



# Play-Based Cognitive Development Parameters in Children

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## Abstract

Play is crucial for kids' general development since it fosters more creative and abstract thinking in them. They can fully engage in playing activities when they have the opportunity to participate. Through play, children learn how to solve challenges they create for themselves as well as other cognitive thought processes. From an infant to a teenager or adult, cognitive development refers to the formation of intellectual processes, such as remembering, solving problems, and making decisions. According to recent research, play improves a child's imagination, memory, reasoning, social skills, language proficiency, creativity, and mental health—all of which are critical for forming their future. The principal aim of this investigation is to evaluate the dimensions of children's cognitive development through play by reviewing relevant literature. This study has employed the descriptive qualitative research approach to achieve this goal. The study came to the conclusion that play has a major role in children's cognitive development. According to this review study, play opportunities help children stay psychologically happy, and parents and teachers are important in providing them.

**Keywords:** Cognitive development parameters, play, children, problem-solving, decision making, creative thinking.

## 1. Introduction

The broad term "cognitive development" refers to a variety of categories or dimensions of mental capacities in children, including problem-solving, reasoning, creative thinking, social and language skills, etc. Studies and research indicate that children's play might enhance their cognitive abilities. A young child's capacity for abstract and imaginative thought grows when they are given the freedom to play. There are four phases in a child's mental development, each of which represents a distinct style of thinking and perceiving the world. Stages of cognitive and emotional development are referred to by terms like "sensorimotor intelligence," "pre-operational thinking," "concrete operationalism," and "formal operationalism." According to Piaget (1970), childhood develops in multiple stages that roughly correlate to chronological ages. Playing can help a child become more creative. Solving problems creatively demonstrates cognitive growth. Play teaches kids so many things, including problem-solving and social skills. They consequently possess a more assured sense of themselves and a more well-rounded viewpoint. A child's imagination and creativity are fostered through play. To put it briefly, play has a major positive impact on children's mental development. Smith (2003). Santrock (2005) suggests that play activities help young infants develop their cognitive abilities because they offer refinement, command, and exploration. Play is emphasised by proponents of early childhood education (ECE) (Wood and Attfield, 2005).

Therefore, the purpose of this study is to evaluate and review the criteria of children's play-based cognitive development. The following criteria are included in this study: the ability to solve problems, make decisions, think creatively, have social and language abilities, and improve oneself via reading a variety of published works of literature.

## 2. Study Related literature Reviews

A wealth of literature is available on the subject, and it can be examined under the following headings:

Ahmad et al., (2016), When given the opportunity to play and become fully immersed in what they are doing, children develop more sophisticated and complex thinking skills. Children learn how to communicate, how one object may be used in place of another, and that they too can adopt a different character through role-playing and props. Through dramatic play, kids can discover their voices and begin to grasp that different people have different viewpoints on the same thing. Building with blocks teaches kids about gravity, equilibrium, and the cause-and-effect relationship. By touching objects of different sizes and amounts, they gain some practise in trying things out, taking meticulous notes, drawing comparisons, and working with numbers. Regular mathematical play helps kids acquire a variety of skills that help them make the shift from concrete to abstract thought. Through sensory play, kids can develop their scientific thinking skills and learn how to assess concepts.

Pyle and Danniels (2018), Play can be categorised into many different types, such as unoccupied play, social play, constructive play, spectator play, parallel play, etc. Each type of play has a specific relationship to the stages of play. To put it briefly, categories are the ages of the kids participating in play activities. A toddler engages in spectator play, while an infant engages in unoccupied play. Thus, play activities and a given age group are related to a number of cognitive development factors.

Mcleod, (2022), Kids learn how to solve problems by playing games and doing puzzles. Role-playing exercises have been demonstrated to help early children's learning in a number of ways. Observing and mimicking the behaviour of older children and adults can help young children develop their language skills.

Jones, (2003), Children engage with the world and all of its various things, happenings, and processes while they are paid. Even the tiniest kid will initially use their senses to explore a new object—touching, watching, tasting, seeing, and hearing—before attempting to manipulate it. Youngsters learn by engaging with and deciphering the things, circumstances, and forms that comprise their daily environment.

Adele, (2017), Children acquire social skills, enjoy themselves, explore their surroundings, grow in empathy, learn problem-solving techniques, and sharpen abilities that will help them as adults via play. Play has benefits for both academic and developmental learning. These are looked at from various angles. Children benefit from developmental learning in a variety of ways, such as preventing autism or improving motor abilities.

Malik & Marhawa (2020) talk on Piaget's hypothesis of how children learn through play. They contend that Jean Piaget must be taken into consideration in order to properly understand brain development. Piaget emphasised that children must carefully balance assimilation and accommodation when faced with new information. "Assimilation" is the process of incorporating newly learned material into previously held mental models.

Carroll & Hestenes (2000), Infants and toddlers with disabilities can play together by modelling and overseeing each other's interactions. According to this and other research, children's frequency of inclusive interactions is significantly influenced by their teacher's encouragement and presence. To understand how teacher relationships affect kids' play in inclusive settings, more study is necessary. This is a timely reminder that we must figure out how to best support children in fully inclusive classes in addition to simply putting children of similar ages in groups.

(Mazarin, 2021), They imitate their environment. This is an excellent method for teaching children the value of each member's contribution to the family. He highlights how a social group's language-based norms and expectations shape one's style of thinking. According to Whorf, language shapes our thoughts and emotions. Play fosters language use as well as the growth of cognitive and social skills. Play is beneficial for improving motor abilities, social interaction, and language acquisition. Play and rapid brain development occur in key brain areas in young children. In some homes, strict discipline is the norm, thus playing should be promoted more.

## 3. Analysis

In order to improve children's cognitive development, educators employ theories and research that highlight the boundaries of a child's cognitive growth. For instance, Piaget's theory facilitates understanding and

communication between educators and children. Many educators use Piaget's theory, despite the fact that it was not intended for educational purposes (Miller, 2010; Woolfolk and Margetts, 2016: 90). A major drawback of this profound insight is the lack of play options for children of particular economic and social classes in emerging nations like India. Rather, they work as household helpers or as child labourers. The majority of the examined literature does not address the question of how children from low-income families develop cognitively. Children discover solutions to self-generated questions like "Does this piece go here?" and "What happens when I do this?" through play. Children from disadvantaged backgrounds can acquire these skills when they are allowed to play.

Vygotsky (1966) identified the issue with the majority of play activities for preschoolers. It is common knowledge that children and preschoolers like playing. We rarely recognise, nevertheless, that a child's enjoyment of most play activities is contingent upon the child finding satisfaction in the play itself. Put another way, if a child does not enjoy what they are doing, they will lose interest. Because they were unable to achieve the desired outcome or did not get the anticipated results, they do not perceive their play activity to be "interesting." It's possible that you've observed a number of restless kids who struggle to focus on single-play activities. The dull quality of play is frequently cited as the cause. This may make the duties of parents more difficult because they now have to ensure that their child is playing for a significant amount of time in addition to providing opportunities for play. When it comes to giving kids the right kind of play activities in preschool or kindergarten, parents have an equally important responsibility as teachers.

Play activities are considered to have a variety of effects on kids, and they also involve parents, siblings, and teachers. Playing with a child on a regular basis will undoubtedly benefit both parties. Puzzles that children can solve quickly can sometimes be difficult for adults to complete. Adults have a particularly important role because they should recognise the value of play and be conscious of the potential effects play may have on their child's mental development. This raises the question of the mental health or personal circumstances of parents. Research on this topic has neglected to include the fact that parents' difficulties make it difficult for them to see how important play is for their children's cognitive development.

Research indicates that children's cognitive capacities are enhanced by positive parental mental health. Playing together improves kids' relationships with their family, friends, and neighbours, according to numerous research. Friendships are created that will last a lifetime (Bordova and Leong, 2005). Most studies indicate that parents and kids benefit from collaborative play. In addition to instructors, parents are a child's first and most important teachers in terms of intellectual development. When students reach the second cognitive stage, teachers begin to observe them (Piaget, 1978). Teachers are actively involved in helping students acquire the cognitive skills that impact their development. Numerous studies assert that play benefits children as well as their parents, teachers, and families, all of whom collaborate to promote cognitive development in the child.

#### 4. Conclusion

The play that is incorporated into children's life at multiple stages enhances their cognitive development. Language and social skills, problem-solving abilities, original thought, memory, etc. The results also demonstrated that the quantity of playtime spent playing determines how important play is for learning, not the age of the children or students. Play is important and useful for kids during their formative years, and it also benefits their parents, siblings, instructors, and other playmates. Research indicates that play is linked to enjoyment, which leads kids to play mobile games for longer periods of time—a practise that is more detrimental to their health than beneficial. Since kids imitate their adults, people should play with them to get them to play more. Ultimately, it may be concluded that play has a wide range of benefits for kids' cognitive development.

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