

Cognitive Development and Sociocultural Theory

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Psychology 150 – Dr. Brian Partridge

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Jean Piaget's Cognitive Development Theory and Lev Vygotsky's Sociocultural Theory have, and continue to be, the subject of rigorous debate; however, from my perspective, the two theories complement each other by creating a broader, more comprehensive picture of cognitive development.

Piaget's Theory of Cognitive Development

Piaget believed that children's minds were not merely miniature versions of adult brains; instead, they go through stages developing schemas (a framework of processed and gained knowledge), assimilating information into existing schemas, and changing schemas to accommodate new information which cannot be assimilated. Equilibration is the balance between assimilation and accommodation and is typically how children progress through stages. Piaget's theory states there are four stages: the sensorimotor stage(age: birth to 2 years), the preoperational stage(age: 2-7 years), the concrete operational stage(age: 7-11 years), and the formal operational stage(age: 12 and up).

Sensorimotor Stage

In this stage, we develop through experiences, movement, and our five senses. In the first month, it is all about reflexes and the child's reaction to various stimuli, creating the reflexive schema. This develops via circular reactions as the child interacts with their environment and begins to explore different actions and their effects. My son found that when he kicked the crib rails, the mobile would move, which eventually led him to learn how to reach out and turn it with his hands. One of the main milestones of this stage is object permanence, where a child learns that when an object is hidden from sight, it is still there, which signifies a working memory.

Preoperational Stage

We learn to speak and begin to comprehend symbols such as words, pictures, and gestures represent something in the world. The child is very egocentric in this stage and begins to explore the world through play and make-believe. Piaget called this the intuitive stage because while the child is receiving a vast amount of input, they do not have the cognitive skills to understand how they acquired the knowledge. In this schema, speech becomes prevalent, and memory and intelligence become evident. My son would watch me fence and then mimicked my actions using anything that resembled a foil, which demonstrated his use of symbols and the ability to pretend.

Concrete Operational Stage

The central aspect of this stage is the ability to develop and apply logic while being less egocentric and more rational. The child can apply logic to concrete observations but has a difficult time with abstract concepts. A conservation test in this stage is using two glasses of liquid with equal amounts in each glass and then pouring the liquid into containers differing in shape and size to determine if the child understands that the amount of fluid is the same regardless of the containers shape.

Formal Operation Stage

According to Piaget, this is the final stage of development that lasts into adult-hood and consists of learning how to think abstractly, form metacognition, gain the ability to reason deductively, and form hypotheticals. This stage also involves contemplating subjects such as the future, society, politics, etc. In contrast, whereas Piaget believed that most of our development was internal and a result of self-discovery and our interactions with the environment, which leads

to learning, Vygotsky believed that culture, language, and social interactions played a more significant role in learning, which leads to development.

Vygotsky's Sociocultural Theory.

The Sociocultural Theory proposes different cultures and societies affect a child's cognitive development. Like Piaget, Vygotsky believed that children are born with the elementary mental functions: attention, memory, sensation, and perception. But unlike Piaget, these elementary functions become higher mental functions through social and cultural influences as well as language, which in Vygotsky's view, is paramount in developing thought, for without language or symbols, what is a thought? Children hear external speech, as from a guardian, which eventually becomes self-talk or private speech, aiding their cognitive abilities, and eventually becomes internal speech.

Scaffolding is another crucial aspect of Vygotsky's theory, which demonstrates how a more knowledgeable other (MKO) can increase a child's ability to learn by providing a zone of proximal development(ZPD), where a child can learn beyond their zone of internal development(ZID). Scaffolding allows us to learn from anyone who possesses a higher level of knowledge or experience, regardless of age.

Conclusion

From my perspective, both theories are valid, if incomplete. Piaget's theory is concrete in its developmental breakdown and categorization but does not address the importance of language, sociocultural influences, and scaffolding, nor does it address the fact that some never reach the formal operational stage. Vygotsky's theory is more fluid and less expanded on, which is possibly due to his death five years after he created his theory. However, when one combines

the two theories, we get a more holistic and encompassing view of the various factors that shape cognitive development.

References