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DECLARATION

I, **Pamela Kathambi,** hereby declare that this research report is my original work and it has not been submitted before for any academic award either in this or other institutions of higher learning for academic publication or any other purpose.
The references used here from other journals or materials are indicated in the references section.

Signed: ……. Date: …….

DEDICATION

I dedicate my project work to my family and many friends. A special feeling of gratitude to my loving parents, Mr & Mrs Tarichia, whose words of encouragement and push for tenacity ring in my ears. My siblings have never left my side and are very special gratitude to them.

I dedicate this work and give special thanks to the KCA university staff especially my supervisor for his supportive service towards achieving the completion of the research.

I dedicate this work and give special thanks to my best and ever-helping friends for being there for me throughout the entire period of my research.

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ABSTRACT

Children come into the world eager to learn. The first five years of life are a time of enormous growth of linguistic, conceptual, social, emotional, and motor competence. Right from birth a healthy child is an active participant in that growth, exploring the environment, learning to communicate, and, in relatively short order, beginning to construct ideas and theories about how things work in the surrounding world. The pace of learning, however, will depend on whether and to what extent the child's inclinations to learn encounter and engage supporting environments. There can be no question that the environment in which a child grows up has a powerful impact on how the child develops and what the child learns.

My research was done at Tumaini Pre-unit School in which children ages 2 to 5 years. It focuses on programs provided outside the home, such as preschool, Head Start, and child care centers. As the twenty-first century begins, there can be little doubt that something approaching voluntary universal early childhood education, a feature of other wealthy industrialized nations, is also on the horizon here.

Learning, moreover, is not a matter of simply assimilating a store of facts and skills. Children construct knowledge actively, integrating new concepts and ideas into their existing understandings. Educators have an opportunity and an obligation to facilitate this propensity to learn and to develop receptivity to learning that will prepare children for active engagement in the learning enterprise throughout their lives. This report argues, therefore, those promoting young children’s growth calls for early childhood settings (half day or full day, public or private, child care or preschool) that support the development of the full range of capacities that will serve as a foundation for school learning. As the child is assimilated into the culture of education in a setting outside the home, early childhood programs must be sensitive and responsive to the cultural contexts that define the child's world outside the school or center, and they must build on the strengths and supports that those contexts provide.

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CHAPTER ONE

INTRODUCTION

Cognitive development refers to how a person perceives, thinks, and gains understanding of his or her world through the interaction of genetic and learned factors. Among the areas of cognitive development includes: processing, intelligence, reasoning, language development and memory. It was once believed that infants lacked the ability to think or form complex ideas and remained without cognition until they learned language. It is now known that babies are aware of the surroundings and interested in exploration from the time to actively learn. They gather, sort and process information from around them, using the data to develop perception and thinking skills.

Historically, the cognitive development of children has been studied in a variety of ways. The oldest is through intelligence tests, such as the widely used Stanford Binet Intelligence Quotient (IQ) test first adopted for use in the United States by psychologist Lewis Terman (1877–1956) in 1916 from a French model pioneered in 1905. IQ scoring is based on the concept of "mental age," according to which the scores of a child of average intelligence match his or her age, while a gifted child's performance is comparable to that of an older child, and a slow learner's scores are similar to those of a younger child. IQ tests are widely used in the United States, but they have come under increasing criticism for defining intelligence too narrowly and for being biased with regard to race and gender.

In contrast to the emphasis placed on a child's native abilities by intelligence testing, learning theory grew out of work by behaviorist researchers such as John Watson (1878–1958) and B. F. Skinner (1904–1990), who argued that children are completely malleable. Learning theory focuses on the role of environmental factors in shaping the intelligence of children, especially on a child's ability to learn by having certain behaviors rewarded and others discouraged.

Piaget's theory of cognitive development

The most well-known and influential theory of cognitive development is that of French psychologist Jean Piaget (1896–1980). Piaget's theory, first published in 1952, grew out of decades of extensive observation of children, including his own, in their natural environments as opposed to the laboratory experiments of the behaviorists. Although Piaget was interested in how children reacted to their environment, he proposed a more active role for them than that suggested by learning theory. He envisioned a child's knowledge as composed of schemas, basic units of knowledge used to organize past experiences and serve as a basis for understanding new ones.

Schemas are continually being modified by two complementary processes that Piaget termed assimilation and accommodation. Assimilation refers to the process of taking in new information by incorporating it into an existing schema. In other words, people assimilate new experiences by relating them to things they already know. On the other hand, accommodation is what happens

when the schema itself changes to accommodate new knowledge. According to Piaget, cognitive development involves an ongoing attempt to achieve a balance between assimilation and accommodation that he termed equilibration.

At the center of Piaget's theory is the principle that cognitive development occurs in a series of four distinct, universal stages, each characterized by increasingly sophisticated and abstract levels of thought. These stages always occur in the same order, and each builds on what was learned in the previous stage. They are as follows:

Sensorimotor stage (infancy): In this period, which has six sub-stages, intelligence is demonstrated through motor activity without the use of symbols. Knowledge of the world is limited, but developing, because it is based on physical interactions and experiences. Children acquire object permanence at about seven months of age (memory). Physical development (mobility) allows the child to begin developing new intellectual abilities. Some symbolic (language) abilities are developed at the end of this stage.

Pre-operational stage (toddlerhood and early childhood): In this period, which has two sub stages, intelligence is demonstrated through the use of symbols, language use matures, and memory and imagination are developed, but thinking is done in a non-logical, non-reversible manner. Egocentric thinking predominates.

Concrete operational stage (elementary and early adolescence): In this stage, characterized by seven types of conservation (number, length, liquid, mass, weight, area, and volume), intelligence is demonstrated through logical and systematic manipulation of symbols related to concrete objects. Operational thinking develops (mental actions that are reversible). Egocentric thought diminishes.

Formal operational stage (adolescence and adulthood): In this stage, intelligence is demonstrated through the logical use of symbols related to abstract concepts. Early in the period there is a return to egocentric thought. Only 35 percent of high school graduates in industrialized countries obtain formal operations; many people do not think formally during adulthood.

The most significant alternative to the work of Piaget has been the information-processing approach, which uses the computer as a model to provide new insight into how the human mind receives, stores, retrieves, and uses information. Researchers using information-processing theory to study cognitive development in children have focused on areas such as the gradual improvements in children's ability to take in information and focus selectively on certain parts of it and their increasing attention spans and capacity for memory storage.

Objective Statement

This report was based on the following objectives:

a) To recognize the biological, cognitive and psychosocial development of the child
b) Identify typical cognitive developmental milestones in preschool
c) To find out the psychomotor development skills in a pre-school children
d) To find the language development

Background information

The purpose of this study is to observe the cognitive inability to conserve and cognitive development for children in the preoperational stage of development. According to the Swiss cognitive theorist Jean Piaget, the preoperational stage refers to the second stage of cognitive development, which spans the years 2 to 7, when children begin to form mental representations yet still lack the ability to think logically (Berk, 2005). Piaget discovered a number of tasks that highlight these limitations of preoperational thought, including his well-known conservation task, which is what I used in my observation-based study. Conservation, or "the idea that certain physical characteristics of objects remain the same, even when their outward appearance changes" (Berk, 2005, p.320), is deficient in preoperational children. This study looks at three particular conservation tasks: the conservation of numbers, substance and continuous quantity. I observed how children at the preoperational stage of thinking are unable to conserve in each experiment.

Jean Piaget believed in the cognitive-developmental theory, in which children actively discover and manipulate the world around them in order to build their knowledge. Thus, he believed that as children's experiences expand from birth to adolescence, their brains develop in four distinct stages. As children progress from one stage to the next, they are continually cognitively revising any discrepancies between their own ways of thinking and information they encounter in their surroundings. (Berk, 2005) That is why Piaget highly characterized the preoperational stage according to the deficiencies in a child's understanding.

Theories Explaining Child Development

Theories of development provide a framework for thinking about human growth and learning. But why do we study development? What can we learn from psychological theories of development? If you have ever wondered about what motivates human thought and behavior, understanding these theories can provide useful insight into individuals and society.

Child development that occurs from birth to adulthood was largely ignored throughout much of human history.

Children were often viewed simply as small versions of adults and little attention was paid to the many advances in cognitive abilities, language usage, and physical growth that occur during childhood and adolescence.

Interest in the field of child development finally began to emerge early in the 20th century, but it tended to focus on abnormal behavior.

Eventually, researchers became increasingly interested in other topics including typical child development as well as the influences on development.
Why is it important to study how children grow, learn and change? An understanding of child development is essential because it allows us to fully appreciate the cognitive, emotional, physical, social, and educational growth that children go through from birth and into early adulthood.
Some of the major theories of child development are known as grand theories; they attempt to describe every aspect of development, often using a stage approach. Others are known as mini-theories; they instead focus only on a fairly limited aspect of development such as cognitive or social growth.

Among them include the following:

Erikson's Psychosocial Developmental Theory
Psychoanalytic theory was an enormously influential force during the first half of the twentieth century. Those inspired and influenced by Freud went on to expand upon Freud's ideas and develop theories of their own. Of these neo-Freudians, Erik Erikson's ideas have become perhaps the best known.
Erikson's eight-stage theory of psychosocial development describes growth and change throughout life, focusing on social interaction and conflicts that arise during different stages of development.
While Erikson's theory of psychosocial development shared some similarities with Freud's, it is dramatically different in many ways. Rather than focusing on sexual interest as a driving force in development, Erikson believed that social interaction and experience played decisive roles.
His eight-stage theory of human development described this process from infancy through death. During each stage, people are faced with a developmental conflict that impacts later functioning and further growth.
Unlike many other developmental theories, Erik Erikson's psychosocial theory focuses on development across the entire lifespan. At each stage, children and adults face a developmental crisis that serves as a major turning point. Successfully managing the challenges of each stage leads to the emergence of a lifelong psychological virtue.

Piaget's Cognitive Developmental Theory
Cognitive theory is concerned with the development of a person's thought processes. It also looks at how these thought processes influence how we understand and interact with the world. Piaget proposed an idea that seems obvious now, but helped revolutionize how we think about child development: *Children think differently than adults*.

Theorist Jean Piaget proposed one of the most influential theories of cognitive development. His cognitive theory seeks to describe and explain the development of thought processes and mental states. It also looks at how these thought processes influence the way we understand and interact with the world.

Piaget then proposed a theory of cognitive development to account for the steps and sequence of children's intellectual development.

- **The Sensorimotor Stage:** A period of time between birth and age two during which an infant's knowledge of the world is limited to his or her sensory perceptions and motor activities. Behaviors are limited to simple motor responses caused by sensory stimuli.
- **The Preoperational Stage:** A period between ages 2 and 6 during which a child learns to use language. During this stage, children do not yet understand concrete logic, cannot mentally manipulate information and are unable to take the point of view of other people.
- **The Concrete Operational Stage:** A period between ages 7 and 11 during which children gain a better understanding of mental operations. Children begin thinking logically about concrete events, but have difficulty understanding abstract or hypothetical concepts.
- **The Formal Operational Stage:** A period between age 12 to adulthood when people develop the ability to think about abstract concepts. Skills such as logical thought, deductive reasoning, and systematic planning also emerge during this stage.

Vygotsky's Sociocultural Theory

Another psychologist named Lev Vygotsky proposed a seminal learning theory that has gone on to become very influential, especially in the field of education. Like Piaget, Vygotsky believed that children learn actively and through hands-on experiences. His sociocultural theory also suggested that parents, caregivers, peers and the culture at large were responsible for developing higher order functions.

In Vygotsky's view, learning is an inherently social process. Through interacting with others, learning becomes integrated into an individual's understanding of the world. This child development theory also introduced the concept of the zone of proximal development, which is the gap between what a person can do with help and what they can do on their own. It is with the help of more knowledgeable others that people are able to progressively learn and increase their skills and scope of understanding.

Bandura's Social Learning Theory

Social learning theory is based on the work of psychologist Albert Bandura. Bandura believed that the conditioning and reinforcement process could not sufficiently explain all of human learning. For example, how can the conditioning process account for learned behaviors that have not been reinforced through classical conditioning or operant conditioning?

According to social learning theory, behaviors can also be learned through observation and modeling. By observing the actions of others, including parents and peers, children develop new skills and acquire new information.

Bandura's child development theory suggests that observation plays a critical role in learning, but this observation does not necessarily need to take the form of watching a live model. Instead, people can also learn by listening to verbal instructions about how to perform a behavior as well as through observing either real or fictional characters display behaviors in books or films.

Behavioral Child Development Theories

According to the behavioral perspective, all human behavior can be described in terms of environmental influences. Some behaviorists, such as John B. Watson and B.F. Skinner, insisted that learning occurs purely through processes of association and reinforcement.

Behavioral theories of child development focus on how environmental interaction influences behavior and are based on the theories of theorists such as John B. Watson, Ivan Pavlov, and B. F. Skinner. These theories deal only with observable behaviors. Development is considered a reaction to rewards, punishments, stimuli and reinforcement.

This theory differs considerably from other child development theories because it gives no consideration to internal thoughts or feelings. Instead, it focuses purely on how experience shapes who we are.

Two important types of learning that emerged from this approach to development are that classical conditioning and operant conditioning. Classical conditioning involves learning by pairing a naturally occurring stimulus with a previously neutral stimulus. Operant conditioning utilizes reinforcement and punishment to modify behaviors.

CHAPTER TWO

LITERATURE REVIEW

Jean Piaget introduced his Theory of Cognitive Development early in the last century. Today researchers and educators have strived to find links between students' cognitive stage of development and their capacity for learning (Ewing, 2011). Cognitive development was to be viewed as a continuum involving the interaction of four influences: maturation, active experience, social interaction, and a general progression of equilibrium (Ewing, 2011). Piaget's theory states that there are four stages of cognitive development: sensorimotor, preoperational, concrete operational and formal operational.

The sensorimotor stage of development includes infants from birth to two years old. The interaction that infants receive from care givers during the sensorimotor stage of development is crucial. According to Sylva (2011), "Child development, especially in the early years, requires complex social interaction with warm, sensitive adults, as shown by theorists" (pg. 19). Positive interaction between adults and infants is linked to the development of language, cognition, emotion regulations, and responsiveness (Sylva, 2011). Good quality care relates positively to child outcomes. The Families, Children, and Child-Care (FCCC) study found that child who had been in child care homes during the first two years of life performed better at age three than did children whose earlier experiences had been in other types of care (Sylva, 2011). This study shows that children who receive quality at home care display greater expressive language and verbal comprehension. However, in the United States, studies have shown that more than fifty percent of American mothers return to work within three months of birth, with a high percentage of infants being in child care centers (Sylva, 2011). This means that a greater responsibility is put on care givers to surround infants with stimulating environments that foster wonder, curiosity, and provide a safe and secure place to learn.

It is clear that brain development is dramatically impacted by an infant's environment. Infants will gradually start interacting with the environment as behavior moves away from inherited reflexes. At birth infants are born with natural inherited reflexes. This allows infants to learn about the environment and begin to understand the world. Reflexes may include rooting, gripping, toe curling, stepping, and sucking. The sucking reflex is introduced when something touches the roof of an infant's mouth. Mouthing behaviors are common in this developmental stage. Parents and care givers often give children toys that encourage oral exploration and discovery through the other senses. When an infant is about eight months old, he or she will have about one thousand-trillion connections between neurons, which is twice the amount of connections in an adult brain (Karmiloff-Smith, 2010). By the end of the sensorimotor stage of development infants practice the knowledge acquired and begin learning how to use it.

The next stage in Piaget's Theory of Cognitive Development is the preoperational stage. This stage of development lasts from two years of age until age six or seven. According to Veraksa (2011), "The main tools that a child masters at this age (2-7 years) are figurative tools: sensory

standards, various types of perceptual models, schemes and plans. Children begin to generalize their first-hand experience and identify the aspects of reality that are most significant for solving new practical tasks. At the same time, they form conscious and voluntary relationships to reality" (pg. 81). Children begin to give objects human characteristics and participate in pretend play. Often emotion, thoughts, and intentions are exuded through play. Though children possess the ability to play with one another, they lack the ability to understanding one another.

During the preoperational stage of development, activities provide a special space in which the growth of abilities happens. Veraksa (2011) stated, "Children discover or 'co-create' the 'logic' of tools and the 'logic' of activities together with adults" (pg. 81). Care givers or parents arrange activities and pass experiences on during appropriate times. At this stage children are discovering the qualities of the outside world and are beginning to grasp reality. In order to grasp reality, opportunities must be given to observe and experiment. This allows children to get acquainted with natural phenomena (Veraksa, 2011). Along with observation and experimentation, children need to experience various situations.

Experiencing various situations includes not only direct interaction with reality but also the experiences of one's own attitude to this reality (Veraksa, 2011). Adults must help children learn the qualities of the world. Expression can be communicated through painting, dancing, expressive movement, or fairy tale symbolism. Role playing, or modeling, can also help reproduce the activity of adults in play. This activity encourages children to represent the understanding of a role and express feelings toward it. This is also known as symbolization by which it is possible to use play as a method of correction of emotional abnormalities in development of children (Veraksa, 2011).

The concrete operational stage is the third stage in Piaget's theory. This stage lasts from six or seven years until eleven. Children in this stage rapidly develop as individuals. Different subjects are included in school curriculum to bring school children cognitive development. Subjects taught in schools such as language, literature, social sciences, general sciences, mathematics, and art are primarily meant for cognition (Basantia, 2012). According to Basantia (2012), "As the child comes in contact with various environmental stimuli, she/he receives many things rapidly from the environment and develops the capacities, capabilities, and abilities, aptitudes, etc., in different area/field of knowledge in accordance with the facilities/conditions provided to him/her at home, school as well as in the society" (pg. 69). The objectives of teaching change are in accordance with the demands of the society. Situations, time, place, needs, demands, and facilities available are all factors that could impact a child's cognitive development.

Educators must have flexible approaches to teaching different subject areas due to the vast amount of diverse learners. Schools of the twenty-first century are increasing in student diversity within classrooms (Murry, 2012). Teachers can benefit from explicit preparation and professional development that enriches their capacities to build, and to elaborate upon, school-family connections (Murry, 2012). Different areas of teaching require students of this age to achieve specific competencies. Enhancement of growth in cognitive abilities across subject areas

will increase if educators continue to exercise professionalism. Teachers must be aware that students needs change throughout the year and must be willing to work with students to meet competency goals. When teachers conduct different teaching strategies to accommodate for different learners, it enhances the achievement of the learners in different curricular and co-curricular areas (Basantia, 2012).

The final stage in Piaget's Theory of Cognitive Development is the formal operational stage. This stage last from age eleven to sixteen and into adulthood. During this stage adolescents develop abstract thinking and reasoning. Skills such as logical thought, rational reasoning, and systematic planning begin to emerge. Science and mathematics is important in developing logical thinking due to the fact that it encourages hypothetical situations. When given situations, adolescents are able to think about a wide range of possible solutions. When problems come up adolescents, form a hypothesis, and then reason whether or not it is a good idea.

During this stage adolescents are able to make a hypothesis and revise the hypothesis when new information is given. This process is also known as the scientific method and is practiced throughout the curriculum spectrum.

When adolescents reach adulthood, declines in cognitive brain functioning can occur. Adults can maintain a high level of cognitive functioning as they age by staying physically, socially, and intellectually active (Bielak, 2012). Researchers do not have definite proof but, evidences favors maintaining an intellectually engaged and physically active lifestyle promotes successful cognitive aging. The declining of cognitive brain functioning is a gradual process and happens over a long period of time.

Jean Piaget's Theory of Cognitive Development greatly impacted researchers and educators. Researchers started studying cognitive development in different ways and began to discover and reveal new information about cognition. Piaget's theory also brought to attention the importance and impacts of developmentally appropriate practices. Educators now know the effect that environments, curriculum, materials, and instruction have on children and adolescents. Curriculum and instruction began to change based on this theory and has been influential in learning. Piaget stressed that though children and adolescents go through the same developmental stages, progression through the stages happens at different rates. Therefore, educators must show acceptance and understanding toward individual needs. Educational progress should be influenced by each child's own course and rate of development.

CHAPTER THREE

RESEARCH METHODS

This research was done at Tumaini Pre-Unit School in Meru County. It was collected in various activities of children within the school; during class time and during the field activities (playing and free time of the children. The data was undertaken by various data collection methods, which included Observation and interviewing of the both children and teachers.

Further, children were assigned various activities and tasks which they were to undertook under instructions of the teacher. This formed the main source of data and behavior observation and exposure.

My observation was naturistic and thus a visit was done in special school with children on special needs. Data was collected in their everyday classroom setting, giving the results more external validity. Their activity time was in the playground in the children school. The children were given a variety of activities through which they were allowed to rotate. There was a sandbox, a water table, a painting station, an area to play with play dough, a large box full of shapes to explore and a light table. The activities required little individual instruction and were activities that children had the opportunity to explore on a nearly daily basis. The teachers helped to facilitate cognitive development by creating an environment that encourages interaction, curiosity, exploration and problem solving. The teacher's interactions with individual's preschoolers, asking questions and provoked through and required attention, also helped to facilitate development.

Further, children were given a variety of highly structured activities as well as more open-ended activities through which they rotated. At one table children splatter painted posters, at a second table they made "backward crowns" for April's fool's day and a third table they created small barnyard scenes. These activities were highly structured, carefully explained and unique to this particular day. The teachers were highly involved, and following directions, as well as learning new skills, were involved. At the same time a second set of a second set of activities is available each day for the kindergarteners. This type of activity requires no individual instruction and encouraged interactions among the children, not with the teachers. The kindergarten teachers helped to facilitate cognitive development by encouraging interaction among children and with adults, by introducing new problems to explore and by fostering creativity. The teacher's individual interactions also aid cognitive development by encouraging children to solve problems for themselves, as opposed to simply providing an immediate solution.

The physical set up of both activity time rooms were very similar and the variety of different activities encouraged interaction and exploration. The creative activities presented by the teacher for the different age group were appropriate for their skills and development level and thus facilitated cognitive, social and intellectual development. The preschoolers' activities helped improve their communication, fostered curiosity and encouraged creativity. At the same time, the

children's activities required that they have a basic ability to multitask and more extensive ability to follow careful instructions.

The research was entirely guided by the observational questions. The target children were in the age range of 2-4years of age. The children were playing kicking, hide and seek, painting, colouring various designs, and other tasks assigned and guided.

CHAPTER FOUR

FINDING

The study was done in a class setup and as well in the field. The data collected, observed and recorded is analyzed and discussed in this section.

The development of children however is so extensive and multifaceted that no single theory pre model can rapture it. Thus, in observing the children clear examples of all theories became evident.

Piaget's theory builds upon three assumptions:

a) that children's mental and physical activity contributes to their own development
b) That young children learn many important lessons on their own
c) Children are intrinsically motivated to learn.

An example of such self-teaching and motivation occurred in the preschool classroom. A group of children were placing small plastic shapes in a cup with a one-inch hole in its bottom and then fall through. Every few minutes the shapes would stop failing through the hole, the children would be disappointed, dump the pieces out the other side and begin again. It was evident to me that they stopped flowing through the hole because the star shaped piece was too large and blocked the hole, however the children seemed confused. This simply meant, the children had taught themselves that a shape larger than the hole could not fit through and consequently caused the hole to be blocked, stopping the flow of shapes. Children also taught themselves during the activity period. While making the "backward crowns" the children were trying to glue the two ends of somewhat waxy paper together. The glue kept coming apart and one of the children walked up to the instructor and said, "the glue doesn't work, can we have stapler?". These scenes clearly exhibit Piaget's theory that children teach themselves through their own actions and interactions. They are also ideal examples of a basic function of cognitive growth, organization, or integrating observations into coherent knowledge. There was a drastic difference however between the two age groups when it came to discover that the star was blocking the hole, a fairly simple concept. On the other hand it took the kindergarteners only a minute to discover that the glue would not holed and devise an alternative plan. Thus, we see that Piaget's fundamental assumptions about children teaching themselves are true and this rate of self-education grows exponentially as children gain more knowledge of the world.

Core knowledge theorists suggest that children enter our world with specialized learning abilities that allow them to quickly acquire crucial knowledge. They argue that this inmate knowledge is domain specific, limited to a specific are. A preschool aged girl had some basic knowledge of psychology, or knowledge of people. As a little boy walked out of the room holding his mom's hand and looking ready to cry she called out his name. A kindergartener seemed to have basic knowledge of biology. When a teacher angrily sked a young boy why he had left room without a teacher he responded, "I was thirsty" and upon further questioning said "but I couldn't find you." He continued to explain that if you are thirsty you have to drink or you might get sick because

your bossy needs water. We see even young children do seem to have knowledge of biology, physical and psychology as core knowledge theorist suggest. It is also apparent that children build on inmate knowledge very rapidly. The kindergarteners aged children seemed to understand more have more knowledge and draw connections within categories far better.

Information-processing theorist think that children are undergoing continuous cognitive change and believe that analogical reasoning, for understanding new problems in familiar terms, is a key method that children use in their learning process. The teachers at the children school use analytic reasoning to help children solve problems. At the painting station in the preschool student's activity room there were a series of sponge stamp figurines to dip and stamp on paper. One little girl was trying to use the stamp as a paint brush but ended up creating a disaster. The teacher came over and said "do you remember the stamps and ink we used at the other table yesterday" the little girl nodded her head and the teacher continued. She picked up the sponge stamp saying "you do this exactly the same way" and demonstrated how to stamp the figure onto the page. In the kindergartener class one young boy was trying to reach a book on a shelf. He was standing on tiptoes but couldn't quite make it. One of the assistants came over and asked if he needed help. When he said "no" she asked if he remember how they taught them to reach the cubbies on top shelf. He immediately pulled over a small step stool and used it to reach the out of grasp object. Consequently, we see that in an attempt to facilitate problem solving teachers give young children hints that involve analogical reasoning. There is however a significant difference between the analogical reasoning and ability of preschoolers and kindergarteners. The kindergarteners needed only to be reminded of the similar problem, while the preschoolers required that the familiar problem be not only referenced but also explained, compare and guided. Information processing theorist's idea that children are problem solvers who use analogical reasoning as a key tool is collaborated by my observation at the children's' school and it was also evident that the speed of analogical reasoning increased drastically with experience.

Sociocultural theory, suggest that children's development is greatly facilitated by their interactions with other people. Teachers clearly encourage interaction between the children and also between children and adults as a learning mechanism at the children's school. Guided participation was used again and again as a tool in both the preschool and kindergarteners classes. After seeing several children unable to stamp the sponge figures the teachers began to stamp the figures for children and then simply allow them to decorate the figures. Thus, the children could create artwork that they would have unable to make on their own. In the kindergarten classroom a similar set up was used. The fence rails and other aspects of the barnyard scene had already been cut out so the children could simply glue them on and color them. Yet again the children were then able to create a piece of artwork that would have been impossible to make at their level without this guided participation. Guided participation is key for development for both groups. The differences lies in the difficulty of the task for which guided participation are necessary in order to complete it. Preschool age children need help to complete tasks that kindergarteners can easily complete on their own. It was clear through the observations at the children's children that the sociocultural theorists are correct in their

perspective that human interaction is a fundamental aspect of cognitive development. I have thus seen that because the development of children is so extensive and multifaceted no single theory can capture it and all four theories shed light on important aspects for thus development.

CHAPTER FIVE

RECOMMEDATION AND CONCLUSION

Thus, I have learned through our observation, and in concordance with the theories of Piaget, Gelman and Williams among others, that cognitive development is very multifaceted and can be explained only by combining and expanding upon a variety of models and theories. The one thread however that connects all these development is that as children gain strategies to further their development and gain more knowledge. Piaget was correct that children actively father their own learning and gain more knowledge. Core knowledge theorists seem to be correct in their idea that children have innate knowledge in certain specified areas.

Information processing theorists were also correct in their statement that analytical reasoning is crucial tool for cognitive development. Finally, sociocultural theorists were also correct with their perspective that human interaction is of utmost importance in development.

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