

Preschoolers' Cognitive Development

Piaget

Piaget believed that preschoolers were in the midst of the **preoperational stage** of development, which he believed occurred in children from age two through age seven. During this stage, children are able to reason and use concepts and symbols but they are unable to perform operations, which are logical and formal mental processes. From age two through age seven, children are often unable to think through a problem to reach a solution.

Piaget assessed children's cognitive abilities by engaging them in a series of tasks to test their centration, conservation, egocentrism, and intuitive thought. When children were unable to master these tasks, Piaget believed that they had not progressed beyond the preoperational stage. Therefore, the **preoperational stage** of development is defined more by the types of activities children cannot do than by the types of activities they can do.

Although Piaget's theory has been hugely influential, it does not come without limitations. For example, we now know that children develop various capabilities slightly earlier than what Piaget assumed. Furthermore, Piaget is often criticized for focusing on the negative side of development, by displaying the activities that children cannot perform, rather than focusing on the abilities they have. Although his theory is not perfect, it is still largely influential and provides a great deal of knowledge and structure to the field of developmental psychology.

Preoperational Stage: Centration

When children engage in centration, they focus on only one aspect of a situation or an object and ignore other relevant information. Chris exhibits this behavior when he prefers to have five pennies over a five-dollar bill because he is centrating on the number (**five** separate pennies versus only **one** five-dollar bill) instead of the amount.

Preoperational Stage: Conservation

Conservation is similar to centration. When children engage in conservation, they focus on only one feature rather than including all possible information. When children are unable to conserve, they believe that the physical shape of an object is directly related to quantity. Chris exhibits this behavior when he and his brother are given glasses of juice of different sizes. He assumes that because his brother has a taller glass, he has more juice despite the fact that their father poured the same amount of juice into each glass.

Preoperational Stage: Egocentrism

Egocentrism is another behavioral pattern preschoolers express when they are unable to accept the physical viewpoints of others. This does not mean that preschoolers are selfish. They are just unable to understand that different people have different perspectives of the world. Chris often engages in this behavior when he stands in front of the television, blocking the view of his siblings. Because his thinking is egocentric, he fails to realize that he is blocking the view of his siblings as he assumes his siblings can see exactly what he sees.

Preoperational Stage: Intuitive Thought

Preschoolers' development of intuitive thought is a hallmark characteristic of these development stages. During this stage, children become particularly curious about the world. When Chris entered this stage, he began asking questions about everything. It became slightly annoying for his parents to answer his constant questions. However, parents should use this stage of development to increase their children's understanding of the world.

Vygotsky

Lev Vygotsky gave utmost importance to a child's social and cultural environments. He believed that the learning process could not occur in a vacuum. According to Vygotsky, the learning process is highly influenced by the culture and society of the child. Vygotsky believed that children learned by actively engaging in social interactions, for example, by "apprenticing" with adults and peers. According to his view, children grow cognitively because of the assistance that social partners provide. This view is in contrast with Piaget, who believed that children must learn independently by exploring their world and that intelligence developed from actions. However, if Vygotsky and Piaget had ever collaborated, they both would have probably agreed that parents should take advantage of the teachable moments that occur when children begin engaging in intuitive thinking.

While Piaget's theory has clearly marked stages in cognitive development, Vygotsky's theory does not divide the development phase into stages. Instead, Vygotsky's theory is based on some distinctive features, such as private speech, zone of proximal development, and scaffolding

Theoretical Features: Private Speech

The first feature of Vygotsky's theory is **private speech**, or talking to self. Vygotsky considered this an important aspect of development as it helps children in thinking through issues, comprehending them, and coming up with solutions. As we grow, private speech is internalized. Though it is not vocal anymore, it never really leaves us. Instead of speaking out loud, adults engage in private speech through a thought process that is a quiet internal dialogue. Many developmental psychologists believe that private speech is a precursor to this internal dialogue. When Chris plays alone in his room, he often narrates his actions. For example, he tells himself to "put that block up there" and to "be careful" when he is walking near his block tower.

Theoretical Features: Zone of Proximal Development

Another marked feature of Vygotsky's theory is the **zone of proximal development**. He believed that the zone of proximal development is a specific stage of learning when a child almost, but not fully, completes an independent thinking activity. The mental functions are in the process of maturing in this stage. He thought that it is crucial for social partners to engage with the child in the zone of proximal development through **scaffolding**, which was another feature of Vygotsky's theory.

Theoretical Features: Scaffolding

Supporting the child through the learning process while letting the child complete the task independently encourages cognitive development. When Chris entered preschool, he was unable to write his name. His teacher noticed that he was in the **zone of proximal development** and guided his thinking abilities with **scaffolding**. As Chris struggled to write his name, his teacher guided him through this process by asking him to speak his name out loud, then asking him to focus only on one letter at a time, and finally showing him a picture of the letter so that he could correctly write each letter. Had his teacher not taken the time to engage him in this process and simply written his name for him, Chris would have missed learning an important skill.

Information Processing Approach

The **information-processing approach** to cognitive development focuses primarily on preschoolers' recalling abilities. Children are able to recall details of commonly performed activities or events. Think back to your own earliest memory. How detailed is it? How old were you? Most people cannot remember anything that happened before they were three years old. This inability to remember anything of the first three years of your life is commonly referred to as **infantile amnesia**. Even at the age of three years, **autobiographical memories** (memories of our own life events, also called episodic memories) are not entirely accurate and are easily manipulated and overly simplified (which is why many states do not allow young children to testify in court cases).

Although preschoolers' autobiographical memories require additional development over time, these children tend to form memories of **scripts**, or memories for commonly performed events. For example, Chris may not be able to recall his experience of going to the grocery store the week before, but he can easily recall the major steps in grocery shopping, such as riding in the car, picking up a grocery cart, selecting items, and paying the cashier.