



# **RESEARCH METHODOLOGY IN MULTIDISCIPLINARY SUBJECTS [ VOLUME-1 ]**

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## CHAPTER 14

# COGNITIVE DEVELOPMENT OF PRESCHOOLERS

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### **Abstract**

The acquisition, organization, and application of knowledge in reasoning and problem-solving are all aspects of cognitive development. To learn effectively, cognitive abilities are required. The cognitive abilities of children can vary widely, which can lead to significant differences in their academic and social outcomes. Self-regulation and executive function are cross-domain cognitive abilities that help children succeed in school by allowing them to set and achieve learning goals, maintain attention on those goals, avoid distractions, and control their emotions. There is a wide range of variation in the learning methods children use. Children need to be able to learn through a combination of unintentional trial and error, intentional demonstration and instruction, and guided discovery. Pretend play provides children with an opportunity to practice and perfect a wide range of cognitive strategies, including communication, problem solving, and goal pursuit. As children engage in imaginative play, they develop their linguistic, cognitive, sensory motor and affective abilities all at once. No pre-school curriculum exists. It stimulates, plays, and develops. Against this backdrop, pre-school teachers and parents can help children process information, look at things, and emphasize qualities and exclusivity.

***Keywords:** Cognitive Development, Preschool teaching, Self-regulation and Emotions.*

### **I**ntrouction

A child is like a rare and beautiful flower in the human garden, its sweet scent filling us with joy and reminding us of the divine qualities, emotions, and feelings for which we are all grateful. It is now generally accepted that every country must devote resources to the education and training of its people if it is to prosper economically. Having children causes adults to reflect on their own

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childhoods. This beautiful creation of God needs protection from the damaging effects of poverty, hunger, neglect, and contempt for his development needs if it is to survive long enough to blossom. Our culture generally prioritizes short-term gains over long-term investments in children's education and growth. Upon entering the world, a baby has no concept of who he or she is or where she is. Right from the moment of his birth, he is undergoing the transformation into a fully conscious human being. It's a big mystery how a brand-new person comes to be. After birth, children rely on their senses and develop the ability to understand linguistic sequences for a wide range of purposes. He talks to strangers, hangs out with friends, uses things, and experiences things. Most commonly, the "pre-school" age range is set as three to six years old. These years are crucial because they set the stage for the rest of one's life, from childhood to old age. In order to flourish, preteens and teenagers require both positive adult role models and healthy ways to channel their innate skills and interests.

### **Concept of Cognitive Development**

A wide range of mental functions, such as knowing, seeing, remembering, imagining, conceiving, judging, and reasoning, are collectively referred to as "cognitive" in this context. Early childhood cognitive development refers to a set of intellectual skills that experts deem "normal" for a baby, toddler, preschooler, or kindergartener. Cognitive gains have long been used as indicators of a child's well-being. The cognitive growth of children during preschool has been shown to have long-term effects on their academic performance and their likelihood of completing high school (Burger, 2010). Cognitive skill development is the process by which a child gradually develops the capacity to comprehend sensory information. Learn about the definition and growth of cognitive abilities such as attention, memory, and reasoning, as well as typical training and cognitive milestones in kids between the ages of 2 and 12. In other words, it quantifies or systematizes how much a child should be able to do or comprehend by a specific age. In light of this, the fact that the term "cognition" is quite broad and encompasses a variety of sub processes may help to explain why it has proven to be so difficult for psychologists to define cognitive psychology in a clear and concise manner. It is obvious that different types of information processing, occurring at various

levels, are necessary for cognition (Rahayu, 2019). These skills may appear mentally or physically. However, social, emotional, and language milestones as well as physical developmental milestones are frequently viewed as distinct types of development. Naturally, they are all connected because brain function essentially affects every other aspect of life. All of these mental processes are reflected in the typical human behavior. However, the current study has adopted Piaget's term for cognitive development. He holds that the development of organized language, symbolic functions, and logical thought occur between the ages of two and seven, but not coordination, and that the development of number, substance, length, area, weight, and reversibility occurs between the ages of seven and eleven. The emergence of hypothetical and deductive thinking in young children from the age of 11 onwards is a hallmark of their cognitive development. Human intelligence and the capacity for hypothesis formation are at the center of cognitive development, a branch of learning psychology. Human learning and thought processes are at the heart of the cognitive development framework. Intelligence, learning, and memory are all tested and analyzed. Cognitive theorists may be interested in studying topics such as how children's problem-solving skills develop, how our perception of our own academic success varies by culture, how we acquire new languages, and many more. The initial phase is a motor-sensing one. The average toddler stays in this age bracket until they are two years old. During this time period, a child's development is focused on the senses of taste, touch, sight, sound, and smell. A child learns that the world continues to function even when he or she is not present. At this point, a child knows that, even though he can't see them, his toys are still in the living room even when he's in his own room. During this time, a child also starts to develop their motor skills. Most kids, however, don't grasp the concept of symbols until they're older. Researchers, doctors, educators, and parenting experts all place a premium on cognitive development because we want all children to grow up to be productive members of society. To improve their students' intelligence, teachers should focus on making the classroom a place where students want to spend time. This can be done by employing even the most basic of methods, resources, and media in order to boost student retention of course material. It is crucial for a child's cognitive development to have access to appropriate learning experiences during the preschool

years. The family's socioeconomic status and religious beliefs are the two most influential aspects of the child's environment that affect brain development. This category includes both satiety and stimulation. A child's development and learning may be severely stunted if they are deprived of these during infancy and early childhood, especially if the deprivation is severe and lasts for an extended period of time. By gauging a person's intellectual development, we can foretell their academic success and performance in the future. Facilitating the cognitive development of young people is essential to reaching this goal. Remembering that there are approaches to early childhood education that can promote and enhance a child's cognitive development is also crucial. This could happen at home with parents or at a facility with early childhood professionals. The antics of toddlers and preschoolers may look like harmless fun at first. But the truth is that children's intelligence is constantly developing. The more we can encourage kids' development through positive play, the better. What you learn adds to what you already know. In the first few years of a child's life, as billions of cells are organizing into networks and trillions of synapses are connecting them, the brain experiences a flurry of electrical and chemical activity in response to every touch, movement, and emotion. The rate of brain development during early childhood is universally acknowledged to be unparalleled. To develop the cognitive abilities and self-awareness that are prerequisites for empathy, children need time to grow and mature.

### **Concept of Pre-school**

Preschool education has long been the norm for children of both nursery school and kindergarten age. There is little need to distinguish between the preschool and kindergarten years because of the substantial overlap between them. The time period between a child's birth and their entry into kindergarten is known as their pre-school years. Preschool courses are now acknowledged as fundamental to students' eventual scholastic achievements. When parents discuss their children's "pre-school education," they usually refer to the years before they enroll them in kindergarten, which typically begins at age six in the United States and other developed nations. Children of preschool age are naturally curious about the world around them and eager to learn more about its inner workings, its sensations, and its possibilities for their own

participation. At this age, children learn by example, mimicking their parents, siblings, and peers. The child's memory and understanding are strengthened as they practice fundamental problem-solving skills through imitation. In its broadest sense, preschool encompasses the years before a child enters kindergarten. Significant growth and change occur between the ages of three and six. Children in this age range make their initial forays into the larger social world outside of their families, joining and contributing to peer groups. The lessons learned during this time frame will serve as a basis for the rest of one's life, from infancy to old age. In order to flourish, preteens and teenagers require both positive adult role models and healthy ways to channel their innate skills and interests. Despite their similarities to adults, kids have their own unique needs, abilities, and, most importantly, a childhood of their own. Due to the rapidly shifting socioeconomic climate, it is imperative that preschool programs receive adequate funding at this time. Children's efforts to learn, explain, organize, control, create, and anticipate are all examples of how preschoolers actively participate in their own cognitive development. Young children are masters at pattern recognition and arrangement, and they use this ability to make sense of the world around them. Despite this preschoolers display an impressive hunger for knowledge.

### **Preschool Goals**

The goal is to help the child develop a strong body, good coordination, and the ability to move around with ease. The goal is to equip the youngster with the fundamental life skills necessary for personal adjustment, such as proper nutrition, hygiene, dress, self-care, and housekeeping. The goal is to teach the child to behave appropriately in social situations, to encourage positive participation in group activities, and to help him or her appreciate the value of respecting the rights and privileges of others. Motivated by a desire to aid the child in reaching emotional maturity by teaching him to identify, name, process, and control his feelings and emotions. The goal is to help the child develop a positive view of aesthetics. Inspire him to learn more about the world around him and help him develop new interests by giving him opportunities to do so. As a means of encouraging children's growth in autonomy and originality through ample opportunity for play. In order to strengthen the kid's ability to communicate effectively through the use of clear, fluent,

and grammatically correct speech. Each child's unique reactions and behaviors can be observed and studied in the nursery school's role as a research laboratory for child development. Recent research has shown that pre-schools lay a solid foundation for children's harmonious development, making up for the shortcomings of parenting in low-income homes and giving every child a fair shot at success in life.

### **Preschool affects Cognitive Development**

The questions that preschoolers have are never-ending. They have a passion for amassing various items. Additionally, preschoolers enjoy repeating the same activities over and over, and they adore being told the same story in a variety of different ways. They enjoy being adventurous and trying out new things whenever they can. These are efforts to improve their cognitive abilities. Research from a number of fields suggests that preschool attendance could have important consequences for children's future development. Preschoolers who continue their education into elementary school typically have a head start in terms of learning how to think critically, paying attention, and reading. Studies have found that children who participate in preschool programs are more prepared for school and have greater success in the first grade, as well as have a greater chance of graduating high school and learning a second language. Because they provide children with a stimulating experience and make it possible for optimal cognitive development, high-quality factors such as a healthy environment, exciting activities, and encouraging care-giving instructors are essential to promote children's well-rounded development. The importance of starting a child off with a strong foundation in education is widely acknowledged now. Children with low levels of executive function struggle to manage their emotions and impulses, which prevents them from fully engaging in classroom activities and negatively impacts their grades (Baptista et al., 2016). A recent meta-analysis found that children who attend preschool have significantly better linguistic and cognitive abilities and later academic performance. How children's language and cognition develop as a result of participating in early childhood programs has been studied. The early years of a child's development are marked by success in areas such as pre-reading, early numeracy, language, non-verbal reasoning, and spatial awareness. Decades of research have shown

that children who attend a high-quality preschool program are more likely to develop the cognitive, reading, and social skills necessary for success in school. As a result, there are positive effects, and the development of children is aided. Language, literacy, content knowledge, concept mastery, oral communication, and a well-rounded set of cognitive talents are all fostered, all of which are necessary for academic success.

### **Play promotes Cognitive Development**

The combination of play with mental exercises is a powerful tool for fostering preschoolers' brain growth and development. Unstructured play can teach kids problem-solving and decision-making. When asked why, when, what, or how, children may develop these skills. Encouraged questioning helps people draw their own conclusions about the world. Giving kids choices promotes critical thinking. Giving kids chances to think independently and solve problems can improve their critical thinking. Unrestricted playtime helps children develop. Interest in kids' typical daily activities has grown in recent years. During the same time period that rates of childhood mental disorders (anxiety, depression, and suicide) have increased, studies show that the quality and quantity of children's play have declined. Children of today spend less time outdoors and more time playing video games and other electronic toys at home (Wridt,2004). Thus, kids are encouraged to draw their own conclusions and experiment. As they play with all five senses, a child's critical and creative thinking will develop. Sensory play may help children learn and develop. A child's senses help them compare. During infancy and childhood, brain development is swift and cognitive development is especially susceptible to environmental influences (Marshall, 2011). To put it simply, children's play is a crucial developmental tool for their brains. Researchers have found a correlation between play and the development of language skills, mathematical readiness, later math success in school, and enhanced cognitive functioning. Children can also use their senses to explore and adapt. Encouragement to use their senses may help children develop their sensory network and nerve connections as they grow. Sensory play's activity panels improve motor skills, imagination, and description. Outdoor play may benefit a child's hippocampus, which controls learning and memory. Playing outside helps kids remember details, focus, and



develop neurons. Playing helps develop motor skills and working memory, which are crucial for cognitive growth. Children sometimes forget instructions. They may succeed by focusing on memory and concentration tasks. Play's biggest brain-growth benefit is the ability to think outside the box. Inspiring children's creativity and imagination may help them handle the unexpected. To play any game or activity, kids must form associations and neural pathways to understand different concepts. Objects that foster curiosity and learning can spark them. Awe and wonder may make their education more enjoyable. Cooperative and solo activities can help kids develop independent thinking. Sharing and teamwork are lifelong skills kids must learn. Sharing and empathy will be taught to kids. Kids will also learn that sharing makes others feel included and give them a chance to use a toy. Outdoor playground sections may require more sharing. Playing teaches them to wait their turn on the swings and slide. Modeling sharing can help young children learn.

### **Conclusion**

The most formative time for a child's cognitive development is during the pre-school years. The study's findings have improved our understanding of how abilities are correlated and organized in the pre-school years on the basis of a typical process that is perceptual in nature. The National Policy on Education's early childhood education and care programme has provided strong support for this idea. However, very little effort has been made in terms of research and practical activities, and the pre-school movement in India has largely remained philanthropic and propagandist. At the pre-school level, there is, in fact, no set curriculum. Its focus is on play, stimulation, and developmental readiness. They enjoy taking turns with one another in games at this age. Young children, especially preschoolers, often engage in socio-dramatic play, in which they act out scenarios with their peers. They improve their social problem-solving abilities, their imagination, and their ability to empathize with others by playing roles. In light of this, parents and teachers of preschoolers can instruct their charges to process information by focusing on the salient features of objects' attributes, dimensions, and characteristics. Children can benefit greatly from spending more time observing their surroundings and learning to identify and describe differences in

form, size, color, and intensity. A child's cognitive growth often stops progressing during preschool. Lack of access to playtime could have lasting effects on his or her meta-cognitive abilities.

### Recommendations

- The government should support preschool education and provide adequate play materials.
- The early childhood program should regularly train staff to improve child care and update child development knowledge.
- Preschool/motherless babies' home managers/proprietors and caregivers should attend seminars and workshops on teaching methods and managing observatories for effective teaching.

### References

- Baptista, J., Osório, A., Martins, E. C., Verissimo, M., & Martins, C. (2016). Does social-behavioral adjustment mediate the relation between executive function and academic readiness.
- Burger, K. (2010). How does early childhood care and education affect cognitive development? An international review of the effects of early interventions for children from different social backgrounds. *Early Childhood Research Quarterly*, 25(2), 140-165.
- Marshall, J. (2011). Infant neurosensory development: considerations for infant child care. *Early Childhood Education Journal*, 39, 175-181.
- Martin, C., Wood, C.H. & Little, J.J. (1990). The development of gender stereotype components, *Child Development*, 61, 189-1901.
- Rahayu, D., R. (2019). Pengaruh Penggunaan Video Kartun Mencampur Warna Terhadap Kemampuan Kognitif Pada Anak Kelompok B di TK Terpadu Alhidayah II Ds. Bakung Kec. Udanawu Kab. Blitar. *PAUD Teratai*, 2(2).
- Wridt, P.(2004). An historical analysis of young people's use of public space, parks and playgrounds in New York City. *Children, Youth and Environments*, 14(1), 86-106.