Piaget vs. Vygotsky: The Cognitive Development Theory
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Takeaways

- Cognitive development is defined as development of the ability to think and reason.
- Both Piaget and Vygotsky were regarded as constructivists.
- Piaget's theory has 4 set stages; Vygotsky does not believe in set stages.

Cognitive development is defined as development of the ability to think and reason (University of Chicago Comer Children's Hospital, 2006). Jean Piaget and Lev Semionovich Vygotsky were both enormously significant contributors to the cognitive development component of Psychology. The way children learn and mentally grow plays a central role in their learning processes and abilities. By understanding the progression of cognitive development teachers enable themselves to better cater to the unique needs of each child.

Both Piaget and Vygotsky were regarded as constructivists. Constructivism is an approach to teaching and learning based on the premise that cognition is the result of "mental construction". In other words, students learn by fitting new information together with what they already know. Constructivists believe that learning is affected by the context in which an idea is taught as well as by students' beliefs and attitudes (Hawai'i Department of Education E-School, 1996). One other similarity between Piaget and Vygotsky is that they both believe that the boundaries of cognitive growth were established by societal influences. Unfortunately, this is where the similarities between Piaget and Vygotsky end.

The key ideas of Piaget's and Vygotsky's theory differ. Piaget believed that intelligence came from action. He held that children learn through interacting with their surroundings and that learning takes place after development. Alternatively, Vygotsky felt that learning happens before development can occur and that children learn because of history and symbolism (Slavin, 2003, p.30, 43). Vygotsky also believed that children value input from their surroundings and from others. Piaget did not place importance on the input of others.

Piaget and Vygotsky's theories on cognitive development also have differing opinions.

Piaget's theory of cognitive development consists of four evident phases. The first is referred to as the sensorimotor stage. This stage typically occurs between birth and two years of age. During the sensorimotor stage children at first rely solely on the reflexes (sucking and rooting for example) that they were born with. Intelligence manifests itself through motor activities, for example children learn to crawl and walk during this stage. Most of the knowledge acquired during this stage is through physical activity. However, some language skills begin to emerge and the concept of object permanence is obtained during the sensorimotor period.

The second segment of Piaget's theory is called the preoperational stage. This takes place between the ages of two and seven. Throughout this stage children are egocentric. In other words they believe that everyone thinks exactly as they do. Children begin to use symbolism in relation to their world. Also, their use of oral language, memory, and imagination blossoms during this time.

The concrete operational stage is Piaget's third stage of cognitive development. Between the ages of seven and eleven children experience a dramatic change in the way they think. Thinking becomes less egocentric and more logical. Reversibility, the ability to perform a mental operation and then reverse one's thinking to return to the starting point, manifests itself prominently during this stage (Slavin, 2003, p.33).

The final step in the cognitive development theory of Piaget is identified as the formal operational stage. It has been ascertained that only about 35% of people ever achieve formal operational thought (Huitt & Hummel, 2003). This stage provides those who attain it with the ability to master abstract though and use symbols in relation. This affords the capacity to complete intricate problems in subjects such as Algebra. Hypothetical situations are also processed logically during this stage.

While Piaget's theory has four clear stages, Vygotsky alleged that there are no set stages at all. The first facet of Vygotsky's theory is referred to as private speech, or essentially talking to oneself. Vygotsky found private speech to be important because it aided children in thinking through an issue and coming to a solution or conclusion. Private speech eventually is internalized, but it never completely goes away.
Vygotsky's idea of a zone of proximal development is the second aspect of his cognitive theory. A zone of proximal development is the level of development immediately above a person's present level (Slavin, 2003, p.44). The zone of proximal development contains things that children may not be able to do alone at the time, but are on the verge of achieving. Vygotsky felt it was important to work within the zone proximal development to achieve maximum learning.

Scaffolding involves encouragement and assistance in the form of advice and suggestions to aid a child in mastering a new concept. Scaffolding is the final piece of Vygotsky's cognitive development theory. By using hints and pointers from teachers, parents, and peers who have already grasped the desired concept, children are able to form their own path toward a solution and by doing this eventually to self-regulate, or think and solve problems without the help of others (Slavin, 2003, p.44). Teachers and school systems have been applying the cognitive development theories of Piaget and Vygotsky for some time. A good example of Piagentian learning could be set in a preschool classroom. During the preschool years Piaget views children as being in the Preoperational stage and as a result they tend to be egocentric. Therefore, it would be logical to talk about things with preschool age children from their own viewpoints as they will feel their experiences are the only experiences. During show and tell one child might say the ball that another child brought to class to share is for rolling while the child who brought the ball may feel the ball is better suited to throwing. Neither child is wrong in this instance, the ball can be used for both purposes, but they may think that because they each respectively like to roll or throw the ball that the other child likes to share in the same activity.

A possible classroom application of Vygotsky's cognitive theory could take place in a first grade classroom. First grade students are often on varying levels of knowledge. Some children may already know how to read while others are still trying to master this concept. A good way to help the children who are not reading as well as the others may be to give these children help sounding out a word when they get stuck while reading a story. In conclusion, cognitive development plays a key role in learning and thinking methods of children. Piaget and Vygotsky offer some incredible insight into the possible ways children learn and by using these theories it is possible to create a more conducive learning environment for each child.

References


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