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A Model Program to Maximize Intellectual Development for Taiwanese Daycare/Preschool Children Ages 0-3

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**A MODEL PROGRAM TO
MAXIMIZE INTELLECTUAL DEVELOPMENT
FOR TAIWANESE DAYCARE/ PRESCHOOL
CHILDREN AGES 0-3**

Project Report

Presented to

The Graduate Faculty

Central Washington University

In Partial Fulfillment

of the Requirements for the Degree

Master of Education

by

Crystal Fei-Ying Hou

June, 1997

Please note: Photographs of children throughout this project have been omitted due to privacy concerns.

A MODEL PROGRAM TO
MAXIMIZE INTELLECTUAL DEVELOPMENT
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The purpose of this project was to design and develop a model program to maximize intellectual development for Taiwanese daycare/ preschool children ages 0-3. To accomplish this purpose, a review of current literature regarding intellectual development of preschool age children and related early childhood education was conducted. Additionally, related information from selected daycare/ preschool centers was obtained and analyzed.

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TABLE OF CONTENTS

Chapter	Page
1. BACKGROUND OF THE PROJECT	1
Introduction	1
Purpose of the Project.	2
Limitations of the Project.	2
Definition of Terms	3
2. REVIEW OF THE LITERATURE	5
Intelligence and Developmental Theory in Infancy and Early Childhood – An Overview	6
Topics Related to Child Rearing During the First Three Years of Life.	14
Selected Approaches to Enriching Baby’s Mind	18
Selected Child Care Education Programs	23
Summary	27
3. PROCEDURES OF THE PROJECT	28
Need for the Project	28
Development of Support for the Project	30
Procedures	31
Planned Implementation and Assessment of the Project	31
4. THE PROJECT	33
Unit One - Cognitive Intelligence	p 5
Unit Two - Interpersonal Intelligence	p 9
Unit Three - Language Intelligence	p 12
Unit Four - Math Intelligence.	p 18
Unit Five - Art and Creativity Intelligence.	p 23
Unit Six - Scientific Probe Intelligence	p 27
Unit Seven - Socialization Intelligence	p 31
5. SUMMMARY, CONCLUSIONS, AND RECOMMENDATIONS	34
Summary	34
Conclusions.	34
Recommendations	35
REFERENCES	36

CHAPTER 1

BACKGROUND OF THE PROJECT

Introduction

High on most people's priority list of human attributes is the capacity for intelligent behavior. Indeed, improvement in the development of intelligence probably has been the single most popular topic in the incredible activities of early education since 1965. Although there is virtually unanimous agreement about the desirability of attending to the development of intelligence in young children, there is by no means equal agreement on how that goal is to be achieved.... early important work in the field of child development research reinforced the notion that the first years of life were of special importance.... a goodly number of child development research workers had become especially concerned with the subject of learning during the first three years of life (White, 1988, p.7).

In the above statement, White has alluded to the wide spread attention given to the intellectual development of young children during the past thirty years. Although agreement does not exist as to how best this might be accomplished, White contended 0 to 3 years are vitally important to a child's intellectual development. This is a critical

period during which to monitor the growth of intelligence, to measure preintellectual abilities, and to reinforce intellectual development.

Research conducted by Gordon (1971), has further emphasized the critical importance that the early years play in the fundamental growth and development of young children. Said Gordon (p.14):

Generally, the longitudinal studies indicate that the early years are formative years; that what transpires during these years leaves its mark on both the behavior and attitudes of the child.

Purpose of the Project

The purpose of the project was to design and develop a model program to maximize intellectual development for Taiwanese daycare/preschool children ages 0-3. To accomplish this purpose, a review of current literature regarding intellectual development of preschool age children and related early childhood education was conducted. Additionally, related information from selected daycare/preschool centers was obtained.

Limitations of the Project

For purposes of this project, it was necessary to set the following limitations:

1. Research: The preponderance of research and literature reviewed for purposes of this project was limited to the past ten (10) years.
2. Scope: The model program will be implemented in selected daycare centers

in Taiwan.

3. Target Population: The model program has been designed for children ages 0-3.

Definition of Terms

Significant terms used in the context of this project have been defined as follow:

1. Intelligence: Is a composite or combination of human traits, which includes a capacity for insight into complex relationships, all of the processes involved in abstract thinking, “adaptability in problem solving, and capacity to acquire new capacity” (Clark, 1988, p.8).
2. Longitudinal Studies: Most of the research has been done either on small samples in laboratory situations or on large-scale studies. A characteristic approach of American developmental psychologists to the problem of relationships between early child experience and later personality and intellectual development has been through the medium of longitudinal studies of small samples(Gordon, 1971, p.12).
3. Maturation: Biologically, babies come equipped with innate capacities, requiring no training or education(Jacob, 1991, p. 28).
4. Physical Experience: Refers to a person’s interaction with any aspect of the physical environment (Jacob, p.30).

CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

The review of research and literature summarized in Chapter 2 has been organized to address:

1. Intelligence and Developmental Theory in Infancy and Early Childhood – An Overview
2. Topics Related to Child Rearing During the First Three Years of Life
3. Selected Approaches to Enriching Baby's Mind
4. Selected Child Care Education Programs
5. Summary

Research current primarily within the past ten years was identified through an Educational Resources Information Center (ERIC) computer search. Additionally, a World-Wide Web connection with the public libraries in the Richmond, British Columbia area was accessed to obtain related information including the following source documents: The New First Three Years of Life, published by Simon and Schuster(1995); How to Multiply Your Baby's Intelligence, published by Avery Publishing Group(1994); Your Baby's Mind, published by Bob Adams, Inc.(1991); The Critical Years, published by New Harbinger(1984); Teaching Mathematics to Young Children, published by Prentice-Hall, Inc.(1984).

Intelligence and Developmental Theory in Infancy and Early Childhood--

An Overview

Helping a child make the most of the first three years of life has been viewed as extremely important for their future development and for full enjoyment of those years for all concerned. However, knowledge of early-child development and occasional outside support make the job easier and more successful. It is unfortunate that parents still have to seek out resources outside the home. They should be made available by the country's educational system to every family raising children. White has concluded that, during the first three years of life, parents should pay particular attention to the growth of the child's understanding of language and, they should nurture the child's natural curiosity. It is through language that the child is able to understand and interpret what is encountered in his/her environment(White, 1995, p. 255).

The First 8-24 Months

White has further contended that knowing in detail what a baby can and cannot do and what he/she is interested in is key. With this knowledge and understanding one can avoid the overdevelopment of the intentional cry and engage in the ongoing function of designing, and regularly redesigning, an educationally beneficial environment for the baby. The first eight-to twenty-four-months of infancy have generally been considered the period during which the parenting job becomes much more stressful, and more difficult to perform

with the best results. Guiding good development of language, intelligence, and curiosity can be surprisingly easy, but helping the young child become a healthy social being is considerably more difficult (p. 248).

In recent years, the works of Piaget have served as one stimulus for greater interest in infant intellectual functioning. The model for the development of intelligence proposed by Piaget recognized the distinctiveness of intellectual activity during infancy, but viewed this intellectual activity as an integral link in the evolution of human intelligence. A brief characterization of the six stages in the development of sensory-motor intelligence model proposed by Piaget, and reported by Lewis (1976, pp. 185-186) has been paraphrased below:

Stage 1 (*Birth to 1 month*): Inborn reflexes (i.e., rooting, sucking, grasping), become more efficient and combine with each other to form primitive schemas such as rooting-and-sucking.

Stage 2 (*1 to 4 months*): The infant begins to 1) define the limits of his/her own body through accidental discoveries which prove interesting; and 2) The infant repeats his/her movements in order to prolong such experiences, combining looking with grasping, for example, to form a more complex organization of behavior called *prehension*.

Stage 3 (4 to 8 months): 1) The baby learns to adapt familiar schemas to new situations, and uses them to “make interesting spectacles last;” 2) The infant’s interest is focused less on his/her own body and more on the world about him/her; 3) The baby will reach for objects as long as he/she can see them.

Stage 4 (8 to 12 months): 1) The child begins to show the emergence of intentional behavior. He/She may search for toys only partly concealed or hidden right before his/her eyes; 2) The baby’s anticipatory behavior and his/her imitation of sounds and actions reveal the beginnings of memory and representation.

Stage 5 (12 to 18 months): 1) The toddler now begins to experiment systematically, varying his/her schemas in “directed groping;” 2) He/She is able to follow visible displacements of an object being hidden, and finds it where it was last seen, but cannot infer the results of unseen displacements; 3) He/She recognizes pictures of familiar persons or objects and can follow simple verbal directions.

Stage 6 (18 to 24 months): 1) This stage marks the transition from sensory-motor activity to mental activity. The toddler invents new means through mental deduction; trial-and-error “groping” is no longer acted out physically but is carried out symbolically or mentally; 2) The child is now able to deduce the invisible displacements of a hidden object; the toddler clearly knows that the object continues to exist even when he/she does not see it; 3) The child is beginning to use symbols in language and make-believe play; he/she remembers

past events and imitates them at a later time; 4)He/She shows purpose, intention, and the beginnings of deductive reasoning, along with a primitive understanding of space, time, and causality. The child is entering the period of symbolic representation.

Knowledge Development

According to Jacob (1991), children's knowledge develops in an orderly manner and by means of three main activities:

1. *Construct*: Children construct knowledge by acting on the object of knowledge.
2. *Expand*: Children expand their knowledge by relating the object of knowledge to what they already know.
3. *Own*: Children come to own knowledge by using it (p. 27).

We must create the appropriate, comfortable atmosphere for our babies' learning with a consistently warm, caring attitude. Babies develop their fullest intellectual potential through exploration and play, with great latitude to choose what they are interested in, and in an atmosphere of unconditional love, encouragement, and support (p. 28).

Mental Development

Although cognition specialists have long pondered the question of mental development, from Piaget's research and contributions, we now believe four major factors explain this intriguing process: maturation, physical experience, social transmission, and equilibration or self-regulation as paraphrased below:

1. *Maturation*: Jacob's research established some limits on the role played by environment on a child's maturation. Said Jacob(p. 28):

Biologically, babies come equipped with certain abilities: they grasp objects; they blink; they suck; they perceive depth; they coo; they display a startled reaction when dropped. These are innate capacities, requiring no training or education. Experience, and the opportunities to exercise these skills enable the baby to improve upon them, expanding them to their natural limits.

For example, if an infant is born brain damaged, no degree of environmental stimulation will alter the child's ultimate growth and development limitations.

Maturation, then, "is a key element in the growth of intellect, and it works in tandem with experience (p. 91)." To determine what kinds of varied, stage-appropriate experiences are absolutely necessary to enhance intellectual development, Jacob divided experience into two areas: physical—interaction with any aspect of the physical environment, and social—interaction with people and their culture (pp. 28-9).

2. *Physical Experience*: In the context of intellectual development, physical experience refers to a person's interaction with any aspect of the physical environment. A baby pushing a ball, shaking a rattle, pulling a toy, banging on the table, or dropping a spoon to the floor allows for the discovery of the physical properties of these objects as well as how objects interact with each other. All such encounters with the physical

world constitute physical experience, which is crucial to a child's mental development. It is through this form of experience that a baby builds scientific as well as logic-mathematical knowledge, all of which help a baby to interact with a variety of objects and events during his/her first two years. The child's logic and mathematical knowledge are constructed from these physical experiences (pp.30-31).

3. *Social Transmission*: Socially transmitted knowledge and experience comes from people. Thus, the "culture of the baby" is developed and transmitted to the baby by the people around him/her. While a baby is interacting with people, a knowledge of the conventions of those people is being constructed that encompasses the cultural mores, values, "no-nos," folklore, music and even rhymes of the baby's culture. Through channels of the culture (art, music, language, and education), children assimilate a great deal of socially developed knowledge, which forms a foundation for them to learn and from which to master their own culture (p. 33).
4. *Self-Regulation (Equilibration)*: Babies, are born with an internal force that moves them in the direction of higher and higher intellectual adaptations. The child's development has a specific direction—toward better intellectual ways of adjusting to the world of knowledge. Piaget has shown how this movement has moved in the direction of more and more adult-thinking. What explains this movement toward higher and higher levels of functioning? The answer lies in the concept of equilibration, described as follows by Jacob:

Equilibrium is a state, but equilibration is an ongoing process, one of continuous mental adjustment in an effort to strike a balance between what baby already knows and what baby is trying to understand. Children require their own amount of time to assimilate new concepts fully before they are ready to create new concepts for themselves. Like all other forms of learning, conceptual learning needs practice. A self-regulating process that motivates one to make sense of experience, to keep relating the new to the old until one sees the distinction and can construct a new category of knowledge. Equilibration is an important factor in understanding and facilitating baby's intellectual development (pp. 35-37).

Multiple Intelligence Theory

Howard Gardner (1985), director of Harvard University's Project Zero, suggested that we all possess seven intelligence areas or seven ways of knowing which can be applied to early childhood education methods as paraphrased below from Lazear's *Teaching for Multiple Intelligences* (p. 10):

1. Verbal/Linguistic Intelligence: This intelligence is involved in reading, writing, story telling and creating.
2. Logical/Mathematical Intelligence: This intelligence is involved in deductive thinking/reasoning, numbers, and the recognition of abstract patterns. It was called scientific

thinking.

3. Visual/Spatial Intelligence: This intelligence is involved in the sense of sight and being able to visualize an object and create internal mental images/pictures.
4. Body/Kinesthetic Intelligence: This intelligence is involved in physical movement and the knowing/wisdom of the body.
5. Musical/Rhythmic Intelligence: This intelligence is involved in the recognition of tonal patterns, including different environmental sounds, and a sensitivity to rhythm and beats.
6. Interpersonal Intelligence: This intelligence is involved in person-to-person relationships and communication.
7. Intrapersonal Intelligence: This intelligence is involved in inner states of being, self-reflection, metacognition, and awareness of spiritual realities.

Lightening the Intellectual lantern

According to Chen (1996, p.44), the intellectual educators and specialists of the 1940's made a daring assumption: If an effective stimulation could be given at certain stages of a baby's brain development, human learning competence would break through. These intellectual educators believed that the brain's physiological development and greatest capacity for intellectual growth and learning occurred by the age of six. During this time, it was believed that learning development in young children evolved in three

transition stages: Cognitive learning, Subconscious learning and Creative learning(p.49).

In discussing recent advances in early childhood education in Japan, Chen (p.49) described how school curricula in that country organized around an index of eight learning competencies, have produced significant results in the intellectual development of children.

Specific features of the learning competence index included:

1. Language competence -- including native, official, foreign languages and dialects;
2. Math competence;
3. Space competence;
4. Cognition competence;
5. Memory competence;
6. Inference competence;
7. Imagination and creativity competence;
8. Social adaptability competence.

Topics Related to Child Rearing

During the First Three Years of Life

Sibling Rivalry and the Spacing of Children

According to White, there has been little question that the difficulties associated with having closely spaced children under age three constitutes the single most pressing concern for families with young child. Two-year-old babies do not like one-year-old competition. No matter what a parent may do, he/she cannot change that. However, the older child will

probably maintain his/her good temperament until the new baby starts to crawl. At that point, however, the baby will not only need more of the parent's attention, but may also get into the older child's toys as well and, the older child may then hit or hurt the new baby. In fact, the number of different well and, the older child may then hit or otherwise hurt the new baby. In fact, the number of different can do much to alleviate the problem of closely spaced siblings(less than three years), there is simply no way of making the situation as easy as dealing with one child only or with widely space children(pp. 264-5).

The Critical Importance of Hearing Ability

“ It is just about impossible for an infant to grow to his/her full potential if his/her hearing is impaired for much of his/her first years of life. Retarded language development in three-year-olds is one of the most common symptoms of future educational difficulties in underachieving preschool children,”(White, p.271).

White recommended use of the following checklist to alert parents to possible hearing problems in babies:

birth to 3 months: Baby is not startled by sharp clap within three to six feet; is not soothed by mother's voice.

3 to 6 months: Baby does not search for source of sound by turning his/her head and eyes; does not respond to mother's voice; does not imitate his/her own noises; does

not enjoy sound-making toys.

6 to 10 months: Baby does not respond to his/her own name, to the telephone ringing, or to someone's voice when not loud; is unable to understand common words—for example, “no,” “bye-bye.”

10 to 15 months: Baby cannot point to or look at familiar objects or people when asked to do so; cannot imitate simple words or sounds.

15 to 18 months: Baby is unable to follow simple spoken directions; does not seem able to expand his/her understanding of words.

Any age: Baby does not awaken or is not disturbed by loud sounds; does not respond when called; pays no attention to ordinary crib noises; uses gestures almost exclusively to communicate his/her needs and desires rather than verbalizing; or, watches parents' faces intently (p. 274).

Additionally, White has recommended the following steps be undertaken if hearing loss is detected in the child (pp. 274-5):

- Pediatric assessment with particular attention to upper respiratory system --- detected by physician or pediatric
- Otologic and audiologic assessment to classify a causal picture—e.g., physical condition of ears, nose, and throat. Is hearing involved, and if so, how much does the child hear?

--What course of treatment and education is indicated? --- detected by pediatric audiologist.

--Attention to factors including social and economic deprivation that affect developmental language and speech. --- detected by parents and professionals in medicine and audiology.

--If irreversible loss is established, refer to agencies that can assist parents with an educational program. --- detected by professionals in medicine and audiology; well-baby clinic; hospital or university speech and hearing center or health center.

Substitute Child Care

Traditionally, women have assumed primary responsibility for raising their children, especially during the first years of the child's life. Today, that tradition is being challenged. More and more infants and toddlers are spending the majority of their waking hours in the care of someone other than a member of their immediate family. However, it is understandable that both the primary caregiver and the baby may benefit if the primary caregiver is able to get away from the baby for several hours every day because of the stress and emotional intensity of being with baby day in and day out. Both the parent and the baby do better when they have regular relief from each other, especially during the fifteen- to twenty-four-month period (White, pp. 283-4).

White identified two situations in which substitute child care may be a necessity:

1) when parents cannot raise their own children; and 2) when the parents simply do not want to rear their babies. Part-time care, though not as desirable as full-time care, can free up the time of either or both parents to earn needed income. It can also provide parents, especially the mother, the opportunity to pursue a career, or to undertake college/university studies if she desires. The most important reason for part-time substitute care is that it gives parents a break from the continuous responsibilities of child-rearing (pp. 287-8).

Selected Approaches to Enriching Baby's Mind

The review of research and literature related to early childhood education has focused attention on reading development, activity stimulation, working with highly capable children, and special courses designed to help parents become involved in their child's education. Selected approaches to enriching baby's mind have been described below:

The Importance of Reading

As a basic skill considered essential for a child to reach cognition and comprehension of the things happening around him/her, reading has taken on great significance. It enables the child to speed up mental processes and accomplish actions symbolically, as opposed to actively. "We should recognize that even reading, this symbolic way of knowing, is also active. Action is the mother of intelligence, not words." (p. 59). In infancy, this action is

physical; in toddlerhood the possibility of representing actions through symbols (such as words) and signs (such as stop signs) becomes a reality. Said Jacob:

Only when children have had enough experience performing coordination and differentiation to the point where they have a practical intelligence—an intelligence of here and now, of concrete objects and her interactions with them—can they graduate to the world of the sign and the symbol (pp. 59-60).

Activity Stimulation

Professor J.M. Hunt(1961), of the University of Illinois, undertook a comprehensive review of the existing literature concerned with activities which stimulate mental development. Hunt concluded that, “within limits, the more varied the stimulus to which a baby is exposed, the greater the benefits will be.” The goal should be to provide the young child with an appropriate amount of stimulating, enriching experience. For optimum benefits, one has to strike a balance between the baby’s stage of cognitive growth and the kind and quantity of stimulation (p. 60).

How the Gifted are Raised

Professor Benjamin Bloom (1964), of the University of Chicago, recently concluded an ambitious survey of 120 Americans considered to be among the top mathematicians, sculptors, neurologists, swimmers, and tennis players in the United States. Bloom found

the single most significant factor in each child's development was the parents, all of whom shared four key characteristics and understood the importance of (pp. 61-62):

1. *Very early play and encouragement.* Parents provided rich environments in which their children could explore the outside world as well as their own abilities. They assured ample opportunity for the children to initiate their own play. These parents understood that learning must take place in the act of play.
2. *The home environment in motivating their children.* Parents created wholesome surroundings with different kinds of interesting interactions in which children were able to explore their individual interests to the fullest and continue in their self-chosen activities. In all cases, parents served as models of motivated, determined people.
3. *Their child's self-chosen interest as his or her own priority.* Once their child reached school age, the parents made every effort to continue supporting him/her in self-initiated, self-chosen interests.
4. *Their parental responsibility in their children's development.* Parents contributed to their children's remarkable success by remaining open-minded while encouraging independent thinking and free exploration.

Bloom concluded that, for parents to accomplish all this requires an attitude that places a premium on the spontaneous activity of the child, activity that is encouraged and guided by a knowledgeable caregiver. Bloom continued that it is not normal for babies to be passive recipients of stimulation. Rather, they should be:

1. Acting upon objects and events, not merely speculating
2. Choosing and initiating the types of interactions, not being subjected to traditional curriculum filtered down from elementary school
3. Doing the performing, not having the performing done for or to them (p. 63)

The “Better Baby” Course

The Institute for the Achievement of Human Potential (1955) has designed a curriculum to help parents take an active role in children’s education. This “Better Baby” course, which was developed by Doman (1979), has emphasized teaching infants reading, mathematics, encyclopedic knowledge, and physical mobility, as follows:

1. Reading: Doman suggested using 6 x 24 inch cardboard strips with words in very large red print as the child’s visual pathway matures, the red can be changed to black and the size of the print is gradually reduced. The tiny child learns best when he/she sees the information for only a brief second. Parents should teach children familiar and interesting words.

2. Mathematics: Doman and his staff began by using 100 dot-cards printed with one, two, three up to 100 red dots. Parents presented dot cards to the child, in ranging from one to 100, in sets of ten over a prescribed period of time. Second, addition, subtraction, multiplication, and division were taught in the prescribed manner. Third, equations with mixed functions are taught. Doman believed infants were able to determine the answer to an equation such as: $4 + 8 \times 9 - 100 = 8$, and were said to be able to point to the correct number of dots even before they could talk.
3. Encyclopedic Knowledge: Parents were encouraged to teach children “bits of intelligence” called by Doman. The knowledge domain has included geography, history, zoology, botany, fine arts, engineering, anatomy, chemistry, and geometry. Doman argued that children could learn anything if present in an honest, factual, and loving way. The Knowledge cards were produced to be precise, discrete, unambiguous, and were new information to the children.
4. Physical Mobility: The early development of mobility in newborns is a vital part of future ability to learn and grow to their full potential according to Doman. He showed clearly each stage of mobility and how to create an environment that would help the baby achieve each stage more easily. Therefore, he encouraged parents let children explore and discover together the joys of human mobility – from the simple but vital stage of crawling to the beginnings of the sophisticated skills of the gymnast.

Selected Child Care Education Programs

The Institute for the Achievement of Human Potential

Parents who are concerned about stimulating their children's intellectual growth have become interested in the "Better Baby" course developed by Doman. He and his staff first developed techniques for teaching parents how to teach their brain-injured children. Later, they started using the same teaching methods with normal children and with tiny babies. In the course, Doman claimed that these methods of teaching enabled babies of less than a year to learn facts. He believes that the first six year of life are the most important years of a child's life in terms of learning and that our educational system has been doing things entirely backwards.

The goal of The Institutes is to raise significantly the ability of all children in the intellectual, physical and social domains. The Institutes accept children regardless of their present capabilities and helps them achieve their fullest potential. The Institutes was established in 1955 and is a non-profit federally tax-exempt educational organization and their world headquarters is located in Chestnut Hill, Philadelphia.

The founder, Glenn Doman, after providing services to young children for many years, has received global recognition, praise and admiration from many international groups and organizations. The insightful discoveries of his teaching methods and developmental tools: learn-to-read, encyclopedic knowledge program, teaching baby mathematics, and training physical mobility, have strongly influenced millions of families

worldwide. Doman also claimed that any child can be made a genius through specific teaching techniques. There should be nothing mystifying about teaching, since the ability to learn comes from within every newborn child. In fact, young children can assimilate information at a rate that staggers the imagination. Doman has recommended “ turning play into learning, and bring in a learning into play,” as an important strategy for stimulating and enhancing a child’s innate desire, ability and need to learn.

The Missouri New Parents As Teachers Project (NPAT)

The goals of the Missouri New Parents As Teachers Project (NPAT)(1981), were designed as cost-effectiveness studies to seek information regarding the desirability of training and support for new parents as their children’s first teachers. The focus of the Missouri program, according to White, was on general competence, which included intellectual, linguistic, and social skills (p.158). The Missouri NPAT project also focused on first-time parents, while excluding for evaluation purposes, families whose situations were beyond the capacity of a modestly priced program. For example, a single parent would not be excluded from receiving services but would not be included as part of the evaluation sample. The same was true if English was not the first language spoken in the home (p. 158).

White contended that concentrating on first-time parents is of great importance in projects of this kind, as they were by far the most highly motivated, receptive, and flexible of all parents. The NPAT curriculum placed emphasis on the development of interpersonal

skills, language, problem-solving ability or intelligence, along with basic information about the development of sensory skills, such as vision and hearing, and control of the body through both large and small muscle abilities. White believed parents should understand: What happens in a child's development, starting at birth and moving right through to the third birthday; and the principal influences on each of the developmental stages of childhood (p.158-9).

The NPAT orientation and curriculum was also consistent with the families. The initial orientation focused on the period of late pregnancy and the child's fifth month, and after which the orientation shifted substantially. Four major developmental themes during the period from seven to eight months to the third birthday included: language acquisition; the development of intelligence; the development of curiosity; and, the acquisition of interpersonal skills. All of these learnings were combined, with the help of a strong instructional staff, into a collection of curriculum materials and lesson plans that covered the entire time period from the third trimester of pregnancy through to the child's third birthday. Extensive use was made of audiovisual products in delivering the curriculum (pp. 170-2).

White described the NPAT pilot projects as "extraordinarily successful." Prior to the NPAT program, Missouri school policy effectively delayed funding for educational opportunities until a child was five and a half or six years of age. The NPAT program essentially made it possible for preschoolers to move well ahead of the typical three-year

age levels in the critical areas of reading, language, and intellectual development, there by assuring that these children would very likely to do well in just about any later educational situation. These realities point to not only the likelihood, but the inevitability of programs like NPAT, everywhere, sooner or later (pp. 183-4).

The Head Start Program

Besharov (1965) began conducting research on the United State's federal government early childhood development program for low-income children, as a six-week summer experiment, as part of President Lyndon Johnson's War on Poverty. This program has received enormous publicity, and a great deal of money has been made available for research on the general topic of learning during the preschool years. The purpose of Besharov's research was to explore the question of how any child could be helped to make the most of his or her innate potential through the provision of the most beneficial experiences throughout the first six years of life. The project's first target was to seek a definition for the "well developed six-year-old." Its second target was to determine when, in the early years, signs of very good development first surfaced. However, research findings proved inconclusive, in view of the fact the program was designed for ages 3-5 or 3-6, rather than focused on 1-3 year olds per se.

Summary

The research and literature summarized in Chapter 2 supported the following themes:

1. Four major educational processes, including language, curiosity, intelligence, and social development, are essential in child development during the first three years of life.
2. Major issues influencing development during early childhood include sibling spacing hearing impairment, and substitute child care.
3. Research and literature related to early childhood education has focused attention on reading development, activity stimulation, working with highly capable children, and special courses designed to help parents become involved in their children's education.
4. "Turning play into learning, and bring in a learning into play," as an important strategy for stimulating and enhancing a child's innate desire, ability and need to learn.

CHAPTER 3

PROCEDURES OF THE PROJECT

The purpose of this project was to design and develop a model program to maximize intellectual development for Taiwanese daycare/preschool children ages 0-3. To accomplish this purpose, a review of current literature regarding intellectual development of preschool age children and related early childhood education was conducted. Additionally, related information from selected daycare/ preschool centers was obtained and analyzed.

Chapter 3 contains background information describing:

1. Need for the project
2. Development of support for the project
3. Procedures
4. Planned implementation and assessment of the project

Need for the Project

The need for the project was influenced by the following considerations:

1. The writer (Crystal Hou), has observed that while the decrease in procreation in Taiwan in recent years has produced families with only one or two children, efforts by parents and professionals to provide these children with the benefits of early childhood education have dramatically intensified. Helping a young child to develop into a secure and

well-adjusted person and assuring his/her optimal early intellectual development has become a major concern and task of new parents.

2. The writer has also observed the recent trend that finds both parents either have jobs or want to work, and therefore have little time to cope with childbearing on their own. This may be especially true of mothers who would like to work rather than taking on the hard work involved in raising children themselves. The writer has become particularly alarmed by those who take it for granted that soon after a new child is born it is all right for the child-rearing responsibility to be assumed by other members of society paid for the task.

3. The writer has heard the cliché or the slogan “ the first three years of a child’s life are the formative years for its entire life span,” and wondered why these first few years have been regarded as some of the most critical in the human life. However, in Taiwan, the development of educational programs for the early ages is still in the initial stage.

4. The writer has been provided the opportunity to establish an educational center in Taiwan for preschool children ages 0-3. It seemed clear to her that if children of three years of age are advanced in respect to language and intellectual skills, they are very likely to be well prepared for formal education when they are older.

5. The writer, as the mother of a two-year-old son, has been earnestly studying and developing a knowledge-base on how to raise an intelligent child, what children are like at any point in their growth and development, and about what influences a child's development.

6. Undertaking this project also coincided with the writer's graduate studies at Central Washington University.

Development of Support for the Project

The writer has for many years observed how new parents including relatives, friends, and colleagues, have attempted to raise children that would be bright, well-mannered, and while providing the best kind of role modeling for their children. Some experience on the subject of child-rearing was also gained from hearsay evidence and from the elder generations. However, as a mother herself for two years, the writer's maternal instinct has spontaneously triggered an interest in helping children develop high levels of intellectual skills. The writer was also confronted with the working parent's dilemma: the choice between providing mother care or surrogate care for her young child. Her anxiety and motivation were driven by the following questions and considerations: Do the parents want to be fully responsible for the care of their children? Do the parents have the resources to do the job? Do the parents have any real choices? What kinds of child care is available? Because babies grow up very quickly, if the parents have a choice, should one parent possibly be chief caretaker for the first three years of a child's life?

Procedures

To obtain background information essential for designing and developing a model program to maximize intellectual development for daycare/preschool children ages 0-3, an Educational Resources Information Center (ERIC) on CD-ROM search was conducted. Information related to enhancing intellectual development in young children was also obtained via World-Wide Web access to the public libraries' data base. The literature search was further aided by an Electronic Library via Internet connection which provided current information from journals, magazines, newspapers and special reports. Additionally, related information from selected schools was obtained and analyzed.

Planned Implementation and Assessment of the Project

Implementation of the model program in selected daycare centers in Taiwan for preschool children, ages 0-3, has been tentatively scheduled for spring, 1998. Following implementation of the model program, the primary mission of the daycare/preschool centers will focus not only on maximizing children's intellectual development, but also on providing new parents with reliable information about their infants and toddlers and, offering in a practical advice to parents concerning child growth and development. Parents will be recruited as teachers for their children and periodic home visits will be arranged. Examples of assessment may include any or all of the following: observations of student classroom behavior, evaluation of student work produced in class, parent interviews and

feedback, use of sociograms to observe socialization, and use of learning process checklists related to student performance outcomes. Assessment data obtained may be used to modify and improve school curricula, instructional methodology, and student learning activities.

CHAPTER 4

THE PROJECT

The model program to maximize intellectual development for Taiwanese daycare/preschool, ages 0-3, which was the subject of this project, has been presented in Chapter Four, in seven instructional units to coincide with the following areas of intellectual enlightenment:

Unit One - Cognitive Intelligence

Unit Two - Interpersonal Intelligence

Unit Three - Language Intelligence

Unit Four - Math Intelligence

Unit Five - Art and Creativity Intelligence

Unit Six - Scientific Probe Intelligence

Unit Seven - Socialization Intelligence

A MODEL PROGRAM TO
MAXIMIZE INTELLECTUAL DEVELOPMENT
FOR TAIWANESE DAYCARE/PRESCHOOL
CHILDREN AGES 0-3

CRYSTAL FEI-YING HOU
June, 1997

TABLE OF CONTENTS

<u>UNIT</u>	<u>PAGE</u>
Unit One - Cognitive Intelligence.....	p 5
Overview.....	p 6
Development of Potential Objectives	p 6
Learning Activities.....	p 6
Performance Outcomes.....	p 8
Assessment.....	p 8
Unit Two - Interpersonal Intelligence.....	p 9
Overview.....	p 10
Development of Potential Objectives	p 10
Learning Activities.....	p 10
Performance Outcomes.....	p 11
Assessment.....	p 11
Unit Three - Language Intelligence.....	p 12
Overview.....	p 13
Development of Potential Objectives	p 13
Learning Activities.....	p 13
Performance Outcomes.....	p 17
Assessment.....	p 17

Unit Four - Math Intelligence	p 18
Overview.....	p 19
Development of Potential Objectives	p 19
Learning Activities.....	p 19
Performance Outcomes.....	p 22
Assessment.....	p 22
Unit Five - Art and Creativity Intelligence.....	p 23
Overview.....	p 24
Development of Potential Objectives	p 24
Learning Activities.....	p 24
Performance Outcomes.....	p 25
Assessment.....	p 25
Unit Six - Scientific Probe Intelligence.....	p 27
Overview.....	p 28
Development of Potential Objectives	p 28
Learning Activities.....	p 28
Performance Outcomes.....	p 30
Assessment	p 30

UNIT ONE

COGNITIVE INTELLIGENCE

Table of Contents

<u>Contents</u>	<u>Page</u>
Overview	p 6
Development of Potential Objectives	p 6
Learning Activities	p 6
Performance Outcomes	p 8
Assessment	p 8

COGNITIVE INTELLIGENCE

Overview

Each child learns to adapt to a new environment along with his/her growth and maturation. The child will form concepts through interacting with different people, matters, and objects. The most important functions of adapting to an environment is to effectively form a positive self concept and /or self awareness.

Development of Potential Objectives

1. Build self awareness
2. Use body movement to develop cognition and organization
3. Balance the five sensory perceptions (vision, auditory, tactile, olfactory and gustatory)
4. Strengthen physical agility

Learning Activities

Affective Domain:

Provide children with opportunities to bring emotional knowledge and assumptions to awareness, and apply inquiry skills in the service of affective development (Growing up gifted, third edition, Barbara Clark, p.259).

Activity:

* Magic Circle discussion about the magic box that has something in it to make every person happy.

Physical Domain:

Provide experiences (sight, hearing, smell, taste, and touch) that develop

integration between mind and body. Through direct physical senses and even the view of reality, the children can pursue the cognitive excellence.

Activity:

* Sensory awareness activities

a. Exploratory play:

Small paddling pool with life buoy, planting with shovel, dance with rhyme, field trip, zoo visit, sleeping in the hammock, etc.

b. Eye-hand coordination:

Labyrinth toys, clothes put on, button/ unbutton, zipper drawing, painting, etc.

c. Learning-to-learn /array, matching, and classification:

Material collection and classification, construction blocks, Play-dough, beads string, puzzles, etc.

* Body awareness activities

a. Small-muscle activities:

shuttlecock, spinning, reaching, stretching, etc..

b. Large-muscle activities:

hopscotch, rope skipping, swing, throwing balls, climbing up the extension ladder, jumping on a bed, running, gymnastics, mini bowling, hanging horizontal bar, balance lever, skating, hide-and-seek, etc.

* Pleasure experiences:

a. Being tickled, being swung in the air, turning somersaults, etc..

b. Scooting on seat, squeezing the face, etc..

* Other activities to heighten awareness:

a. Improvisation for the theater; make-believe play, pantomime, etc.

b. Moving as a cat, dog, crab, spider, etc..

Performance Outcomes

* Richness of sensory sensibility and acquisition of skills, creativity and confidence.

* Hand/eye/body/brain coordination and spontaneous physical agility.

* Imagination and integrative creative learning.

Assessment

a. Make a checklist of play activities that indicates children's preference.

b. Set up several workout stations in different areas using games that require sensory and body awareness skills.

c. Allow children to choose an activity and observe the fine and gross motor and perceptual skills. Keep a log of behavior records for 2-3 weeks.

d. Analyze findings looking for consistent play behavior patterns and make notes of each child's improvement and progress.

UNIT TWO

INTERPERSONAL INTELLIGENCE

Table of Contents

<u>Contents</u>	<u>Page</u>
Overview	p 10
Development of Potential Objectives	p 10
Learning Activities	p 10
Performance Outcomes	p 11
Assessment	p 11

INTERPERSONAL INTELLIGENCE

Overview

During the process of helping children build self-awareness, the key concept is to develop active and healthy interpersonal communication skills. An effective development of these skills will assist in the development of social skills.

Development of Potential Objectives

1. Develop interpersonal relationships.
2. Demonstrate social relationships and interpersonal problem solving.
3. Move from directed to self directed discipline and restraint.
4. Learn to play and cooperate with other children.

Learning Activities

Play group activities:

- * Circle time, birthday celebration, hide-and-seek, dodge ball,

Make-believe activities:

- * Police officer catch robber, Eagle hunts for chicks, Pretend gunfight between groups,

Baking with play-dough, Family role play, Impersonations.

Watching Video tapes:

- * Short stories with happy, sorrowful and angry themes.

Performance Outcomes

- * Show empathy and respect, Recognize others feelings, Forgive others, Work cooperatively with others.
- * Have positive and affectionate personal relationships.

Assessment

- a. Make a checklist of personal behaviors that includes emotional stability and sensitivity to environmental circumstances.
- b. Observe the behaviors or any tendency of anxiety, depression, withdrawal, hostility.
- c. Document children's cooperation in group activities.
- d. Show a film on interpersonal relationships, and have individuals respond to simple questions.

UNIT THREE

LANGUAGE INTELLIGENCE

Table of Contents

<u>Contents</u>	<u>Page</u>
Overview	p 13
Development of Potential Objectives	p 13
Learning Activities	p 13
Performance Outcomes	p 17
Assessment	p 17

LANGUAGE INTELLIGENCE

Overview

Early human development study shows that from fourteen months of age, the language growth for children accelerates steadily. Timing becomes important for when teaching task should begin. Most language learning should be scheduled by the age of ten. A child below the age of five can easily absorb, learn and accept language if it is presented properly. Communication teaching should start prior to the age of seven.

Development of Potential Objectives

1. Be able to listen, speak, and read properly.
2. Experience thinking simultaneously with language and promote through pretend play.
3. Facilitate peer interaction and foster the development of emergent literacy.
4. Provide multilingual challenges.

Learning Activities

Four kinds of learning activities for language comprehension will be taught to meet the developmental needs of the children. The four kinds of learning will be similar to that of the “Whole Language Approach” and the “Total Physical Response” (TPR).

Practice 1: Listen and speak

- * Story telling with slightly exaggerate expression
- * Opportunity for children to converse and bring an open-ended story to completion.
- * Learn from peers daily life activities and body language

Practice 2: Read

- * Train children's visual pathway to differentiate between one written symbol and another.
- * Have children master individual letters of the alphabet and read words.

Practice 3 : Children Theater

- * Play theater; to encourage self-affirmation and social behavior learning.
- * Act out fairy tales from revised stories.
- * Improvise stories to help develop social and cooperative skills.

Practice 4 : Multilingual Intervention

- * Facilitate peer group interaction for daily foreign language.
- * Exploit limited resources to create multilingual environment.

Practice 1 : Listen and Speak

Procedure: *Listen - think - speak - listen again - think again - speak again*

The learning procedure should be through listening—conceiving—understanding—attempting to speak-- matching absorbed information-- finding the proper memory symbol --reorganizing--thinking--speaking out—and listening again.

A young child will try to pronounce, make sentences, understand the meaning and practice conversations. Through a series of trials, self-adjusting and self-management, a child can adapt to the rules of language, expresses maturely and pick up daily routine conversation (Chen, 1996, pp. 147-150).

Practice 2 : Read

Procedure: *Make all written materials large and easy to see; speak clearly, loudly, and with enthusiasm. Show materials quickly to keep children's attention.*

Since young children's visual ability is not mature, all written materials should be designed to extend their visual sophistication. Doman (1994), pointed out five reading pathway to follow:

Step One: Single words

Use familiar and self vocabulary. For example, names of family members, relatives, favorite foods and animals, objects in the house, parts of the body, self-owned objects, favorite activities and actions.

Step Two: Couplets

Review a child's vocabulary and determine what couplets can be used. For example, use basic colors as one simple group of words, and combine learned words to create new couplets and short phrases. Then, teach opposites in pairs, i.e., big—little, dark—light, as a group of words, and combine old words.

Step Three: Phrases

Use names of people or animals and add "is" to link up with action words. For example, Henry is eating; Daddy is sleeping.

Step Four: Sentences

Use simple phrases and add objects. For example, Henry is eating an apple.

Step Five: Books

Use a real book which contains vocabularies that have been taught as single words, couplets and phrases.

Practice 3 : Children Theater

When children practice play acting, the following concepts should be considered:

- * It is a game, not a performance.
- * It is a sign of self-renewal and creativity.
- * It is an expression of a child's wish.
- * It is self-creation, not pretentiousness.
- * It is self-realization.
- * It is group participation and cooperation.

There are three kinds of theater:

a. Simulative play theater

Introduce oneself, make a wish, tell a story, make a phone call, personification.

b. Fairy tale theater:

Wolf is coming, Snow White.

c. Improvisation theater:

Have teachers and/ or children create or choose a story.

Develop a story and then rehearse.

Improvise a performance and repeat.

Practice 4 : Multilingual Intervention

- a. Provide thirty-minute-a-day language practice (such as in English, French, Spanish, or Japanese) during group activities or daily routine conversation.
- b. Periodically invite other preschoolers who speak different languages into the classroom and foster mutual peer language interaction.
- c. Discuss foreign cultures, holiday celebrations and experience foods from the different cultures.
- d. Introduce folk songs and nursery rhymes from different countries.

Performance Outcomes

- * Understand most adult speech.
- * Have children speak in full sentences and express themselves clearly.
- * Initiate interchanges with peer groups and adults during daytime activities.
- * Exhibit high interests in listening, talking, reading and acting.
- * Adopt to different languages.

Assessment

- a. How receptive is the child to different kinds of vocabulary ?
- b. How well does the child show the ability to follow instructions?
- c. To what degree does the child show an understanding of the grammatical elements and content of stories, books, plays etc. ?
- d. How well can the child express ideas?

UNIT FOUR

MATH INTELLIGENCE

Table of Contents

<u>Contents</u>	<u>Page</u>
Overview	p 19
Development of Potential Objectives	p 19
Learning Activities	p 19
Performance Outcomes	p 22
Assessment	p 22

MATH INTELLIGENCE

Overview

Mathematics learning should be emphasized as a part of a child's logical thinking, development. The concept of reversibility is the key. A true understanding of number depends on a child's analytical thinking –classification and seriation (arranging in order). This is achieved through relating thinking patterns to concepts of number, logic, object, persons, events and space.

Development of Potential Objectives

1. Develop classification, 3D, set, numeration, measurement, order, and time concept.
2. Strengthen logical thinking ability to apply to daily life problem solving.
3. Teach concrete concepts and present them through an active approach.

Learning Activities

Math Lab Practice:

Classification: Distinguish size, geometric shape, color, pattern, number, value, etc..

Recognize likenesses and differences between objects and group them accordingly.

3D: Realize the interrelated position, direction, distance amongst a set of objects. For examples, place books on the top of shelf, blocks at the second level and puzzle on the bottom. Ride a tricycle around; toss a ball to someone close and to someone far away.

Set and numeration: Classify and group some objects together to form sets of numbers.

Ask comparison questions (how many or how much). Ask order questions (first,

second, third). Ask one-to-one correspondence questions (two groups each have the same number of objects in them; e.g., cup-and-saucer). Ask sequence questions (plus, minus, multiple, subtract). The number of objects in a group should remain the same no matter the arrangement or order.

Measurement: Use a standard unit to explore nonstandard measurement of length, height, and distance. Designate the amount of space something occupies in a container in order to learn about volume and capacity. The realization of rearranging or changing the shape of a container does not alter the amount of space occupied. Weight is not necessarily related to size.

Order: Based on the comparison of size, combination, color, length, etc., arrange a series from high to low, dark to bright, big to small. Most children under three do not understand the idea of a fixed order.

Time: Know the sequence or schedule of daily routines. Drinking a bottle of milk before going to daycare; washing hands before eating; brushing teeth before sleeping, etc.. Young children should know the seasons, months, weeks, days, hours, minutes, seconds, yesterday, today, and tomorrow concepts.

Games and Activities:

a. Tell how things are placed in space

* Use positional relation terms:

above--on top of--high--in front of--beside--around--near--between,

below--beneath--low--in back of--behind--middle--far--connected,

apart—open—off—inside—outside—closed—together

Verbalizing the relationship between body parts and objects and identifying pictures are all meaningful activities.

- * Use sequential relation terms:

before—after—first—next—behind—between—last--middle

Lining up and moving in sequences helps bring daily routines into focus.

- * Use directional relation terms:

around--away from—backward—forward—opposite—sideways--toward

right—left—up--down

Moving body parts; directing movements; passing objects; understanding and picturing right and left are important and special concepts to learn.

- * Observation activities of length, area, and volume, identification of same and different body parts; movement in different directions and levels develop visual, volume and directional concept.

b. Identify different colour and size of objects

- * Look at cars in the parking lot and classify their color and size.
- * See the round leaves, the rectangle houses, the triangle signs, a long train, a short earth worm, a big truck, a small bird, etc.
- * Find a specific shape and similar shapes.

c. Compare changes of form, speed, and volume

- * Use comparison and seriation terms:

big—large—small—more—less—heavy—light—high—low—long--short

tall—wide—hot—cold—fast—slow—hard—soft—far—near--loud

Compare different lengths and weights through the use of movement.

d. Understand money value

- * Distinguish coins and bills of different values (dollar, quarter, cent, dime, etc.).
- * Place coins into a vending machine or piggy bank that match the required amount asked for by the teacher.

e. Directional running

- * Understand the relationship between time and velocity.

The slower the child runs the further the child will fall behind.

h. Recognize people or objects in photographs and describe the time, place and event.

Performance Outcomes

- * Develop problem-solving skills which arouse curiosity in creative math activities.
- * Spark the child's desire to be involved with math-related activities.

Assessment

- a. Giving Piagetian-type tasks as tests to evaluate progress in learning logical thinking concepts.
- b. Rotate and introduce new activities constantly and observe progress and achievement by individual students.
- c. Identify activities that specifically interested the children.

UNIT FIVE

ART AND CREATIVITY INTELLIGENCE

Table of Contents

<u>Contents</u>	<u>Page</u>
Overview	p 24
Development of Potential Objectives	p 24
Learning Activities	p 24
Performance Outcomes	p 25
Assessment	p 25

ART AND CREATIVITY INTELLIGENCE

Overview

A creative art curriculum provides children an opportunity to explore their environment. By using different materials young children can express their inner feelings and thoughts. Music can also enhance a child's imagination and intuitive memory. The creative process is more important than the product outcome itself during the early years of a child's life.

Development of Potential Objectives

1. Provide sensory learning which will encourage creativity and imagination.
2. Use art and music forms appropriate to the developmental needs of young children.

Learning Activities

Art and crafts:

Every morning let children have an opportunity to freely explore and have indoor/outdoor hands-on experiences. Drill with a variety of challenges familiar and new without adults' interference.

* Painting; printing; cut and paste; clay; plaster and carving.

Artistic in performing Art:

Provide twenty minutes a day for children to enjoy music and amuse themselves. Develop signing skills, play simple music instruments, to acquaint children with the culture of music.

* Listen and encourage body response to rhythm, tone, and form of the music, especially

with a tempo response by shaking or moving the body and nodding head, etc..

- * Sing and encourage simple songs. Promote spontaneity through creative singing.
- * Perform by promoting improvisation to music.
- * Diversify musical domain through audio-visual aids (folk song, symphony orchestra, classic guitar, dancing, opera, etc.).

Performance Outcomes

- * More open-minded and willing to show their artwork and creativity.
- * Color recognition, differentiation and application ability
- * Skillful muscle control and hands-on coordination.
- * Express creative thinking through artistic performance.
- * Invigorate imagination and intuitive memory.
- * Alleviate tense feeling and change temperament.

Assessment

Observe small group artwork activity with raw materials.

- * Art and crafts:
 - a. How they design and come out with their own solutions?
 - b. If they use appropriate hand/muscle coordinate in the use of materials?
 - c. Does the artwork show any degree of sophistication/complexity?
 - d. Are the children satisfied with their performance?
 - e. How quickly can they finish a product?

* Performing art:

- a. Do the children respond appropriately to different music mood changes?
- b. What kinds of music do they appreciate the most?
- c. Can they create simple songs or play simple musical instruments?
- d. Do they have a sense of rhythm, tempo, tone, or form when moving?

UNIT SIX

SCIENTIFIC PROBE INTELLIGENCE

Table of Contents

<u>Contents</u>	<u>Page</u>
Overview	p 28
Development of Potential Objectives	p 28
Learning Activities	p 28
Performance Outcomes	p 30
Assessment	p 30

SCIENTIFIC PROBE INTELLIGENCE

Overview

Science is a process of observation, identification, description, experimental investigation, and theoretical explanation of natural phenomena. The main objective of scientific education for young children is to encourage curiosity but not over power them with complicated scientific knowledge.

Development of Potential Objectives

1. Provide children with environmental opportunities.
2. Organize experiences to stimulate new science conception.
3. Encourage curiosity by observing, discovering, and investigating different life-form characteristics.
4. Develop a respect for nature.

Learning Activities

Children are naturally curious. Provide them with a series of open-ended question which can stimulate their thinking patterns and take them on field trips. Examples of questions:

What can you hear? How do you feel? What is your opinion?

What is the same and what is different?

If this happens... how do you respond?

Allow at least 5 seconds of response time. This will enable children to develop more creative thinking and answer more thoroughly. The natural environment is the most suitable place for a field trip.

Life Sciences: (At a simple concept level)

- * Biology: Be familiar with cats, dogs, birds, fishes, bees, ants, etc.. Discuss their looks, life styles, and growing patterns.
- * Anatomy: Learn basic bones and muscles structure to further understand body's function of respiration, digestion, circulation, feeling, and movement.
- * Ecology: Understand the relationship between organisms and the Earth.

Physic Sciences: (At a simple concept level)

- * Physics: Understand speed, balance, lever principle, gravity and mechanical principle; experience the light, sound, temperature and magnetism, etc..
- * Geography: Observe the formation of mountain, lake, beach, ocean, etc..
- * Chemistry: Investigate different types of formation. See vapor when boiling which means hot; see snowing when the weather turn cold, etc..

Field trip Activities:

- * Periodically schedule visits to the zoo, aquarium, farms, science world, and park to collect specimens.

Performance Outcomes

- * Show interest and curiosity in scientific phenomena.
- * Learn basic scientific concepts through discussion, response, field trips and activities.
- * Develop a respect for the preservation of nature.

Assessment

- a. Are children able to answer open-end questions?
- b. Are children able to problem solve simple tasks?
- c. Are children interacting and contributing to group discussion?
- d. Are children responding to critical thinking tasks?

UNIT SEVEN
SOCIALIZATION INTELLIGENCE

Table of Contents

<u>Contents</u>	<u>Page</u>
Overview	p 32
Development of Potential Objectives	p 32
Learning Activities	p 32
Performance Outcomes	p 33
Assessment	p 33

SOCIALIZATION INTELLIGENCE

Overview

Education needs to assist young children move from an egocentric focus to self awareness and the understanding that they live in a world with others.

Development of Potential Objectives

1. Provide diversified children literature as a resource of different social experiences.
2. Encourage creative actions or games with rules for social interaction.
3. Respect children's individuality and imagination.

Learning Activities

Through creative games children can express feelings and communicate with others. They learn to appreciate and respect others' needs, feelings and creativity through group activities. Place children in a group, experience at least twice a week.

- * Children play a role and copy an animal, etc..
- * Sing and dance with "what if" action.
- * Game with rules: Eagle hunts for chicks; dodge ball; hopscotch; rope skipping, etc..

Learning and living activities:

- * Show slides of different peoples' emotion and encourage children to respond to what they see.
- * Show different occupations and services, hospital facilities (ambulance), fire department (fire engine), police office (police car), Red Cross(helicopter), etc..
- * Focus on the subject matter of play and relate to real life situations.

- * Encourage children to visit each other at home.

Performance Outcomes

- * Learn socialization and restraint skills through game playing.
- * Compensate and assimilate real life perception by offsetting bad feelings.
- * Accept self and others' feelings and distinguish between what is real and what is illusion.
- * Understand the role of community service and how it can protect and help.

Assessment

- Observe children during group activities or meal/snack time.
- Keep track of children's record with lists of socialization skills.
- Ask simple questions and screen appropriate responses while interacting with adult role models.
- Keep a record of how often children interact with their peers/group?
- Record inappropriate and anti-social behavior.
- Assess children's overall social growth.
- Identify and record any evidence of leadership, competence, obedience, respect, persistence, responsibility, reliance, motivation, patience, gratefulness, forgiveness, generosity and humor.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this project was to design and develop a model program to maximize intellectual development for Taiwanese daycare/preschool children ages 0-3. To accomplish this purpose, a review of current literature regarding intellectual development of preschool age children and related early childhood education was conducted. Additionally, related information from selected daycare/preschool centers was obtained.

Conclusions

Conclusion reached as a result of this project were:

1. The period from birth to three years of ages are vitally important to a child's intellectual development.
2. Interaction with an interesting and stimulating environment as early as possible has a definite impact on child's brain development which in turn promotes learning ability.
3. Successful early childhood education programs have concentrated on helping children develop high levels of intellectual and linguistic skills.

Recommendations

As a result of this project, the following recommendations have been suggested:

1. To enhance a child's intellectual development, from birth to three years of age, diffuse stimulation of major educational processes involving cognition, interpersonal relations, language interaction, math, science, art and creativity, and opportunities for social development are essential.
2. To maximize a child's brain development and learning ability as early as possible, parents and/or early childhood educator should provide an interesting and a stimulating environment.
3. Early childhood education curricula should focus on activities which stimulate and develop cognition, interpersonal relation, language, math, art and creativity, science probe, and socialization intellectual development.
4. Parents and/or early childhood educators seeking to maximize intellectual development for children from birth to age three may wish to adapt the model program developed for purposes of this project, or undertake further research on this subject to meet their unique needs.

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