or, "You have mixed the blue and yellow paint together, and look what you made--green! Or, "I see you're having trouble getting that wet sand to go through the funnel."
>
> Asking children to describe what they are doing: "You've been working in the block corner a long time today. Tell me about the building you've made." Or, "You really seem to like the shells we collected. Tell me all you learned about them."
>
> Asking questions that invite children to examine their own work and look for new possibilities: "Your car is a long way from the gas station. What will happen if it runs out of gas?" Or, "That play dough looks very sticky today. What could you add to it to make it work better?"
>
> Asking questions that encourage children to put together their information in order to arrive at an answer: "Which of these bottle caps is the same as the one you put in the cup? How is it the same?" Or, "What do you think will happen if we hang all the dress-up clothes on one hanger?"

The identification of the effects of adult's reinforcement on the child's performance during the free-play period is the main focus of this study. This will be considered as the interaction between the teacher and the child within an on-going activity.

The focus will be on three kinds of learning which emerge through the course of the activities. These learning activities have been identified through the literature. Manor (1937) called these learnings "Primary," "Associate," and "Concomitant." Each of these can be identified during pre-school classroom activities depending on the quality and quantity of teacher's interaction with the children. The data gathered examines the effects of teacher's interaction (referred to in this study as teacher's verbal expression) on the child's attainment of these learnings.

Also identified in the literature are four phases which a child goes through while engaged in the activities (Condry and Koslowski, 1979). "The four phases of the child's learning activities" will include: "Initial engagement," "the activity," "disengagement" and "subsequent engagement."

This study also examines these four phases as the child participates in the activities of the free-play period.

Significance of the Study

There are several reasons why the results of the study are significant to parents and educators. It shows parents and teachers what to look for when they make decisions regarding the kind of preschool classrooms they choose for

their children and to determine the most stimulating environment for their learning.

Secondly, this study shows the differences between "primary, associate and concomitant" learning. Also, regarding the question of "real learning," it shows that learning in elaboration could be real and meaningful, depending on the activities, the activity center, and the teacher's involvement with the child.

Thirdly, the effects of teacher's verbal expression on a child's abilities to achieve elaborated learning shows the different levels of teacher involvement and their effects on the child's learning.

Fourthly, the frequency of these elaborated learnings in child's initiated activities versus teacher initiated activities were also identified.

Purpose of the Study

The purpose of the study is to:

1. identify the effect of teacher's verbal expression on the child's progress from the primary activity into elaborated learning; and the phases through which they progress.
2. determine the frequency of the elaborated learnings -- associate and concomitant learnings -- during the free-play period.

3. investigate the relationship of child initiated activities to teacher initiated activities toward achieving the elaborated learnings.

The effect of teacher's verbal expression on the child's progression into the elaborated learning activities was defined by the frequency of the associate and concomitant learning activities. By expanding our knowledge about the frequency of the different kinds of learning and the phases through which they are encountered, educators of young children will be able to plan and develop the environment and the activities to foster development. To identify the elaborated learnings and investigate the relationship of child initiated to teacher initiated activities, the phases of child's activities (initial engagement, activity, disengagement, and subsequent engagement) were followed.

At each of these phases certain phenomenon which have significance to the phases was identified. For example:

Initial Engagement -- During this phase either child or teacher is identified as initiating the task.

Activity -- The activity area and the actual activity were identified, e.g., block area -- building house. It was recorded if teacher is present or absent in the area and whether the teacher was directing, participating or

observing the activity. On the part of the child, it was recorded whether child completed the activity or not.

Disengagement -- At this stage it was noted whether it was the child, teacher or other who ended an activity. Other included transitional effects (change of period) or end of observation time.

Subsequent Engagement -- At this stage the child's subsequent engagement after disengagement was identified. It was observed whether it was teacher initiated, child initiated, or peer initiated.

These phases were continued for the child as often as she/he moved from one activity to another during this period of free play (See chart on pg. 9).

Limitations of Study

This study was conducted in day care centers in a northeastern city. The agency involved had 19 classrooms in 5 day care centers. These classrooms included 5 kindergarten classrooms and 14 preschool classrooms. The ages of children ranged from two years nine months to seven years. The sample of the study consisted of 10 classrooms and 50 four-year-old children. Both the classrooms and the children were randomly selected.

THE FOUR PHASES OF THE CHILD'S ACTIVITIES

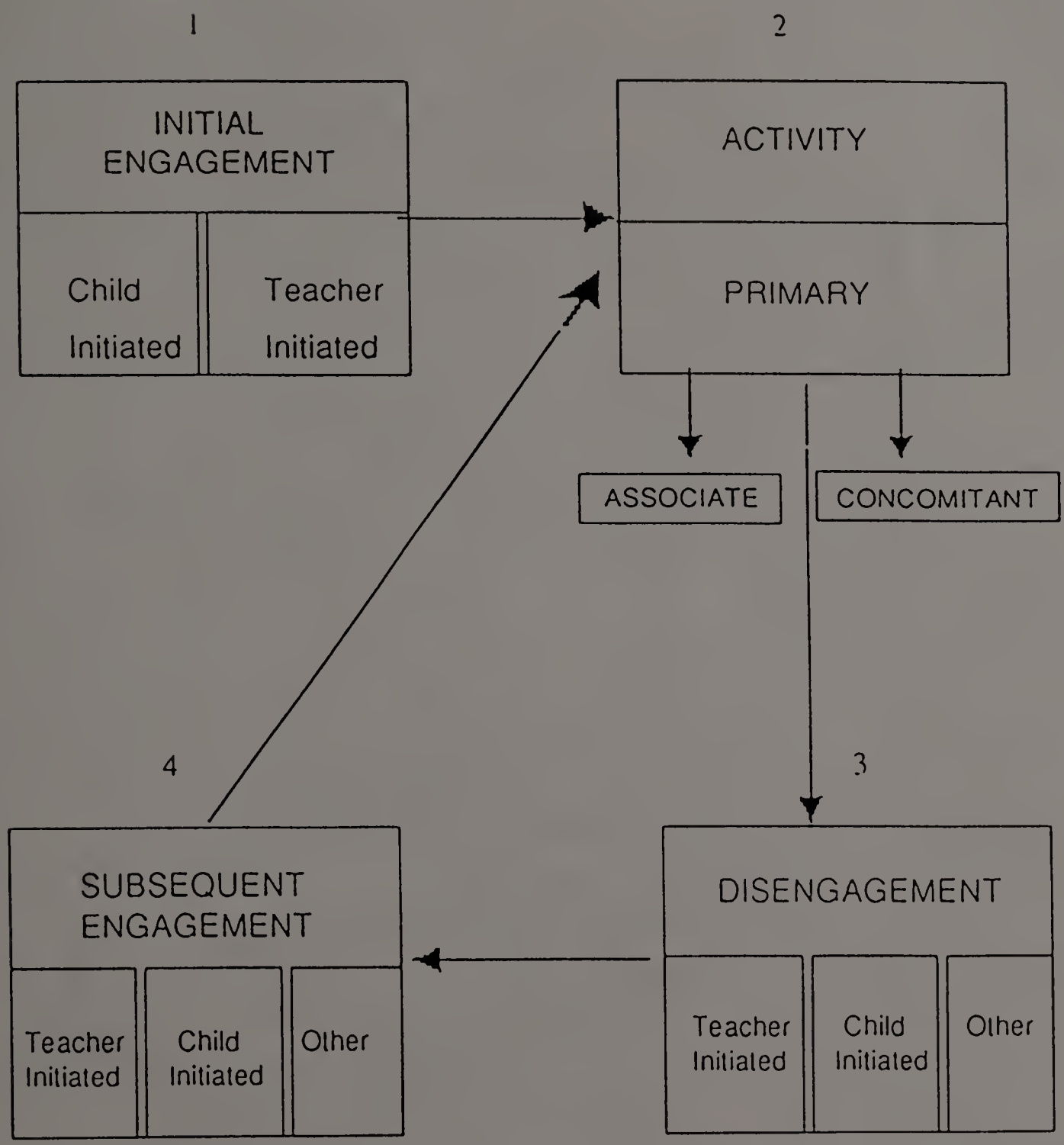

Figure 1.1

THE FOUR PHASES OF THE CHILD'S ACTIVITIES

The class period that was utilized is the free-play period. This period varied in length from classroom to classroom and might last from forty minutes to one hour. But for the purpose of the study, forty minutes of free play was assigned to each of the participating classrooms. The classrooms selected were considered to have some things in common. These are:

-- They all have free-play period where teachers could do very little directing of activites;

-- Special activities may be set out on tables and may be chosen freely by a child;

-- Some other activity centers may be opened and chosen by a child and may not require close teacher supervision;

-- Free-play may occur at the same time in each classroom.

The study involved regular staff who serve as teachers in these classrooms. Both children and teachers were randomly selected with regard to sex, race and socio-economic status.

The study was restricted to the topic -- The effect of teacher's verbal expression on child's elaborated learning during the free-play period. The focus was placed on the following observable variables:

1. Teacher/child interactions.
2. Teacher's initiation of activities for child.
3. Child's initiation of activities for self.
4. Child's movement from one activity center/area of the classroom to another.
5. The frequency of primary, associate and concomitant learnings.

This study is not to be generalized to older children or to school settings with different curricular and standards. Since the data gathered and analyzed come from a limited geographical area, the results should not be projected to a wider population. However, the conclusions reached in the study may be suggestive of a set of needs applicable to other areas.

Definition of Terms

Preschooler -- A child who is at least thirty-three months (2 years, 9 months), until the child is eligible for first grade.

Kindergartener -- A child who is at least 4 years and 9 months and is not eligible for first grade.

Daycare -- Office for Children (OFC) licensed non-residential children's facility operating on a regular basis.

Learning Centers/Activity Centers -- Focal points or areas within a classroom which contain activities and/or materials used to educate, reinforce and enrich a skill or learning concept.

Activity -- A process of action through which hands-on-interaction with materials are used to educate, reinforce and enrich a skill or learning concept.

Learning -- The concept of learning refers to the acquisition of facts, procedures, actions, etc. which can be retained and/or used in practice.

Learning Environment/Physical Environment/Preschool Environment -- These are phrases used interchangeably to identify preschool classrooms where all learning centers are located.

Free-Play Period -- This is a period in the daily schedule that varies between forty-five minutes to one hour. It is the time when most of the activity areas are opened and accessible to the children. Children can move from one activity area to another. The movement to other activity areas could be child initiated, teacher initiated, or peer initiated.

Teacher -- Teacher is any trained regular adult in the classroom who plans, facilitates and supervises all the daily activities in and out of the classroom.

Primary Learning -- The interaction of the child with the main activity in the activity centers. It represents the learnings intimately connected with the activity under way.

Associate Learning -- This activity comes as the result of teacher's didactic suggestions. It is experienced by the child as the elaboration of primary learning: e.g., songs, poems, all of the items of information introduced by the teacher, which are closely related to the primary activity.

Concomitant Learning -- The learning that the child experienced as the result of the main activity. Concomitant learning focuses on habits and attitudes learned during the activity, e.g., child learning to persist when confronted by troublesome problem; to help when invited; to take his/her turn when such is necessary; to remain quiet and contribute his/her share during discussions.

Transitional Time -- A teacher announcing end of activity, clean up time, snack time, group time, bathroom time or outside time.

CHAPTER 2

REVIEW OF THE LITERATURE

Historical Perspective

During the 17th and 18th centuries, educational theorists emerged, two of whom were Comenius and Locke who considered infant education. Comenius wrote "School of the Mother's Knee" in which he recommended "implanting the seeds of knowledge for future development." This literally emphasized the care and education of young children for future development. While Locke, in his writing, made the child "the center of the educational process." He emphasized the importance of the physical, moral and intellectual aspects of the development of the child, even though he believed that "the formation of the habits of good conduct "was the chief aim of education. This period brought the concept of "childhood" as a unique developmental period into existence.

The educational program known as kindergarten was developed by Froebel, a man who thought the lives of young children should be happier than his had been. He was a German who was influenced by the ideas of Comenius and Rousseau and agreed with their view of man as innately good. Froebel believed that the child needed freedom to

develop his natural capacity for goodness. In his view, education was life for the child, not merely a preparation for adulthood.

This was portrayed in his selection of the name "kindergarten" which means "children's garden." The name signifies the idea which he wished to express:

> the idea of development directed by a knowledge of the organism to be developed and aided by the selection of a right environment.
>
> (Manor, 1937)

Froebel was a "realist" in the application of his philosophy and education. He designed an activity-oriented program that included "the original" circle time, drawing, cooking, sewing, gardening, block construction, dramatics, singing and storytelling because he believed that the child is a "social being" (Auleta, in Audeta, 1969). He believed that activity is the basis for knowing and that play is an essential part of the child's education. He believed "that seating children in a circle would help each child identify him/herself as part of his/her own little society or social group (Webster and Schroeder, 1979).

His original kindergarten was a school for children of three to six years that encompassed a greater age span than the present American kindergartens. Froebel was considered the father of the modern kindergarten and was also seen as

the father of modern early childhood education. Not only did he establish the kindergarten, he also established an institute to train young women to become kindergarten teachers, a "revolutionary idea" in the early nineteenth century. As such, two of the women trained at his institute later established kindergartens in the United States, hence, there was a direct link between Froebel and the American kindergarten.

Kindergarten in the United States

German emigrees, one of whom was a senator's wife, Mrs. Carl Schurz, set up the first kindergarten in Watertown, Wisconsin in 1855. The first English-speaking kindergarten was opened by Elizabeth Peabody in Boston in 1860 (Auleta in Audeta, 1979). The number of kindergartens grew and expanded rapidly from 1870 to 1900. One factor that contributed to this was the growing belief that the inherent goodness of the child required a nurturing benevolent environment to develop.

Soon private teacher-training colleges were opened in Boston and New York. The first public school kindergarten in the United States was organized in St. Louis (Manor, 1937). By 1880 some 300 kindergartens and 10 kindergarten-training schools had been opened in cities of 30 different states. Most of the early kindergartens were

privately owned, and by 1890 many more were organized and supported by philanthropic associations. By the beginning of the twentieth century, many public school systems included the kindergarten as part of the regular organization.

In 1928 there were approximately 7,000 public school kindergartens with more than 10,000 teachers. The enrollment in these kindergartens was about 555,070 and the average daily attendance was reported to be 336,746 (Biennial Survey of Education, 1926-1928; 1930).

In July of 1933, "The Representative Assembly of the National Education Association" at the Chicago convention adopted the following resolution:

> Kindergarten training for every child of kindergarten age is a part of the proper educational equipment of the population. The research division, National Education Association, is strongly urged to make a further study of the kindergarten situation throughout the United States.
>
> (The Current Status of Kindergarten, 1934)

This resolution was taken due to some adverse effects of drastic budget cuts which affected the administration of kindergarten. According to the report of the research division of the National Education Association, the enrollment of children in the cities reporting, declined 18.2 percent. Causes for the decrease included the closing of kindergartens and the increasing ages for admission:

14.6 percent of the 102 of 700 cities reporting had entirely eliminated kindergarten.

It is assumed that many of the closed kindergartens were opened at a later date. Today kindergarten activities have been encouraging. Activities of the leading educationists and the united actions of teachers and early childhood organizations have been influential in a campaign of educational publicity to encourage public school boards to have a clearer understanding of the values of kindergarten instruction as an integral part of early childhood education.

Montessori

In Italy, Montessori (1870-1952), a physician, reformer, educator and feminist with a medical degree, worked first with retarded children and later normal children. Her first school, the Case Dei Bambini -- Children's House, was opened in 1907 in the Roman slum of San Lorenzo. More schools and a training program for teachers followed. Montessori believed that children had an inherent desire to explore and understand the world in which they lived (Feeney and Christenson, 1979). Thus, the child was seen as a young explorer, self-motivating and "seeking out of the lands of experiences and knowledge most appropriate for his current stage of development." She was

concerned with "preserving the dignity of the child." Based on her observations, she came to the conclusion "that intelligence was not fixed and could be stimulated or stifled by the child's environment."

Montessori's schools were successful in Italy and eventually spread throughout the world. In the United States Montessori's ideas of creating a child-size environment and the use of sensory materials was adopted. No impact of Montessori's work was seen until the 1960's when concern with the education of "disadvantaged" children gave her approach special interest.

The 1960's brought about some remarkable changes in attitudes toward early childhood education. The federal poverty programs and Head Start were influential factors in the change. The numbers of working mothers grew and created anew the need for quality child care programs (Webster and Schroeder, 1979). Early childhood education began to be recognized in a public way as a genuinely educational service rather than a "glorified form of babysitting or a kind of preventive detention" (Sava, 1975).

According to Sava (1975), early childhood education began to be referred to as "an attempt to stimulate the development of the human mind at the time when it develops most rapidly and with the greatest ease." Adding to the

changes, some influential researchers agreed that early childhood education is essential. Examples of such researchers are:

1. Benjamin Bloom and his associates at the University of Chicago proposed that "intelligence measured at age seventeen, about fifty percent of the total intellectual development of an individual takes place between conception and age four; thirty percent occurs between ages eight and seventeen" (Bloom, 1964). He argues that the greatest intellectual development takes place in the years of early childhood.

2. Edward Zigler argues that cognitive development is a continuous process. "We do not know when all cognitive development is over, so how could we know when half of it is over?" (Zigler, 1970)

3. John Fischer, while accepting Bloom's findings, added in a report (January, 1968) to President Lyndon Johnson for the National Advisory Council on the Education of Disadvantaged Children, "...that a community that seriously wants to improve its children's opportunities will start them to school early" (Sava, 1975).

4. Jerome Kagan's cross-cultural study of the cognitive development during the early years recorded that cognitive development is more flexible. His view was that "the main influence seems to be the time of emergence

rather than the ultimate level of development" (Kagan, 1972). He argued that "no matter what the percentages of cognitive development that occur at certain ages, development takes place most rapidly from birth to age seven. These and other research findings have motivated increased attention by educators to early childhood education. The increased attention and interest gave rise to a variety of daycare programs, Montessori schools, many kinds of kindergartens and nursery schools and kindergartens affiliated with universities and colleges. Some are church-sponsored schools. There are many playgroups, organized schools and home-based programs.

The Nursery School

There has been controversy as to the establishment of the first nursery school. According to Braun and Edwards (1972), the first nursery school in the United States was established in New York City in 1919 by Harriet Johnson. McCarthy (1980) referring to the same history, reported that the first nursery school -- "A Montessri school" was opened in 1915 by Eva McLin.

However, the 1920s brought the establishment of other nursery schools in America. Some of the more notable ones included the Laboratory Nursery School at Columbia Teachers College organized by Patty Smith Hill, a strong advocate of

progressive education in the kindergarten, and the Ruggles Street Nursery School and Training Center in Boston, directed by Abigail Eliot, who studied with Margaret McMilion in England (Feeney and Christenson, 1979). At the time that Abigail Eliot, a trained social worker, took over the Ruggles Street Nursery School in 1922, it was loosely affiliated with the Harvard Graduate School of Education. The nursery school received guidance from Dr. Douglas Thom, a child psychiatrist interested in guidance for preschoolers and older children with behavior problems. Eliot was among the first to emphasize the importance of both the teacher/parent and the teacher/child relationships. Her school served as a model for many new American nursery schools. She was instrumental in starting several new early childhood education projects, including the Cambridge Nursery School in 1923, the first cooperative nursery school, and the Pacific Oaks College in 1952 (McCarthy, 1980).

During the 1920s and the 1930s , nursery school programs grew. This increase was based upon:

> "general concern that each individual be given opportunity to start life fortified with adequate controls and social adjustments that may obviate many of the present difficulties in adolescent and adult life.
>
> (Manor, 1937)

Many were established as laboratories for studying child development, and some were connected with teacher training programs. These early nursery schools emphasized the social, emotional and physical growth of the child (Feeney and Christenson, 1979).

According to Feeney (1979), during the depression, the government sponsored "Works Projects Administration (WPA) nurseries, and during World War II, sponsored day care centers to provide child care for working mothers. Some of these centers were sponsored by private industries of which the Kaiser Shipyards was one. At the end of World War II, women were no longer "badly" needed in the labor market, hence, the shutdown of many of the private and all of the federally operated centers. During this time and up to 1960, child care services received little support. Contributing to this lack of support for child care programs, was the belief which was prevalent at that time that children of working mothers suffered from a lack of essential maternal care and love. However, while there was little support for day care services for children of working parents, the traditional university privately supported half-day nursery school programs continued to serve mainly middle-class families.

Head Start and Follow Through

In 1964 the federal government brought together a panel of child development experts and asked them to come up with a program which would enable low income children to break out of the poverty cycle. In the summer of 1965, Head Start began as a "federally funded program designed to counteract the effects of deprivation on the development of poor children" (Feeney and Christenson, 1979).

Head Start, as a demonstration program, was administered first by the Office of Economic Opportunity and then by the United States Office of Child Development. It focussed on the development of the child in the context of his/her family. Head Start became an "eye opener" to early childhood education. New research and experimental programs followed. Some of the earliest studies showed that Head Start was not an "unqualified success" (Webster and Schroeder, 1979). Smart and Russell (1973), referring to the Westinghouse Study, wrote that one of the first major studies to evaluate the effectiveness of Head Start found that "academic gains were negligible."

> Children entering public school from Head Start showed a small advantage over peers, but the gains were not maintained. In a year or two it was found that the children who had not participate in Head Start caught up with, and were often ahead of the Head Start children in academic achievement.
>
> (Smart and Russell, 1973)

Following this study, the "Follow Through Program" was established in 1968 with the hope that Head Start gains made in the pre-school years could be maintained (Webster and Schroeder, 1979). Follow Through provided special help for disadvantaged children through the third grade.

Recent studies show that Head Start could be beneficial to the society:

> A study of the Perry Preschool Program in Ypsilanti, Michigan (a comprehensive program similar to Head Start) showed that three- and four-year olds who had been enrolled in the program, compared with a control group that had not attended the program, were more likely to be literate, employed, and enrolled in post-secondary education twenty years later and less likely to be school dropouts, dependent on welfare, or arrested for delinquent or criminal activity. (Head Start in Children's Defense Budget, An Analysis of Our Nation's Investment in Children, 1989)

In summary, Head Start, Nursery Schools and Day Cares, Kindergarten and other high quality, comprehensive early childhood development programs have helped to lay the foundation on which many children can build the basic skills they must have for success in school and later at work in the real world. For both disadvantaged and the nondisadvantaged, such programs can be very crucial, helping to provide the skills and learnings young children need for their future development.

Learning

Learning has often been used and has always involved two things -- "exposure to new information and personal discovery of what it means" (Combs, 1982).

This exposure to new information or experience could affect a person's behavior only in the degree to which he or she has discovered the personal meaning of that information (Marton and Svensson, 1978). How to help students discover personal meanings has been the concern of educators. Hence, emphasis on "meaning" has led to the provision of more science and languages in the early grades (Combs, 1982). But less attention has been given to how to help students explore and discover meaning (Combs, 1982).

There are several influential factors that affect students in finding "meanings" to certain information. Four of these influential factors will be addressed very briefly. These factors include "self-concept, feelng of challenge or threat, values and feelings of belonging, or being cared for" (Combs, 1982).

Self-Concepts

What students believe about themselves could affect their behavior and learning. Children's self-concepts are not mere "self-descriptions." Students could see themselves as able or unable when faced with a task. Students

or children who feel or believe "I can" are more likely to try and thus succeed. But students or children who believe they cannot, avoid the embarrassment and humiliation of involvement, and are likely to experience failure. Therefore, self-concepts are feelings of success or failure, acceptability or rejection, happiness or sadness, triumph or defeat (Combs, 1982).

Challenge or Threat

Most people, both young and old, feel challenged when confronted with problems that interest them and that they feel able to cope with successfully. They also feel threatened when confronted with problems they don't feel able to handle.

Feelings of challenge could be conducive to learning, while feelings of threat could be destructive (Combs, 1982). Learning occurs best when teachers are successful in creating atmospheres that are challenging without being threatening. How things seem to the student should be more important than how things seem to the teacher. A teacher who is sensitive to the feelings and beliefs of students is far more likely to achieve productive learning situations than those who pay no or less attention to these aspects of learning (Combs, 1982).

Values

Values are not restricted to religious, political or moral questions. They are generalized beliefs that serve as basic guidelines for selecting our goals and the behaviors we choose to reach. They are personal, they play an important part in the dynamics of everything we do (Combs, 1982). Children who value the block area, art, science, manipulatives, problem solving and finding out about things or getting alone with peers and adults are more likely to be effective leaders, environment explorers, productive and cooperative members of the class and the community as a whole. One would anticipate that the proper role of the teacher lies in the facilitation of exploration through the use of highly structured learning centers, while at the same time, respecting children's own personal formulation of values are powerful determiners of human goals and behavior (Combs, 1982). Teachers who hope to contribute significantly to students' growth and development can not ignore the parts they play in the learning process by setting up classroom values.

Belonging and Being Cared For

Children's feelings of belonging and being cared for could affect their learning process. If a child knows that he or she is cared for and belongs, s/he feels excited and "exhilarated" (Combs, 1982). The child wants to get

involved and begin to enjoy activities. But, if the child feels uncared for or left out, s/he feels "discouraged," "disillusioned," "apathetic" and wants to escape to avoid "humiliation" or "embarrassment." It has been apparent that the condition of being cared for is likely to lead to significant learning and growth in a classroom environment structured to meet the needs and interests of the children.

"Factual learning" is "learning with understanding" (Whittrock, 1974a). The process of "factual learning" involves associating actions to consequences, and is a "reinforced practice by observing others and imitating them, by generating images, inferences, plans and analogies, and listening to teachers" (Whittrock, 1974a).

For children learning can be seen as approaches or levels of "processing information in relation to a given information, to the learner's experience and to the learner's organized knowledge" (Laurillard, 1979). The different approaches can produce different learnings to the learner, therefore, producing different results.

Outcomes of Learning

Examples of the different outcomes of learning are listed below. Prambling, in The Child's Conception of Learning, identifies some of these as:

1. Learning as the increase of knowledge:

Common for conceptions in this category is the idea that learning is the activity by means of which you add to your previous knowledge but no further specification is given to the nature or to characteristics of the activity of learning. This represents a "quantitative view of learning."

2. Learning as memorizing:

The meaning of learning is to transfer units of information or pieces of knowledge from an external source, such as a teacher or a book, into the brain.

3. Learning as the acquisition of facts, procedures, etc. which can be retained and/or used in practice:

In this category the element of value or usefulness in practice is the main difference from previous conceptions. There exists a body of knowledge which the learner should attempt to memorize since it is valuable.

4. Learning as the abstraction of meaning:

Learning is not conceived of an activity of reproducing, but instead as a process of abstraction of meaning from what is read and heard. It implies a different relation to the learning material in the sense that learning is a process where the learner actively selects and condenses ideas, principles, procedures, etc. which are to be learned and understood.

5. Learning as an interpretative process aimed at the understanding or reality:

This conception of learning is equal to the previous category, but there is the added emphasis that an essential element of learning is that what you learn should help you to interpret the reality in which you live.

(Prambling, 1983)

Kinds of Learning

It could be seen that numbers one to three above, refer to the fact that knowledge exist "out there" in activities, books, etc. while numbers four and five refer to the fact that "knowledge takes place within a person" (Saljo, 1979). These results could be further grouped into three major kinds of learning. According to Minor (1937), these major kinds of learning which could be happening even in the pre-school classrooms are stated below as: "Primary, Associate, and Concomitant" Learnings.

Primary learnings represent the learnings intimately connected with the activity underway. Associate learnings are those learnings which come through associate sugges-tions. Concomitant learnings are those learnings which come as a result of the activity (Minor, 1937).

Minor (1937) shows that in the past most teachers concerned themselves too much with primary learnings and were unaware of, or ignored, the possibilities for associate or concomitant learnings. A teacher who analyzes work in these terms becomes more critical of results. S/he is no longer satisfied with the immediate and obvious outcomes of the classroom activities, but welcomes questions that might indicate trends of thoughts and afford opportunities for digressions that, when wisely guided, lead to the much desired associate learnings. This "adventure together" could create a "sympathetic bond"

between teacher and child that in itself is enriching and contributes to advancement in the learning (Minor, 1937). The sympathy and other emotional reactions to the classroom situation are indications of the "concomitant learnings" acquired by the children. Although the children achieve them indirectly, they are by no means incidental on the part of the thoughtful teacher. The better teachers are constantly seeking growth in this phase, they recognize that concomitant learnings may be constructive, and desirable reactions toward life's problems may be realized.

Further analysis of these kinds of learning may be illustrated with a classroom project. For example, a boat. The teacher begins by showing pictures of the boat and talking about the boat with children to arouse enthusiasm in the children.

During the free-play and activity time, some children chose the block area to build a boat. In the art area children made sailors' hats; in the housekeeping area, they played imaginative boat with hats on.

Primary Learning

In the primary learnings, the children learned how to build a boat with blocks in the block area or how to make a sailor's hat from paper in the art area.

Associate Learning

During all the activities of making the boat, both in the block area and the art area, or any other area within the classroom, the teacher asked questions to introduce items of information from real life situations. These associate suggestions or meanings included answers to such questions as: What is the hull of the ship? What is carried there? What officers are in the boat? What other kinds of boats visit the bay?

Other associate learnings that grew out of the activity of making a boat are: stories that were heard, poetry that was read, songs that were learned, weather conditions that were noted, and the points of the compass that were learned. Minor (1937) states that "the extent to which activity leads on to other activities with learning possibilities is the real test of its educational value."

Concomitant Learnings

"The purposeful thinking in solving difficulties in the building of the boat and in going forward into new lines of endeavor may be classified as concomitant learnings." These may be affecting the child positively or negatively.

On the positive side a child could be learning to persist when confronted by troublesome problems, to refrain from meddling with another child's task or work, to help

when invited, to take his/her turn when such is necessary, and to remain quiet and contribute his/her share during discussion. All of the concomitant learning focuses on habits and attitudes learned during the activities.

Learning Centers

"A learning center could be any focal point or area within a classroom which contains activities and/or materials used to educate, reinforce, and enrich a skill or learning concept" (Hillstrom-Svercek, 1985). Hillstron-Svercek suggests that the Learning Center "frees" the teacher, enabling her to interact with individual children. According to her, the Learning Center offers the teacher a "creativity" base upon which almost any thinkable topic or subject can be developed.

Day (1983) suggested that a curriculum taught through learning centers be termed a "responsive curriculum." According to Myers and Maurer (1987), a learning center style curriculum can be viewed as "responsive" because:

> First, the curriculum is designed for a specific group of individuals and therefore meets them where they are developmentally and experientially. Second, the curriculum responds to children at the same time it also builds upon the teacher's previous experiences with young children, formal teacher training; beliefs about appropriate teachers' roles within particular educational settings, and individual skills, values, and interest. Learning Centers invite children to assume responsibilities for their own learning.
>
> (Myers and Maurer, 1987)

The focus of the learning center should be the development of "the whole child" through "goal-directed behaviors, activities, and the experiences of the child in relation to the physical settings of the learning centers. Individual children use, respond to, experience, and do things in the centers because of what they see, have learned, and would like to achieve in them.

The structure and design of the learning centers give the children some guidelines that might help them learn to explore the areas. For example:

Block Area -- should have unit blocks, cars, trucks, boats, animals, trains, etc.

Housekeeping or Dramatic Play Area -- should have dress-up clothes, hats of different kinds, mirrors, crib, dolls, chairs, table, toy refrigerator, stoves, kitchen utensils, shopping cart.

Scrap Art and Craft -- should have easel, tempera paints, water colors, brushes, mixing trays, paint cups, construction paper, scrap paper, pencils, glue, hole punchers, scissors, crayons, rulers, string, clay, play dough, cookie cutters, rollers, etc.

Book Area or Library -- should have bookcase, children's books, reference books, record player, records, pillows, rugs or bean bag chair, etc.

Manipulatives or Table Toys Area -- should have puzzles (small and floor puzzles), table blocks, matching

games, Tinkertoys, Legos, beads, cuisinaire rods, cubes, stringing beads, bristle blocks, etc.

Water and Sand Tables -- should have water for water table and sand for sand table, boats, bucket, cups, baby dolls, smocks for water table, etc.

These and other learning centers present different experiences to the children. Children develop different learning concepts with each of them. For example:

Block Area -- Block areas present opportunities for the children to "use blocks and to behave in the following ways that promote learning" (Massy, 1981):

1. Construct, build and balance (large muscle development);
2. Use questions like "how many," "what size;"
3. Use "polar opposites" like big-little, up-down, long-short, fat-skinny;
4. Create or produce;
5. Destroy safely;
6. Control or manipulate;
7. Children cooperating or disagreeing with each other;
8. Sense of power (child assuming leadership);
9. Release of hostility safely.

Housekeeping Area -- The housekeeping area is a place for dramatic play of the kind most pre-school children enjoy. It can be a place to release the "natural type of

emotional therapy" accepting defeat, suffering and frustration, dealing fear, uncertainty and anxiety. The housekeeping area gives the children the opportunity to:

1. imitate adults;
2. play out real life roles in an intense way;
3. think about relationships and experiences;
4. express strong needs;
5. release unacceptable emotions;
6. change roles usually taken;
7. play cooperatively with other children;
8. try to work out problems and experiment with solutions.

Art and Craft Area -- The art and craft area can expose the children to painting, scrap art, and playdough. These different areas of art play are important in the lives of children. Painting involves brush and fingers. So children's behavior here show:

1. expression of the inner feelings and impulses,
2. communicate in a way without words,
3. create something,
4. to the timid child, it is useful because it is not too messy or dirty, has no rules or restrictions, and it is the first step to free expression without guilt. While to the explosive

child it is a safety valve which helps to release emotions, and it is a real chance for expression through movement.

Scrap Art -- This art offers opportunities for creative expression. It is an excellent way for the child to improve eye-hand coordination through experimentation with:

-- cutting,
-- painting (with sponge, toothbrush and screen roll-on, bottles, etc.),
-- pasting (various types of textures),
-- coloring (crayons and water colors, pens),
-- designing (following and developing patterns).

Playdough -- This is another exciting opportunity in the life of the child that offers the basic satisfaction in exploring, experimenting and controlling. It helps the child release emotions such as aggression and hostility. S/he also releases sense of power, creating and fantasizing and developing sense of touch, muscles, and sight.

Book Area -- The book area is supposed to be a quiet corner to look at and enjoy picture books. It is a special place to read to a child or have someone read the child's selected book. Activities in the area may include: table activities like toys, games and puzzles. These books, toys and games would facilitate child's behavior and promote:

1. intellectual challenge,
2. the child working individually but still in a group,
3. small group work,
4. the opportunity for child to relax with or without (peer, friend, teacher),
5. the child's need to sit and play with an adult,
6. the opportunity for an increased attention span,
7. the child's ability to use small motor skills.

The puzzles are a favorite activity of many individualistic children, or children who are uncomfortable in a large group.

Water Play -- Water play could be available at various times in housekeeping area or as a table activity. It meets the child's basic need of:

1. sensory pleasure and thus, gives the child a chance to feel, experiment and explore;
2. intellectual development while child makes things using things which float or sink and/ or measuring things such as cups, bottles and spoons;
3. releasing emotions like aggression, sympathy, and nonthreatening feelings.

In the learning centers, children are presented with the opportunities to explore, create, initiate and be

independent. But the effectiveness of the centers on the enrichment of the children's learning depends on a creative, sensitive and thoughtful teacher.

Some Thoughts on the Contributions of the Physical Settings to the Child's Learning

Considering the different preschool programs and the contributions of the physical settings to the child's learning, the question arises whether the physical environment affects the child's cognitive development. If so, in what ways does environmental factors influence cognitive development? A recent review of the effects of physical environment and organization of space and activity settings on the child's cognitive development has been conducted by Moore (1987).

Moore (1987) reviewed studies done on "open plan versus closed plan" Child Care Centers. "Open plan child care centers have unpartitioned space with few or no internal walls, while closed plan facilities have self-contained classrooms usually arranged along corridors." "Most of these studies were conducted in elementary schools in which there were some advantages and disadvantages".

For example, he wrote:

> "Open plan schools have been found to have a greater number of learning centers encountered during the day (Gump, 1974), more personal teaching styles (Purlak et al., 1972), less adult pressure (Prescott, 1973), more spontaneous activity change (Prescott, 1973), and smaller group sizes" (Purlak et al., 1972).
>
> (Moore, 1987)

While on the other hand,

> "Open plan schools were found to have: more noise distractions, especially for teachers (Brunetti, 1972; Walsh, 1975), more prevention of noise by teacher admonitions (Gump & Iliff, 1971; cited in Gump, 1975), less structured activity patterns (Purlak, Beardsley & Murray, 1972), and more time that a child cannot be seen or observed by staff." (Twardosz, Cataldo & Risley, 1974)

Despite the above findings, the question has been "which type of environment is better for development?"

According to Moore (1978) studies done on child care centers that looked closely at "behavioral indicators of cognitive development" was done firstly by Field in 1980, and showed:

> more verbal interaction and fantasy play in classrooms with both low teacher/child ratios and partitioned play areas.
>
> (Moore, 1987)

However, some limitations that affected the study were identified by Moore which are not the immediate concerns of this paper. Another study was done by Neill and his colleagues in 1982. These studies were done in comparison of "more versus less open preschool building designs on a number of social, physical, and educationally related activities." The findings show that:

> preschool children spend less time in educationally valuable activities in the more open plan preschools.
>
> (Moore, 1987)

Yet, some limitations were identified.

In 1979 Moore and his colleagues made the assumption that "modified open plan facilities" might be the solution, a "mid-way" between "open plan and closed plan," which they think "might resolve the difficulties of open plans, while retaining their advantages" (Moore, Lane, Hill, Cohen, and McGinty, 1979). They identified the "modified open space" as:

> the organization of the indoor space of a child care center with variety of large and small activity spaces open enough to allow children to see the play possibilities available to them, while providing enough enclosure for the child to be protected from noise and visual distractions.
>
> (Moore, 1987)

Dodge in her book, The Creative Curriculum for Early Childhood (1988), sees this kind of classroom as having:

> clearly defined and well equipped interest areas that are arranged to promote independence, foster decision making, and encourage involvement.
>
> (Dodge, 1988)

In the attempt to find the effect of "modified open plan facilities on children's cognitive development" Moore and his colleagues did a study of six child care centers in Milwaukee County (Moore, 1987). According to him, "the settings were selected to provide two sets of centers, each set with an open plan center, a modified open plan center, and a closed plan center." Each of the centers, as stated,

"was selected to be the same or similar in terms of the size of the center, socio-economic background of children, educational philosophy of the center, and teacher styles of interacting with children, all of which were subsequently measured to permit statistical verification of equivalence or non-equivalence."

Another set of centers were mostly the same in that they "all followed the same philosophy and curriculum and were in comparable middle to upper-middle income, predominantly white suburbs." The subjects were chosen "on a random space and time sampling basis, ranging in age from two years, six months to six years."

After all is said and done, and despite some difficulties encountered, Moore (1987) stated that the research findings include:

> 1. ...that children in modified open centers use significantly more activity settings and are in smaller group sizes than in either open plan or closed plan facilities;
> 2. ...engagement in cognitive developmentally oriented behaviors (engaged in activities involving persons, objects, or educational materials) is most pronounced in modified open plan centers;
> 3. ...children initiate behaviors themselves significantly more often in modified open plan centers than in centers of either of the two other types;
> 4. ...that exploratory behavior is significantly more pronounced in modified open plan centers than in either closed or open plan centers.
>
> (Moore, 1987)

Bringing all the findings together, Moore argued that:

> Child care centers organized in terms of modified open space lead to significant effects on a number of cognitive developmental variables (more behavior settings used; smaller group size; more task related behavior and less transitional, functional, random, and withdrawn behavior; more spontaneous child-initiated behavior; and more exploratory behavior). (Moore, 1987)

Based on this study and other related studies (Gump, 1974; Gump, 1975; Gump & Good, 1976; Travers & Ruopp, 1978; Moore, 1983a), it will be assumed that in a modified open plan preschool setting, the more reinforcement strategies the teacher uses, the more elaborated learning the child could achieve during the free-play period.

CHAPTER 3

METHODOLOGY

Introduction

The research literature (Barker, 1968; Gump, 1969, 1975; Day and Sheehan, 1974) has suggested that the more organized, attractive and varied the physical setting when combined with positive adult interaction, the more "sustaining task-involvement behavior" the children display. In a learning environment such as the preschool classroom with distinct learning centers, the "sustaining task-involvement behavior" could symbolize the change in a child's knowledge due to his/her experience with the environment. This change in behavior could be characterized as what is "learned" and this could affect development in a variety of ways.

According to behaviorist theory, learning should focus primarily on "changes in behavior" while cognitive theorists emphasize "changes in the content or structure of knowledge in memory," which could mean changes in what the learner knows (Bower and Hilgard, 1981).

This study of the effect of teacher's verbal expression on the child's elaborated learning during the free-play period followed a naturalistic observation model. The focus was on preschoolers who were observed during the

free-play period. The teacher as the facilitator of the children's learning was observed and the effect of his/her verbal expression on the child's elaborated learning was recorded. The observable variables as explained earlier included:

1. Teacher/child verbal interactions;
2. Teacher's initiation of activities for child;
3. Child's initiation of activities for self;
4. Child's involvement and performance with materials;
5. Child's movement from one activity center/area to another.

The answers to the following questions were sought:

1. What effect will teacher's verbal expression have on the child's elaboration of learning from a primary activity to associate and concomitant learnings?
2. What is the frequency of the child's initiation of the activities s/he performs as s/he goes through the phases of learning during the free-play period?
3. What is the frequency of the associate learnings during this period?
4. What is the frequency of the concomitant learnings?

The process of the observations included:

The child's initial entrance into an activity area. It was recorded whether it was the teacher, the child or a peer.

The child's involvement in the activity area was followed. Performance with materials was observed closely to determine completion or non-completion of the primary activity which is the activity under way. The teacher's verbal expression and the associate learnings were observed and recorded. Concomitant learnings which are habits and attitude-related behaviors were identified and recorded. Teacher verbal expressions to the child were an essential aspect of the associate and concomitant learnings. Other factors considered in the activity area included the following roles: teacher participating, directing, observing or absent.

The movement of the child from one activity to another was observed and attention paid to child's disengagement from the ongoing activity. The cause of disengagement was identified whether it was completion, non-completion, end of activity, teacher interruption, peer interruption, a transitional effect or end of the observation time. After disengagement from activity, the child's subsequent engagement was observed. Notation was made as to who initiated the disengagement, teacher, child or peer. The same process was followed each time the child changed activity and/or activity area.

Procedure

Instrument

The instrument, The Observational Record of Children's Behavior in Child Care and Early Education settings, was originally designed by Day, Perkins and Weinthaler (1978; 1982) (see Appendix C, pg. 103), formed the basis for the instrument, The Child Observation Form, used for this study. It should be noted that all the definitions used by Day, Perkins and Weinthaler (1982) are not included here. Reference should be made to the publication for detailed definitions.

Modification of Instrument

For the purposes of this study, the researcher has adapted only a few elements from the original instrument. The elements adapted include the definitions of:

Respects space,

Takes turn,

Waits,

Activity Area,

Teacher - initiating, directing, participating, observing, absent

Child(ren) - initiating, completed task, not completed task.

Some Additions: there are other additional elements included in the present research instrument, such as initial engagement, disengagement, and subsequent engagement. These are adapted from Condry and Koslowski's (1979) Four Phases of Child's Motivated Activity.

Initial Engagement: The child's initial entry into a task or activity area. The child is engaged or involved in an activity, painting, drawing, making a craft project, sorting objects, dress-up or imaginative play, water play, etc.

Disengagement: The termination of a task or an activity. The child's disengagement involves stopping an activity. This could be caused by the child completing task, the teacher asking the child to leave activity area, the child leaving by own decision, peer leading the child out of the area, or transitional effects, end of activity.

Subsequent Engagement: The child re-enters another task or activity. The child becomes engaged or involved as in the initial engagement. This could be caused by the teacher asking the child to re-enter a certain activity area, the child deciding to re-enter by him/herself, or another child leading.

Primary, Associate and Concomitant Learnings (Minor, 1937) were the other elements incorporated in the study. For the purpose of this study, these learnings were

considered as defined previously in the Definition of Terms.

The Child Activity Observation Form

The Child Activity Observation Form was the instrument for data collection for this study. It was a forty minute observation form used specifically during the free-play period.

At the beginning of the observation, the child's first name and age, the observer's name and position, and the program and date were identified. The observation form was followed sequentially. Attention was paid to the teacher interaction with the child at every phase of the child's involvement with the areas during the free-play period so as to identify the three kinds of learning.

Each activity, whether it is initial engagement or subsequent engagement was observed and recorded on a different Activity Observation Form. The number of minutes under Primary Learning Activity was recorded.

Activities of less than five minutes were recorded as not completed. Activities of five or more minutes were recorded as completed (see Appendix A, pg. 94).

Population

The population for this study was comprised of five children randomly selected from ten (10) preschool classrooms, making a total number of fifty (50) children. The children in this study were four years of age for the purpose of controlling the developmental and age differences in the preschool classroom. The children, as mentioned above, were randomly selected with no particular attention paid on sex differences. Socio-economic range was narrowed by using preschool classrooms within the same city. Permission was obtained for this study from the parents of the children.

Ten (10) teachers, one from each classroom, were observed (See the definition for teachers, pg. 12).

Classrooms

Ten preschool classrooms were used for this study. These classrooms were observed by the researcher during the free-play periods. The time of the free-play periods varied from classroom to classroom but usually occurred between 9:00 a.m. to 10:00 a.m. The teachers in each classroom do very little directing of activities. Special activities may be set out on tables, but they do not require close teacher supervision. The children in these classrooms are very much familiar with this routine. It should be noted that no new children were used in this

study. This helped to control influences of fatigue, confusion, etc., that some children encounter when they are new to the environment.

Each classroom/teacher was visited and observed five times. Each child was observed once during the free-play period.

Assumptions

The researcher assumes that there would be different outcomes of observations with the individual children. Different classrooms with different management of free-play period would result in different outcomes in terms of teacher/child initiations, child involvement with activities, teacher/child interactions, etc.

There would also be differences in the frequency of the elaborated learnings among different children with different teachers and different classrooms.

Reliability

To assess reliability of the study, the inter-observer reliability was demonstrated by the following steps:

1. Two sample video tapes of two preschool classrooms were completed during the free-play periods focusing on two different children.

2. In the training sessions twelve (12) pre-school teachers and the researcher watched the tapes. Definition of terms were discussed. One tape was watched afterwards with a focus on one child involved in two activities over twenty (20) minutes. The Child Activity Observation Form (see Appendix A, pg. 94) was used for scoring. The results were correlated amongst 13 observers and the percentage of agreement was calculated. The following results show the percentage of agreement in the two (2) activities.

TABLE 3.1

Inter-Observer Reliability Result

Variable	Response	Activity 1 # Agree	Activity 1 % Agree	Activity 2 # Agree	Activity 2 % Agree
Number of Minutes	20	13	100	13	100
Who initiated	teacher vs. child	12	92	9	69
Activity Area	Manipulative	13	100	13	100
Activities	Truck and Dinosaur	12	92	13	100
Role of Teacher	Participate vs. Absent	12	92	13	100
Associate Learning	1 or more vs. 0	13	100	9	69
Concomitant Learning	1 or more vs. 0	11	85	7	54
Average % agreement amongst variables		94%		84.6%	

The Inter-Observer Reliability varied from primary to associate to concomitant learning. Reliability was highest for associate learning and lowest for concomitant learning. Reliability was also higher for the first than for the second activity.

CHAPTER 4

RESULTS

The program used for the analysis of data was SPSS/PC V3.1 (Statistical Package for the Social Sciences, SPSS, Inc., 1988). Contingency table analysis was used which shows the frequency distribution and cross-tabulation of data. Frequency distribution shows the results of the following variables: who initiated activity, activity area, role of the teacher, who initiated disengagement, associate learnings and concomitant learnings.

The crosstabulation distribution shows the results of the following: associate learnings by the role of the teacher, concomitant learnings by the role of the teacher, role of the teacher by class, effect of time on associate learnings and effect of time on concomitant learnings.

Frequency Distribution

There were a total of 114 learning activities recorded in the study. Each activity was scored on a separate form with an identification number given to each activity. For each observation, forty (40) minutes was the maximum amount of time allocated.

There were fifty (50) observations with a mean of 36 with a standard deviation of 5.8. The minimum observed

minutes was ten (10) and the maximum observed minutes was forty (40).

A child enters, performs and stays in an activity for a certain number of minutes until he or she disengages or leaves the activity or the activity area. Table 4.1 (see pg. 66) shows the number of minutes a child spent in an activity.

Two minutes were spent in one activity, four minutes each in two activities, five minutes each in four activities, 6 minutes each in four activities, 7 minutes each in seven activities, and 40 minutes each in two activities.

Initiate: Who initiated activity:

Table 4.2 (see pg. 67) shows that the child initiated in 53 activities while the teacher initiated in 61 activities. There was no significant difference between the two.

Activity Area

There were eleven observed activity areas: manipulative, housekeeping, art, large blocks, etc. The frequency distribution of the number of activities of the children are as follows: 27 in manipulative area, 11 in housekeeping, 43 in art, 11 in large blocks, 3 in sand table, 1 in water table, 3 in bathroom area, 3 in snack area, 4 in group time activity, 4 in science area, and 4 in table games area (see Table 4.3, pg. 67).

Role of Teacher:

Table 4.4 (see pg. 68) shows the different categories of teacher involvement in the activities that the children perform. The categories are teacher being either Absent, or Directing, or Observing or Participating.

The frequency distribution of data in this study show that the teacher was absent in 12 activities, directing in 33 activities, observing in 49 activities and participating in 20 activities (see Appendix C, pg. 103 for definition of teacher role).

Did Child Complete or Not

The data show that the children completed 111 of a possible 114 activities.

Alone or With Other Children

During the activities one or more children could be involved in an activity at a particular time. The results show that in 112 activities the children were in groups of 2 or more and alone in 2 activities.

Who Initiated Disengagement

There are several variables which could cause a child to stop working in an activity or activity area. The child could be going to another activity area or has finished an activity. The results show that the teacher initiated

disengagement for the child in 30 activities, the child self-initiated disengagement in 53 activities, transitional effect brought an end in 23 activities, and the elapse of the forty (40) minute observation time ended 8 activities (see Table 4.5, pg. 68).

Associate Learnings:

Table 4.6 (see pg. 69) shows the frequency of associate learning within the 114 activities. In 70 cases there was no (0) associate learning. Sixteen (16) activities show one associate learning each, 13 activities show two (2) observed associate learnings each, 6 activities show three (3) associate learnings each, 4 activities show four (4) associate learnings each, 3 activities show five (5) associate learnings each, 1 activity shows six (6) associate learnings, and 1 activity shows eight (8) associate learnings.

Concomitant Learnings:

Table 4.7 (see pg. 69) shows that in 65 activities there was no observed concomitant learning, in 32 activities there was one (1) concomitant learning experience, in 8 cases there were two (2) concomitant learnings per activity, 3 activities had three (3) concomitant learnings each, 4 activities had four (4) concomitant learnings each, 1 activity had five (5) concomitant learnings, and 1 activity had seven (7) concomitant learnings.

Crosstabulation Distribution

Associate Learning by the Role of Teacher

Table 4.8 (see pg. 70) shows that teacher roles and the number of associate learnings results in a Chi-square of 40.7 with 21 df, and significant at .006 level.

No associate learning was observed in the following number of activities and their teacher roles:

11 (91.7%) --- Absent

19 (57.6%) --- Direct

36 (73.5%) --- Observe

4 (20.0%) --- Participate

Associate learnings ranging from 1 - 8 were observed in different number of activities with different teacher roles:

1 (8.3%) --- Absent

7 (21.3%) --- Direct

6 (12.2%) --- Observe

2 (10.0%) --- Participate

The highest frequency of associate learning, eight (8) in an activity were observed in one (1) activity. The teacher was participating.

Table 4.9 (see pg. 71) shows an analysis of variance applied to the number of associate learning for the four groups. The results were significant: F=12.7, d.f. 3.110,

sig. .001 level. These data reveal that the groups differ greatly from each other.

Concomitant Learnings by Role of Teacher

Table 4.10 (see pg. 71) shows that teacher roles and number of concomitant learnings resulted in a Chi-square of 20.88 with d.f. 18 and was not significant at .285 level. There was no observed concomitant learnings in the following number of activities and their teacher roles:

10 (83.3%) --- Absent
13 (39.4%) --- Directing
28 (57.1%) --- Observing
14 (70.0%) --- Participating

Concomitant learnings ranging from 1-7 were observed in different number of activities with different teacher roles, e.g., one (1) concomitant learning was observed in the following number of activities:

2 (16.7%) --- Absent
13 (39.4%) --- Directing
15 (30.6%) --- Observing
2 (10.0%) --- Participating

The highest observed concomitant learnings -- seven (7) in an activity -- were in one (1) activity in which the teacher was participating.

Table 4.11 (see pg. 72) shows an analysis of variance applied to the number of concomitant learnings for the four

groups. The results were significant: F=1.8, d.f. 3.110, sig. .149. These data, as in the case of associate learnings, show that the groups differ from each other.

Role of Teacher by Class: The results of role of teacher by class (see Table 4.12, pg. 73) suggest that there are differences in the ten (10) classrooms in the activities the child performed. Some teachers exhibited more of either observing, directing, or participating roles. The results show as follows:

	Total # of Class by Teaching Role
Observing	Observing
Class # 1	5
2	
5	
6	
7	
Directing	Directing
Class # 4	2
8	
Participating	Participating
Class # 3	3
9	
10	

This result with a Chi-square of 57.32 and df of 27 was significant at the .0006 level.

There are differences amongst classrooms as to the number of activities that have one or more associate learnings. The following results show the differences (see Table 4.13, pg. 75).

Class #	Activities
1	5 of 13
2	1 of 16
3	8 of 11
4	3 of 12
5	7 of 15
6	5 of 11
7	4 of 10
8	1 of 8
9	4 of 10
10	6 of 8

The frequency of associate learning varied from classroom to classroom. For example there was only one activity in which associate learning was observed in classroom two. Classroom number eight produced a similar result. There was only one activity in eight cases in which there was associate learning. A glance at Table 4.12 (see pg. 73) shows that this teacher did not use the participating role. By contrast teacher number three used the

participating style, and in eight of eleven activities there was associate learning.

Similar differences exist amongst the classes regarding the observed concomitant learnings within the activities of the child (see Table 4.14, pg. 76). The results show as follows:

Class #	Activities
1	3 of 13
2	9 of 16
3	4 of 12
4	6 of 12
5	5 of 15
6	5 of 11
7	5 of 10
8	3 of 8
9	4 of 10
10	5 of 8

These differences in both associate and concomitant learnings amongst the classes suggest that teacher involvement in the activities the child performs and teacher interactions with the child differ from class to class.

Those classrooms that have the highest percentage of concomitant learning are those classes that have teachers who prefer the directing role of teaching. For example, in classroom two there was at least one (1) instance of concomitant learning in nine (9) of the sixteen (16) activities.

As Table 4.12 (see pg. 73) shows, this teacher preferred the directing and observing role of teaching. The teacher in classroom ten was absent in two cases, directing in one case and observing in another, and four cases of participating. Notice that she made use of all the styles.

Effect of Time on the Frequency of Associate Learning/Minutes

In 70 of 114 activities, there were no (0) instances of associate learning and children spent an average of 14.4 minutes in those activities.

But in 44 activities with 1 or more observed associate learnings, there was a mean of 17.02 minutes spent in each activity (see Table 4.15, pg. 77). This result suggests that time plays a significant effect in the activities the child performs. The child spent a higher number of minutes in the activities that have associate learnings. This result based on the analysis of variance was not significant at the .078 level (see Table 4.16, pg. 77).

Effect of Time on The Frequency of Concomitant Learnings

As the results indicate (see Table 4.17, pg. 78), the means for the entire population was 15.41 minutes with a standard deviation of 7.74. The mean for 65 activities was a no (zero) observed concomitant learnings was 14.17 minutes with a standard deviation of 7.2. Whereas for 49

activities with 1 or more observed concomitant learnings, their mean was 17.06 minutes with an 8.15 standard deviation. These data analyzed by analysis of variance were significant at the .04 level (see Table 4.18, pg. 78). This shows the importance of time in concomitant learning. This indicates that those teachers who emphasized concomitant learning spent more time with the children.

TABLE 4.1

Number of Minutes in Activity

Value Label	Minutes Value	Activity Frequency	Percent	Valid Percent	Cum. Percent
	2	1	.9	.9	.9
	4	2	1.8	1.8	2.6
	5	4	3.5	3.5	6.1
	6	4	3.5	3.5	9.6
	7	7	6.1	6.1	15.8
	8	3	2.6	2.6	18.4
	9	3	2.6	2.6	21.1
	10	11	9.6	9.6	30.7
	11	8	7.0	7.0	37.7
	12	6	5.3	5.3	43.0
	13	4	3.5	3.5	46.5
	14	4	3.5	3.5	50.0
	15	10	8.8	8.8	58.8
	16	4	3.5	3.5	62.3
	17	5	4.4	4.4	66.7
	18	2	1.8	1.8	68.4
	19	1	.9	.9	69.3
	20	8	7.0	7.0	76.3
	21	4	3.5	3.5	79.8
	22	4	3.5	3.5	83.3
	23	3	2.6	2.6	86.0
	24	1	.9	.9	86.8
	25	4	3.5	3.5	90.4
	26	1	.9	.9	91.2
	28	2	1.8	1.8	93.0
	29	1	.9	.9	93.9
	30	3	2.6	2.6	96.5
	31	1	.9	.9	97.4
	34	1	.9	.9	98.2
	40	2	1.8	1.8	100.0
		-----	------	------	
TOTAL		114	100.0	100.0	

Mean: 15.42
Standard Deviation: 7.737

TABLE 4.2

Initiate: Who Initiated Activity

	Who Value	Activity Frequency	Percent	Cum. Percent
Child	1	53	46.5	46.5
Teacher	2	61	53.5	100.0
	TOTAL	114	100.0	

TABLE 4.3

Activity Area/Number of Activities

Value Label	Activity Area Value	Activity Frequency	Percent	Cum. Percent
manipulatives	1	27	23.7	23.7
housekeeping	2	11	9.6	33.3
art	3	43	37.7	71.1
large blocks	4	11	9.6	80.7
sand table	5	3	2.6	83.3
water table	6	1	.9	84.2
bathrooms	7	3	2.6	86.8
snack	8	3	2.6	89.5
group	9	4	3.5	93.0
science	10	4	3.5	96.5
table games	11	4	3.5	100.0
	TOTAL	114	100.00	

TABLE 4.4

Teacher Role/Number of Activities

Value Label	Teacher Role Value	Activity Frequency	Percent	Valid Percent	Cum. Percent
absent	1	12	10.5	10.5	10.5
direct	2	33	28.9	28.9	39.5
observe	3	49	43.0	43.0	82.5
participate	4	20	17.5	17.5	100.0
	TOTAL	114	100.0	100.0	

TABLE 4.5

Disengagement/Number of Activities

	Disen-gagement Value	Activity Frequency	Percent	Valid Percent	Cum. Percent
teacher	1	30	26.3	26.3	26.3
child	2	53	46.5	46.5	72.8
transitional effect	4	23	20.2	20.2	93.0
end of obs.	5	8	7.0	7.0	100.0
	TOTAL	114	100.0	100.0	

TABLE 4.6

Frequency of Associate Learning and Number of Activities and Percent of Activities

Associate Value	Activity Frequency	Percent	Cum. Percent
0	70	61.4	61.4
1	16	14.0	75.4
2	13	11.4	86.8
3	6	5.3	92.1
4	4	3.5	95.6
5	3	2.6	98.2
6	1	.9	99.1
8	1	.9	100.0
TOTAL	114	100.0	

TABLE 4.7

Frequency of Concomitant Learning and Number of Activities and Percent of Activities

Value Label	Concomitant Value	Activity Frequency	Percent	Cum. Percent
	0	65	57.0	57.0
	1	32	28.1	85.1
	2	8	7.0	92.1
	3	3	2.6	94.7
	4	4	3.5	98.2
	5	1	.9	99.1
	7	1	.9	100.0
	TOTAL	114	100.0	

TABLE 4.8

Associate Learnings by Role of Teacher

ASSOCIATE LEARNINGS	Count / Col Pct	Absent 1	Direct 2	Observe 3	Partici-pate 4	Raw Total
0		11 91.7	19 57.6	36 73.5	4 20.0	70 61.4
1		1 8.3	7 21.2	6 12.2	2 10.0	16 14.0
2			5 15.2	2 4.1	6 30.0	13 11.4
3			1 3.0	2 4.1	3 15.0	6 5.3
4			1 3.0	2 4.1	1 5.0	4 3.5
5				1 2.0	2 10.0	3 2.6
6					1 5.0	1 .9
8					1 5.0	1 5.0
Column Total		12 10.5	33 28.9	49 43.0	20 17.5	114 100.0

Chi-square	D.F.	Significance
40.65820	21	.0062

TABLE 4.9

Associate Learnings by Role of Teacher/
Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	68.0406	3	22.6802	12.7125	.0000
Within Groups	196.2489	110	1.7841		

TABLE 4.10

Concomitant Learnings by Role of Teacher
and Number of Activities

Concomitant Learnings	Role of Teacher Associated with Number of Activities and Percent of Activities				
CONCOMITANT LEARNINGS	Absent 1	Direct 2	Observe 3	Partici-pate 4	Raw Total
0	10 83.3	13 39.4	28 57.1	14 70.0	65 57.0
1	2 16.7	13 39.4	15 30.6	2 10.0	32 28.1
2		3 9.1	4 8.2	1 5.0	8 7.0
3		2 6.1		1 5.0	3 2.6
4		1 3.0	2 4.1	1 5.0	4 3.5

(Continued next page)

TABLE 4.10 (Continued)

Concomitant Learnings	Role of Teacher Associated with Number of Activities and Percent of Activities				
CONCOMITANT LEARNINGS	Absent 1	Direct 2	Observe 3	Partici-pate 4	Raw Total
5		1 3.0			1 .9
7				1 5.0	1 .9
Column Total	12 10.5	33 28.9	49 43.0	20 17.5	114 100.0

Chi-square	D.F.	Significance
20.87687	18	.2857

TABLE 4.11

Concomitant Learnings by Role of Teacher/ Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	7.7987	3	2.5996	1.8118	.1492
Within Groups	157.8241	110	1.4348		

TABLE 4.12

"Role of Teacher by Class" Associated with Number of Activities and Percent of Activities within Class and Percent of Activities for Entire Population

Class	Absent 1	Direct 2	Observe 3	Participate 4	Raw Total
1.00	1 7.7 8.3	2 15.4 6.1	8 61.5 16.3	2 15.4 10.0	13 11.4
2.00	3 18.8 25.0	5 31.3 15.2	8 50.0 16.3		16 14.0
3.00	2 18.2 16.7		3 27.3 6.1	6 54.5 30.0	11 9.6
4.00	1 8.3 8.3	8 66.7 24.2	3 25.0 6.1		12 10.5
5.00	1 6.7 8.3	4 26.7 12.1	7 46.7 14.3	3 20.0 15.0	15 13.2
6.00	1 9.1 8.3	2 18.2 6.1	8 72.7 16.3		11 9.6
7.00	1 10.0 8.3	4 40.0 12.1	5 50.0 10.2		10 8.8
8.00		5 62.5 15.2	3 37.5 6.1		8 7.0

(Continued next page)

TABLE 4.12 (Continued)

Class	Absent 1	Direct 2	Observe 3	Participate 4	Raw Total
9.00		2 20.0 6.1	3 30.0 6.1	5 50.0 25.0	10 8.8
10.00	2 25.0 16.7	1 12.5 3.0	1 12.5 2.0	4 50.0 20.0	8 7.0
Column Total	12 10.5	33 28.9	49 43.0	20 17.5	114 100.0

Chi-square	D.F.	Significance
57.32	27	.0006

TABLE 4.13

Associate Learning by Class: 0 VS 1 or More and Number of Activities and Percent of Activities within Class and Percent of Activities for Entire Population

Class	0	1	Raw Total
1.00	8 61.5 11.4	5 38.5 11.4	13 11.4
2.00	15 93.8 21.4	1 6.3 2.3	16 14.0
3.00	3 27.3 4.3	8 72.7 18.2	11 9.6
4.00	9 75.0 12.9	3 25.0 6.8	12 10.5
5.00	8 53.3 11.4	7 46.7 15.9	15 13.2
6.00	6 54.5 8.6	5 45.5 11.4	11 9.6
7.00	6 60.0 8.6	4 40.0 9.1	10 8.8
8.00	7 87.5 10.0	1 12.5 2.3	8 7.0
9.00	6 60.0 8.6	4 40.0 9.1	10 8.8
10.00	2 25.0 2.9	6 75.0 13.6	8 7.0
Column Total	70 61.4	44 38.6	114 100.0

TABLE 4.14

Concomitant Learning by Class: 0 VS 1 or More Associated with Number of Activities and Percent of Activities Within Class and Percent of Activities for Entire Population

Class	0	1	Raw Total
1.00	10 76.9 15.4	3 23.1 6.1	13 11.4
2.00	7 43.8 10.8	9 56.3 18.4	16 14.0
3.00	7 63.6 10.8	4 36.4 8.2	11 9.6
4.00	6 50.0 9.2	6 50.0 12.2	12 10.5
5.00	10 66.7 15.4	5 33.3 10.2	15 13.2
6.00	6 54.5 9.2	5 45.5 10.2	11 9.6
7.00	5 50.0 7.7	5 50.0 10.2	10 8.8
8.00	5 62.5 7.7	3 37.5 6.1	8 7.0
9.00	6 60.0 9.2	4 40.0 8.2	10 8.8
10.00	3 37.5 4.6	5 62.5 10.2	8 7.0
Column Total	65 57.0	49 43.0	114 100.0

TABLE 4.15

Associate by Number of Minutes by Means

Entire Population		Means	S.D.	Cases
Variable	Value	15.4123	7.7366	114
Associate	0	14.4000	7.1107	70
Associate	1	17.0227	8.4757	44

TABLE 4.16

Associate by Number of Minutes by Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	185.8455	1	185.8455	3.1644	.0780
Within Groups	6577.7773	112	58.7302		

TABLE 4.17

Concomitant by Number of Minutes by Means

Entire Population		Means	S.D.	Cases
Variable	Value	15.4123	7.7366	114
Associate	0	14.1692	7.2232	65
Associate	1	17.0612	8.1532	49

TABLE 4.18

Concomitant by Number of Minutes by Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	233.6680	1	233.6680	4.0078	.0477
Within Groups	6529.9548	112	58.3032		

CHAPTER 5

DISCUSSION AND IMPLICATIONS OF THE MAJOR FINDINGS

Effect of Teacher's Verbal Expression on the Child's Elaborated Learning

The primary purpose of this study was to examine the effects of teacher's interaction, which is referred to as teacher's verbal expression, on the child's progression from primary activity to the elaboration of learning into associate and concomitant learnings.

As the results indicate, the teacher's interaction with the child was highly affected by the role of the teacher in the activities the child performed. The study revealed four major teacher roles -- Participate, Direct, Observe, and Absent. The study also showed that the progression from primary activity to the elaboration of learning into associate and concomitant learnings was determined by the frequency of associate and concomitant learnings observed while the teacher was interacting with the child. The study included a population of 50 children, who participated in 114 activities in 10 classrooms. There were significant differences as to the frequencies of associate and concomitant learnings according to the role of the teachers.

Participate: The teacher is participating in the activity with the child but not controlling the activity. He/she is engaged in the same activity with the child. The results show that the teachers used the participating role of teaching only 17.5% of the time. Only twenty (20) activities/instances of participating were noted in the one hundred and fourteen (114) total activities. However, the results show a significant difference between the frequencies of associate and concomitant learnings. There were fifty-one (51) cases of associate and eighteen (18) cases of concomitant learnings. The fifty-one (51) associate learnings indicate high teacher/child interaction. This result indicates that when the teacher participates in activities with the child, this interaction leads to a high frequency of associate learnings. The low frequency of concomitant learnings in the participating role indicates the teacher is less focused on behavior and attitudes.

Direct: When the teacher is directing the activities of the child, the teacher is in charge of the activities. The results show that in one hundred and fourteen (114) activities, the teacher was directing in thirty-three (33) activities which constitute 28.9% of all activities. When the teacher was directing, twenty-four (24) associate learnings and thirty-four (34) concomitant learnings were observed. The difference is suggests that when the teacher

is directing, he/she tends to focus more on attitude and behavior related to teaching, e.g., sit down on your chair/bottom; wait for your turn; sit and listen to the directions; you need to try first, etc. The low number of associate learnings is the result of the teacher's focusing less on the learning of the child.

Observe: When the teacher is observing, the teacher is present in the area of the activity of the child. The teacher may comment on the activity but does not become engaged or involved with the child. The study shows forty-nine (49) of one hundred and fourteen (114) activities in which the teacher was observing. This is 43% of the total number of activities. This style of teacher involvement resulted in a frequency of twenty-nine (29) associate learnings and thirty-one (31) concomitant learnings. The frequencies of both the associate and concomitant show no outstanding differences. This indicates that when the teacher is observing, he/she tends to focus on the elaboration of primary learning to associate learning and the attitude and behavior related learnings as well.

Absent: When the teacher is absent, it explicitly means that the teacher is not present in the area in which the child is performing the activity. The data shows that the teacher was absent in twelve (12) activities, or 10.5 percent of all activities. Frequency of associate learning was one (1) and two (2) for concomitant learning. These

minimal frequencies of associate and concomitant learnings are an indication that sometimes the teacher talks to the child in an activity area from another area.

There were ten (10) classrooms involved in this study. In three (3) classrooms the teachers were primarily participants, in five (5) classrooms the teachers exhibited more of the observer role than the other roles, and in two (2) classrooms, the teachers showed more of the directing role than the other roles. These data confirm what observers have always commented on, namely, the many different styles of teachers.

These different styles of teaching had the effects that we might expect. The teachers with the participating style encouraged associate learning. The active involvement with children resulted in 48 percent of the instances/cases of the total number of associate learning experiences. Teachers with the directing style of instruction were involved in 23 percent of the associate learning experiences in this study. The teachers who exhibited the observer role were involved in 28 percent of the cases (see Table 5.1, pg. 93).

The different teaching roles resulted in very different frequencies for concomitant learning. The teachers who emphasized participation had only twenty-one percent of the total number of concomitant learning experiences. The mean number of concomitant learning experiences was six (6), a

relatively low number. Teachers who are involved in encouraging learning do not have the need or the necessity to enourage children to learn to control their behaviors. The teachers who showed the directing style of instruction utilized forty percent of the instances of statements that emphasized control and appropriate behavior. There were only two (2) teachers in this group, and they averaged seventeen (17) instances of concomitant learning. Teachers who showed the observing style of instruction had thirty-six percent of the total number of concomitant learning experiences. The observing teachers average only six (6) instances of concomitant learning experiences.

Note that teachers who exhibited the participating and observing styles of teaching had the same average mean numbers of concomitant learning experiences -- six (6). This suggests that these teachers did not see the need for constant and consistent use of control statements to children. Note also that the highest frequency of associate learning occurred when teacher was participating in activities with the child. This suggests that teacher participation could be a vehicle for the child's effective learning.

The study also confirmed Condry and Koslowski's (1979) phases of child's motivated learning. As the study revealed, for each learning activity the children performed,

there was an initial engagement, activity performance, disengagement and subsequent engagement.

Initial Engagement: This is the phase of the child's first entrance into any learning activity or activity area. One of the purposes of the study was to identify who initiated the initial engagement, the child or the teacher. The results showed no significant differences between the teacher and the children. The children initiated entrance into activities in fifty-three (53) activities, while the teacher initiated in sixty-one (61) activities. But the result tends to indicate that the teachers seem more in control of the children's activities than the children themselves, since the teachers initiated activities more frequently than the children. The researcher had espected to see more child initiated activities than teacher initiated activities.

Activity Areas, Activities and Performance: The children entered the activities, stayed for a certain number (2-40) of minutes and performed. As the results of the study revealed, the children performed forty-three (43) activities in the art area, twenty-seven (27) in manipulatives, eleven (11) each in both housekeeping and large blocks, four (4) each in science, table games and group time, and one (1) in water table. These results suggest that the teachers tend to plan more art related activities than manipulatives, housekeeping or science activities.

This research will encourage teachers not to focus more on art related activities but to balance the curriculum by planning for math, science, art, and other activities. The curriculum should aim at providing stimulating activities for the development of a wholesome and effective personality which will enable each child to adjust him/herself with life.

Disengagement: A child working on an activity might disengage by saying, "I'm done" or "I'm finished." Some of the other things that caused the child's disengagement as the study revealed were transitional effects, end of the free-play period or change of activity by the teacher and end of the forty (40) minute observation time. The study revealed that children initiated disengagement in fifty-three (53) activities while the teacher initiated or asked the child to stop in thirty (30) activities. There were twenty-three (23) activities for transitional effect and eight (8) for end of observation time. The high number for the children suggests that the children were more in control of when to stop their activities than the teacher. The children re-entered activities or activity areas or went on to a subsequent activity.

While the children performed in the activities, the teachers interacted with the children. An example of such interaction is seen below. Appendix D (pg. 114) has more examples of teacher/child interaction.

Observation One:

Child initiated activity -- Bristle Blocks

Activity Area -- Manipulatives

Teacher is Observing -- "When teacher is present in the area but is only observing the activity. The adult may comment on the activity but does not become engaged with the child."

Child has been playing in the area for about eleven (11) minutes before the occurrence of the interaction:

Teacher: (Child's name), it's time for you to clean up and come over to the sand table.

Child disengaged and went over to the sand table and started playing with sand. Teacher was observing.

Teacher: Be careful, put the sand inside the box.

Child: Look what I made. I made an ice cream soda.

Teacher: I like the chocolate one.

Child: I'm making some chocolate fudge cake.

Teacher: Oh Boy!

Child: (No comment)

Teacher: OK (child's name), you can go to the housekeeping.

Child disengaged here and went to the housekeeping area and continued to play "doctor" in the area. The teacher was observing.

Child: I got a thing for shots.

Teacher: Oh! you are the doctor.

Child: Yes. (Taking teacher's temperature)

Teacher: Are you sure? Am I Okay?

Child: (No comment)

Teacher: You want to check my blood pressure? Am I Okay?

Child: (No comment)

Teacher: What's my temperature?

Child: 100.

Observation ended here.

Comments: It should be noted that when the child disengaged from the manipulative area, he went over to play in the sand. While playing in the sand the teacher asked the child to be careful and to put the sand inside the box. The child said, "Look what I made. I made an ice cream soda." This is an initiation of associate learning by the child. The child's imagination was directed away from sand to ice cream soda. The teacher should encourage the child's fondness for imagination and at the same time help the child to see relationships, understand significances, and gain insight in regard to how the ice cream soda is made. The teacher interaction with the child should be the driving force which leads the child on into further associate learning or activity. This kind of learning

should be wisely guided by the teacher to satisfy the child's interests and motivations.

In this observation the teacher did not respond to the child's ice cream soda but rather said, "I like the chocolate one." The child further initiated Associate Learning by saying, "I'm making some chocolate fudge cake." But the teacher's, "Oh boy." answer ended the interaction before the child was asked to go to the housekeeping area.

In summary, from the above examples and discussions, teachers should provide a variety of primary activities for children's involvement. The initiation and children's performance in these activities should be highly encouraged by the teacher. Teacher's role in the child's activities should be clearly defined, whether it be participating, directing or observing.

The teacher's interaction with the children should be an instrument to encourage the elaboration of children's learning into associate and concomitant learnings. The teacher's attention should also be paid to the children's initiation of associate and concomitant learnings through the questions they ask while they are performing in the activities.

Parents and educators should be able to observe these differences in the roles of the teacher and teacher versus child initiation of activities. They will also be able to identify the style of teacher interaction that might help

might help the child progress from primary to either associate or concomitant learnings. These observations of the classrooms will help determine the appropriate placement for a child.

Research Limitations

Some limitations regarding the specifics of this research exist. First, definitions of associate and concomitant learnings as adapted from Manor, 1937, was limited by a lack of clear examples. Elaboration and expanded examples of both the associate and concomitant learnings will add to a better replication of the study.

Second, for the purpose of maintaining consistency, forty (40) minutes was assigned for each observation. The result of the study shows that the number of minutes each child was observed varied between ten to forty minutes. This inconsistency regarding the total observed minutes for each child should be controlled for more valid results.

Third, this study defined teacher as the adult assigned to the classroom and the activity area. Some inconsistencies exist regarding different teacher style of interaction. In a preschool classroom at least three teachers are present. The child makes contact with almost every one of these teachers/adults as he/she moves from one activity to another.

The differences in these adults' interaction with the child affected the result of the data collected. These differences should be controlled for more consistent results.

Directions for Future Research

While the results of this pilot study provide significant information to parents and educators, a great deal of information can be obtained in subsequent research. The following suggestions will provide information that will clarify the effect of teacher interaction on the child's elaboration of learning.

First, studies of activities in the preschool classroom should classify teacher's goals into primary, associate and concomitant learnings. Manor has suggested that "the analysis of learning is a helpful concept for the teacher to acquire (Manor, 1937).

By analyzing the teacher's goals into these learning categories, there will be a better understanding of teacher's interaction with children during the activity periods. Also, teacher's guidance of children to achieve these learnings -- primary, associate and concomitant will be better understood.

Second, if possible children should be observed over the course of the entire day. During the present study, each child was observed for forty minutes during the free

play period. Although these observations allowed the researcher to examine the effect of teacher interaction with children and the effect on children's elaboration of learning, a recording over the entire day would provide additional information not gathered through the forty minutes recorded.

Further investigations of the effect of certain variables on the study should be done. Such variables should include:

1. Teacher versus child initiated activities.
2. Sex differences.
3. Racial differences.

In the present study, there is no significant difference between teacher initiated activities and child initiated activities and their effects on frequencies of both associate and concomitant learnings. A focus on teacher initiated activities and child initiated activities over the course of the day might help to suggest some differences.

Further study should focus on the identification and clarification of both positive and negative concomitant learnings either through the course of free-play period or through the course of the day. Some examples of negative concomitant learnings may include the child refusing to continue when confronted with a problem, refusing to take a

turn, but fight instead, etc. They could be characterized as the undesirable reactions toward problems.

TABLE 5.1

Frequencies of Associate and Concomitant Learnings by Role of Teacher Associated with Number of Activities for Entire Population and Percent of Activities for Entire Population

Role of Teacher	Associate Learnings	Concomitant Learnings	# of Activities of 114	Percent of Activities of 114
Participate	51 (48%)	18 (21%)	20	17.5
Direct	24 (23%)	34 (40%)	33	28.9
Observe	29 (28%)	31 (36%)	49	43.0
Absent	1	2	12	10.5

APPENDIX A

THE CHILD ACTIVITY OBSERVATION FORM GUIDELINES

The Child Activity Observation Form

For the purpose of maintaining a high degree (up to 80% or more) of reliability in the observations, certain rules will be followed. For the purpose of this study, these rules will include:

1. A child must be observed one time.
2. Each child must be followed throughout a free-play period from the beginning to the end of this period.
3. Child's initial entry into any activity (Initial Engagement) right at the beginning of free-play period must be identified and scored either child initiated (child chosen for self) or teacher initiated (teacher chosen or suggested for the child).
4. Activity Area, e.g., Block must be identified. Activity, e.g., Boat Building, must also be identified. Activity participation must be recorded or scored as completed or not completed. A child is scored not completed if:
    a. Involvement is less than five minutes.
    b. She/he is wandering aimlessly or disorganized running.
    c. She/he is in an activity area uninvolved for five minutes or more until involvement or

leaving the area, watching passively, gazing out of window, behaving disruptively.

A child is scored completed if:

a. She/he is involved for five minutes or more until disengagement.

b. A child verbally says, "I'm done." or "I'm finished." before leaving the area.

c. A child continues on task for five minutes or more until teacher asks the child to leave the area.

d. A child continues on task for five minutes or more until transition time when teacher announces that it is time to clean up, snack time, bathroom time, etc.

5. While child is still in any activity area, teacher must be scored Absent or Directing the activity of the child, or Observing, or Participating with the child.

6. Teacher's verbal interactions would be scored only when such interactions are directed to the observed child or directed to the group of children which observed child is part of, as in case of group story, poem, etc.

7. Any adult (teacher) interaction with observed child during this period will be observed as teacher interaction and scored for Primary or Associate or

Concomitant Learning under Occurrences over time, indicating at what time such learning occurred from the start of activity until occurrence.

8. "A teacher" will be regarded as any adult involved with child in any activity area.

9. Disengagement will be identified when the child leaves the immediate activity area to another activity. It will be scored whether teacher initiated (suggested to child by teacher) or child initiated (child's own decision) or other which might be another child's leadership or during transition - end of activity, or end of observation time.

10. Subsequent Engagement (the following activity the child engages in after disengagement). This must be scored on new activity form.

11. The classroom arrangement and daily schedules will remain the same throughout the study.

On Comments: Observer will write any specific teacher teacher/child comments/responds that will be helpful to the data.

CHILD ACTIVITY OBSERVATION FORM I

Please read the instructions first. Be sure that you clearly understand the instructions before you engage in any observation.

CHILD'S NAME:_____ AGE:_____ SEX:_____

NAME OF OBSERVER:_____ POSITION OF OBSERVER:_____

PROGRAM:_____ DATE:___/___/___

TOTAL OBSERVATION TIME:_____

PHASES	LEARNINGS	OCCURRENCES OVER TIME (IN MINUTES) 1-5	6-10	11-15	16-20	21-25	26-30	31-35	35-40
INITIAL ENGAGEMENT Child ___Initiated Teacher ___Initiated									
ACTIVITY AREA: Activity: Teacher __Absent __Directing __Observing __Participating Child __Completes Task __Does Not Complete Task __In Group (2 or more) __Alone	PRIMARY								
	ASSOCIATE								
	CONCOMITANT								
DISENGAGEMENT: Teacher __Initiated Child ___Initiated Other ___Peer Initiated ___Transitional Effect									
SUBSEQUENT ENGAGEMENT Teacher __Initiated Child ___Initiated	COMMENTS:								

NOTE: Check marks (x) should be used for associate and concomitant learnings and scoring.

CHILD ACTIVITY OBSERVATION FORM II

Please read the instructions first. Be sure that you clearly understand the instructions before you engage in any observation.

PHASES	LEARNINGS	OCCURRENCES OVER TIME (IN MINUTES) 1-5 | 6-10 | 11-15 | 16-20 | 21-25 | 26-30 | 31-35 | 35-40
ACTIVITY AREA:	PRIMARY	
Activity: Teacher __Absent __Directing __Observing __Participating	ASSOCIATE	
Child __Completes Task __Does Not Complete Task __In Group (2 or more) __Alone	CONCOMITANT	
DISENGAGEMENT: Teacher __Initiated Child ____Initiated Other ___Peer Initiated ___Transitional Effect		
SUBSEQUENT ENGAGEMENT Teacher __Initiated Child ____Initiated	COMMENTS:	

APPENDIX B

LETTER OF PERMISSION

November 26, 1990

Dear Parents:

I, Rose Ihedigbo, am a graduate student at the University of Massachusetts in Amherst. As a former employee of Springfield Day Nursery, I worked as a program director in East Longmeadow and was the Agency's Educational Coordinator. Right now I am in the process of completing the requirements for a doctoral degree in Early Childhood Education. My dissertation research has been designed to study the activities of the free-play period. The title of the study is: The Effects of Teacher's Verbal Expression on Child's Elaborated Learning During the Free-Play Period: Study of Activities. I am interested in finding out whether teacher's interactions with children during the free-play period help them in learning more things other than what they are primarily doing at the time.

The study has been designed to use ten classrooms (ten teachers) and fifty children, five from each classroom. The age level of the children has been limited to four years old only. Children's first names only will be used. It will be a very naturalistic observation method. The Child Activity Observation Form, designed for the study, will be used. Video tapes, taped from two of the classrooms will be used basically to train the program directors who will assist me in the collection of the data. The observation time will be limited to the free-play periods only. Some areas the observation will focus on will include:

1. Teacher/child interactions
2. Teacher's initiation of activities for child
3. Child's initiation of activities for self
4. Child's involvement and performance with materials
5. Child's movement from one activity center/area to another (in the classroom).

The result of the study will help teachers better understand the effects of their interactions with children during the activities of the free-play period. It will also help the Springfield Day Nursery to assess their SDN Policy on Developmentally Appropriate Practice, in which a part of the statement includes; "Children will be encouraged to explore, initiate, create and be independent."

My goal is to analyze the data collected in the study for presentation in my doctoral dissertation. I may also use the information in journal articles, and to develop workshops for teachers. However, I

will not, under any circumstances, use your child's full name in the study. I will refer to the school as Day Care Program in Springfield, Massachusetts.

I certainly want to encourage you to allow your child to participate in the study. Also I want you to understand that you are under no obligation to do so. Your child will not be placed at any disadvantage now or in the future if he/she participates. If you agree now to allow your child to take part in the study but later change your mind, you may withdraw at any time without prejudice.

For your child to participate in the study, your written consent is required. Please sign the form below on the space provided for your signature. If you have any questions or would like further information about the study, please call me at home (413) 256-1490.

In signing the form, you are agreeing to allow your child to participate in the study under the conditions set forth above. You are also assuring me that you will make no financial claim on me now or in the future for your participation. Thank you for considering your child being a part of my research. I look forward to the possibility of working with him/her on this project.

Rose Ihedigbo

Rose I. Ihedigbo

DO NOT DETACH. PLEASE SIGN AND RETURN ONE COPY OF THIS FORM. KEEP THE OTHER COPY FOR YOUR RECORDS.

Parent's or Guardian's Consent

I, _____ have read the statement above and agree to my son or daughter's participation in the study under the conditions stated therein.

_____ _____

Signature of Parent or Guardian Date

APPENDIX C

THE BEHAVIOR CHECKLIST OF CHILD-ENVIRONMENT INTERACTION

The Behavior Checklist of Child-Environment Interaction*

Second Edition

An Observational Record of Children's Behavior in Child Care and Early Education Settings

David E. Day
Elizabeth Perkins
Judith Weinthaler

Early Childhood Program
School of Education
University of Massachusetts
Amherst, MA 01003

Task Involvement Behavior. The child is engaged in an activity or task, or is not engaged.

On-Task Behavior: The child is engaged in a task or activity. The child is completing a puzzle, painting at an easel, soring objects, or completing a paper-and-pencil task, for example. The child is attentive to an activity led by a teacher, e.g., watches as a teacher reads a book, listens to other children talk in a group discussion. On-task behavior can be observed in any activity whether teacher directed or self-selected, whether isolate, small group or total class activity. (The nature of on-task behavior for each curriculum activity should be defined in the Activity/Area Description Forms.)

Observes: The child observes the activity of other children or of an adult without participating or interfering in any way. The child watches, and perhaps comments on the activity of a child or adult. The child is obviously interest in what is taking place but in no way attempts to enter the activity in a direct way. (Observes is on-task behavior; on-task will be coded, too.)

*It should be noted that not all Day, Perkins and Weinthaler's observational instrument is included in this Appendix.

Off-task Behavior: The child is inattentive, uninvolved, or wandering. The child is not engaged in a task, fails to respond to a teacher's query, or fumbles around in distraction. An inattentive/uninvolved child may sit quietly at a table or in a circle with other children who are involved. The child need not be disruptive.

A wandering child moves about the room without focus. S/he wanders from area to area without attention to any activity and without joining others. The child remains in an area only for a few seconds duration before moving on.

Waits: The child waits while activities, materials, etc. are being prepared or the activity started. The child waits, alone or with others, while a teacher prepares, organizes, distributes materials, or attends to other children. The child sits at a table waiting for the teacher to distribute paste to each child. The child is asked to remain seated in a circle while the teacher searches for a storybook. (Waits is off-task behavior; off-task will be coded, too. Waits occurs while an activity is supposed to be taking place. It is not an in-between or transition period.)

Transition: The child is between activities. The child is not engaged in a curriculum task but, rather, is between events, e.g., between reading instruction and mathematics; between completing a puzzle and beginning to paint; or preparing for recess. Transition can only be known by the context: a teacher announces a new activity is to begin; a child completes a task and has not begun another.

Materials Use. The child is using materials and/or equipment.

Single use materials: The child is using a material in a prescribed manner, or a material for which the outcome is predetermined. Swinging on a swing, using scissors to cut a pattern, tracing one's name with a crayon are examples of prescribed materials use. Completing a puzzle or lotto game, playing a game of checkers, looking at a book, or completing a worksheet are examples

of materials for which there is a predetermined outcome.

Multi-use materials: The child is using a material which requires exploratory, constructive behavior in which the outcome of the activity is not inherent in the material. Examples of multi-use materials would include unit blocks, modeling clay, wood for construction, easel painting, sand and water play, and exploratory science table. However, the key to this behavior is the child's use of the material.

Combines: The child combines materials. The child uses an assortment of materials, oftem from more than one area, in his/her play or activity. For example, a child might combine sand with finger paint to get different texture and color. A child might use blankets from the fantasy play area in the blocks area to construct a tent. A child may use blocks and boards from the woodworking area to construct a maze for a guinea pig. The child may build a structure with checkers or use a ruler as a lever in a task unrelated to measurement.

Abuses/Misuses: The child abuses or misuses materials. The child throws blocks, tears pages from a book, chews pieces from a game or puzzle, crushes a toy or paints on a wall. The child is not using the material as it was intended and in a destructive or disruptive way.

No materials use: The child is not using any material. The child may or may not be on-task. S/he could be involved in a circle activity, group discussion or viewing a film.

Off-task manipulation: The child is off-task but is fumbling with a material, e.g., spinning a block while idly sitting on a table.

Cooperation: The child is engaged in independent, associative, or cooperative activity, or is being directred by the teacher.

Works independently: The child is engaged in a task alone. The child is not involved with nor does s/he seek the assistance or direction of another child or adult. The child may be

physically isolated (in a place without other children) or near others (at a table or on the floor close to other children). There may be some conversation with others but the child continues to work or play alone.

Teacher directed activity: A teacher is leading/directing the activity in which the child is engaged. Teacher direction may occur in a large group or tutorial activity; the size of the group is unimportant. The child is obliged to follow the lead of the teacher. Examples could include morning circle, snack, a reading lesson, storytime, and a walk through the neighborhood.

Talks to self: The child talks to him/herself while engaged in an activity or task. The speech is not directed to anyone else, though it may be a series of questions and may occur in the presence of other people. It is clearly speech for oneself and can take any form, i.e., role playing behavior, directing task resolution, or discussing an event.

Respects space: The child respects the physical space and/or materials of other children. The child walks around another child who is seated on the floor looking at a book. The child does not disturb a construction project, game or other activity of children. By contrast, a child who did not respect the physical space of others would march through an area where an activity was occurring. A child who does not disrupt the activity of others working in close proximity - at a table or on the floor - would also be respecting physical space.

Takes turn: The child takes turns in activities with other children. The child will allow other children to use materials s/he is using, to alternate using a piece of equipment, or wait in line with other children before using a material or engaging in an activity. Taking turns would include sharing common materials in an art activity, for example, while working independently on one's own project. It would also include waiting to swing on a tree swing until another child had finished (not to be confused with waiting for an activity to begin). Taking turns is learned behavior and may need to

be mediated by adults. Even in instances where adults are involved, the behavior should be coded. It should not, however, when the child has been threatened with the imposition of sanctions if s/he refuses to take a turn.

Helps child: The child assists another child. The child provides assistance to another child as, for example, in getting a cup of water for a handicapped peer, helping a child lift a box, offering to assist in picking up blocks. This behavior occurs with or without adult encouragement.

Disturbs: The child disturbs the activity of others and/or behaves in a way disruptive of on-going activities. The child intentionally rolls a large ball into the block structure of another child. The child runs about screaming while others are trying to listen to a story. The child taks other materials. A disruptive child would not be task involved and would be attempting to interfere with others who are or who might want to be involved.

Threatens/Strikes: The child threatens or strikes another child. The child threatens to strike another child with a block, kicks a child, intentionally drives a tricycle into another child or throws a swing in a way to threaten a nearby child would all constitute threatening or striking behavior.

Leaves Classroom: This behavior will be coded when the child leaves the classroom and the observation cannot be continued. A child leaving for the toilet, taking a message to another teacher, or being picked up by a health worker or a dental appointment would be examples of this behavior. Coding leaves the classroom signals the interruption of the observation prior to its completion.

Three types of contextual data will be gathered: the designation of the activity or learning area, information about the teacher, and information regarding the size and composition of the group of children in which the observation is taking place. Each of these types of data will be defined.

Activity Area: Before the observations are begun, the teacher in charge of the classroom shall identify and define all of the activities and learning areas which comprise the classroom curriculum structure. For example, a nursery school and kindergarten will commonly have the following learning areas and activities: housekeeping, arts and crafts, blocks, table games, circle time, snack and outdoors. A first, second and third grade might have, in addition to those of the kindergarten, a reading area, writing instruction, mathematics area and instructional activity, and a children's book area, for example. Each activity and area will be identified and given an ID number.

There can be an unlimited number of activities and areas in any classroom and just as much variety in their kinds among different early education programs. However, there seems to be a set of areas and activities commonly found in preschools and another set common to primary grades. They have been described below, with the corresponding ID. Wherever possible these IDs should be used in identifying like kinds of areas and activities.

There are two activities which appear in every classroom, activity which occurs across or between areas and clean-up. Activity which does not occur within a designated or defined area or is not a part of a regularly scheduled event shall be called Open Activity. Open activity occurs when two children are engaged in fantasy play in which they move along the corridors and pathways of the classroom but moving about on the periphery of areas (wandering behavior). Open activity is a functional designation for observations which do not occur in any of the designated learning areas.

Clean-up activity is that which occurs in every area when the teacher signals it should begin. The teacher will announce clean-up, will ring a bell or in any of several other ways signal to the children the end of what they are engaged in and the request that they should return materials to their place of storage, clean off tables, place used materials in waste containers, etc. Clean-up supersedes all other

area designations; during clean-up ignore where it occurs and code only that it is then taking place. The numeral 2 should always be the ID for clean-up.

Common Preschool and Kindergarten Activities Areas

Activity/Area	Definition of the Area
Transition Activity	
Open Activity	Activity which occurs outside of designed learning areas and not during regularly scheduled activities.
Clean Up	Returning materials to their place of storage, picking up, etc. Always at the request of the teacher.
Fantasy Play Area	An area particularly designed to provoke and sustain role play, fantasy, and make-believe, i.e., housekeeping and dress-up play.
Table Games Area	An area in which small games are stored, with large and/or small tables upon which the games are played. Games would include puzzles, lotto, matching and sorting activities and balancing scales, for example.
Blocks	An area in which unit blocks are stored and used. Occasionally large construction blocks may also be found, as would miniature cars, people and other materials useful in construction activity.
Book Area	An area, usually quite small, in which children's books are found for use by both children and adults with children.
Art Area	An area where table arts and crafts occur. Tables, materials for activities, i.e., scissors, glue, paper, etc. would be found. Distinct from easel painting.

Large Group Area	Usually an open space large enough to accommodate all of the children. A place where most whole group, teacher led activities occur, i.e., opening exercise, circle time, story time.
Snack Area	An area designated as the snack area. May be used for other activities when not used for snacks.
Outdoors Area	That area outside the classroom (and building) which is used by the children in the program. This is a gross descriptor for outdoor areas vary widely in size, complexity, and use.

In addition to the identification of each activity and learning area, teachers will be asked to distinguish between those activities into which the children are directed by the staff and those which are freely chosen by the children. Teacher choice is the designation given to the first type of activity. Examples could include circle time, story time, snack, outdoor play. The teachers would announce to the children that snack was about to be served with the assumption that every child would be expected to join in the activity. Even though children may from time to time refuse to join the activity, the existence of the expectation that they all should join is sufficient for designating the activity as being teacher choice.

A child choice activity, on the other hand, is one which is chosen by the child from an array of options. It is common among early education programs to provide periods of time each day when children are responsible for deciding what they shall do. It is the option available to them during these times which shall be designated child choice activities. They may include block play, table games, water play, etc.

Every Activity/Area identified must be designated either teacher or child choice. In cases where a clear distinction is not possible, use would be made for the most common form. That is, it may be possible at times for children to partake of snack when they choose and at other times snack may occur as a total group activity,

directed by the staff. The later modality may, in fact, be the more common form. Therefore, in this case, snack would be designated as a teacher directed activity.

Teacher role. For each observation the role of the teacher will be designated as follows:

> When the teacher is absent from the setting in which the child's behavior is observed.
>
> When the teacher is present in the area but is only observing the activity of the child. The adult may comment on the activity but does not become engaged with the child.
>
> When the teacher is participating in the activity with the child but is not directing, nor controlling, the events, rather s/he is engaged in the same activity as the child.
>
> When the teacher is directing the activity of the child or group of children. The teacher is in charge of the events.

On occasion there may be more than one teacher in an area or with an activity. In such cases code the teacher who is playing the lead role, e.g., the teacher who is directing circle time, or the teacher closest to or engaged with the child, e.g., the teacher who is seated to the rear of a child who is completing a collage in a group where another teacher is observing the events.

Space for identifying each teacher is also provided. Each teacher will be assigned an ID before the observations are begun. In addition to their role, the ID's will also be entered for each observation.

Group Size and Composition. Provision has been made for recording the number of children under observation and the make-up of such a group. Note, this category is for numbers of

children only. The presence or absence of the adult is not a factor in determining group size. Group size will be designated as follows:

When the child is alone;

When the child is with one other child;

When the child is with two to four additional children (group size including the child is three to five children);

When there are more than five children in the group but less than the whole class; when the whole class is not expected to be included;

When it is a whole class activity; when all of the children are expected to be included.

APPENDIX D

EXAMPLES OF TEACHER/CHILD INTERACTIONS

Examples of Teacher/Child Interactions

Observation Two:

Teacher initiated, initial engagement.

Child is in Art area.

Activity is Easter Eggs.

Teacher is Directing.

Child: I can't cut that. (Child trying to cut through construction paper)

Teacher: You can, try again.

Child: (Continued to try)

Teacher: Good, you did.

Child: (Stood on chair, talking to another child.)

Teacher: Excuse me, use a low voice and turn around and sit.

Child: I'm finished.

Teacher: What would you like to do next?

Child: Housekeeping.

Child disengages here and goes to housekeeping.

Teacher is observing.

Child is playing house.

Teacher: You guys stay on the table -- keep the food on the table (referring to all the play food).

Child left for manipulatives.

Child disengages from housekeeping and subsequently engaged in manipulatives.

Teacher is observing.

Activity is cubes.

Teacher: You guys keep the helicopter on the floor (referring to helicopter the child made out of cubes).

Child: (falling from the chair)

Teacher: Be careful.

Child: (leaves the cubes and picks up puzzle)

Activity area -- Manipulatives

Activity -- Puzzle

Teacher is observing.

Teacher: What are you looking for?

Child: (looking for puzzle pieces that fit together)

Teacher: What goes with a baseball?

Child: Gloves.

Teacher: What goes with a pail?

Child: Shovel.

Teacher: What goes with toothpaste?

Child: ????????

Teacher: Let's be nice.

Child: (touches another child's piece of puzzle)

Child: Let's do another thing.

End of observation time.

Observation Three

Child initiated initial engagement.

Activity Area -- Manipulatives

Activity -- Large Legos

Teacher is participating.

Child: I am making a house.

Teacher: What color is your house?

Child: Blue.

Teacher: How many rooms do you have?

Child: I don't know.

Teacher: Do you have more than one?

Child: I made may house.

Teacher: Where is the door?

Child: I made a small door.

Child: Can I take another toy?

Teacher: Yes, you can. Are you done with this?

Child: Yes.

Child disengages from Legos and subsequently engaged with connecting train in the same activity area -- manipulatives.

Teacher is participating.

Teacher: What are you making?

Child: I'm making a train.

Teacher: It looks like a car.

Child: (starts to make sound of car)

Teacher: I made a small car. What about yours? You made a big one. (Teacher brought in a town floor mat)

Teacher: Did you stop at the city stop sign?

Child: I got to stop at the city stop sign.

Teacher: You have another car? When did you buy it?

Child: Saturday.

Child: Now I got two cars.

Child: You got to get some gas.

Teacher: Where is the park?

Teacher: Are you going to give me some directions to go to the park?

Child: Yes.

Teacher: How?

Child: Go to

Teacher: Mr. (child's name), where are you heading to?

Child: I'm heading to the police station. Somebody stole my VCR.

Child: (Continues to play car after the teacher left)

Teacher: It is time to clean up.

Observation Four:

Child initiated initial engagement.

Activity Area: Art

Activity: Coloring cut-out teeth on construction paper.

Teacher is observing.

Teacher: What color is this? (pointing at a red marker)

Child: Red (continues to color)

Teacher: You are almost done. Do you want to stop and color later?

Child: Yes.

Teacher: You used all the colors.

Child: I didn't use red.

Child: Can you help me write my name?

Teacher: (helped the child write her name)

Teacher: Go and pick up something else to make.

Child disengages here and goes over to manipulatives area and picked up number puzzle.

Teacher is participating.

Teacher: Tell us what number that is (pointing at a piece of the puzzle)

Child: (Silent)

Teacher: What number is that? 2 and 0 is 20.

Child: 20

Teacher: 1 and 8 is 18.

Child: Anybody got 12? (showing a piece of puzzle with number on it)

Teacher: 1 and 5 is 15.

Child: 15.

Child: Anybody got 9?

Teacher: The puzzles are done, you want to take out something else?

Child: Yes.

Teacher: What?

Child: Cubes.

Child disengages with number puzzles. But while in the same area -- manipulatives, he picks up stacking cubes. Teacher is participating.

Teacher: What color is here (pointing at a stack-up cube the child made)

Child: Blue.

Teacher: What color is here?

Child: Black (child reached out to take a cube without waiting for his turn)

Teacher: (Child's name), wait for your turn. (Child sat down)

Teacher: You can take a turn now.

Teacher: What did you make?

Child: (no answer)

End of observation time.

Observation Five:

Teacher initiated initial engagement.

Activity Area: Art

Activity: Coloring boiled eggs with crayon.

Teacher is directing.

Teacher: We gonna do egg. It is very, very fragile, so you gonna be very careful.

Child: Is a bird in there?

Teacher: No, it is an egg.

Teacher: You're going to color your egg with crayon.

Child: See (child shows teacher what he did)

Teacher: Okay, keep on, you're going to have a lot of colors on it.

Child: I'm finished.

Teacher: Good job, sit down, we're going to do the basket.

Child disengages from the egg and engages with coloring the basket cut out of construction paper.

Teacher is directing.

Teacher: Guys, you're going to do the basket, put a lot of colors on it.

Teacher: (Child's name), I want you to sit on your chair.

Child: (child was lying on the table)

Teacher: You can use words and talk, sure you do have a lot of words in there.

Teacher: You know (child's name), this is your Bunny Rabbit basket. You could have given it some eyes and a nose.

Child: I don't want to do that, I'm coloring.

Teacher: Okay, I will take your basket and you can go over to the manipulative table.

Child disengages with coloring and goes over to the manipulatives. He is engaged with Magnetic Blocks.

Teacher is Observing.

Child: I made a gun. Brr---Brr---.

Child: Now I made a car, Vroom---Vroom.

Teacher: Are you driving you car?

Child: Yeah.

Child: Is it time to pick up?

Teacher: Yeah, it's time to pick up.

End of free-play period.

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