

Compare and contrast two theories of cognitive development.

Cognitive development is an important theory for psychologists to study as its main aim is to observe how children learn and process the information that they gather from the world around them. Additionally, it is the development of the thinking and organizational systems of the mind that includes thinking, reasoning, problem solving and the development of memory. It also helps psychologists to understand the importance of the influence of nature or nurture on a child's cognitive development. This essay's aim is to compare and contrast Piaget's theory of child cognitive development and Vygotsky's sociocultural theory of development.

Jean Piaget (1896-1980) was born in Switzerland and was said to have paved the way in the study of child cognitive behavior. After studying psychology in Zurich and later in Paris, Piaget went to work in the school in the rue de la Grange aux Belles where his interest in child cognitive development began and after having children of his own, he began to observe them while they were babies (Chiland, 2016).

Piaget used the constructivist approach to explain cognitive development in childhood. He proposed that children were active in forging their development and understanding of the world in which that development was implanted therefore suggesting that children are active learners (Halpenny, 2014).

Additionally, he proposed the idea that children go through four stages of cognitive development as they try to make sense of the world around them. During the first two years of an individual's life, Piaget suggested that they devise schemas or organised notions that are built up through repeated experiences. This is what he called the sensorimotor stage (Singer & Singer, 1995). Piaget argued that schemas were the mental structures that infants use to help construct past

experiences to assist them in understanding future experiences. Furthermore, at the beginning of life, schemas tend to be simple and are largely built up of inbuilt reflexes such as sucking and grasping which, in turn, are only activated when certain objects are present and operate independently of other reflexes (Gross, 2001).

To explain how children use and adapt their schemas, Piaget suggested three concepts.

Assimilation, accommodation and equilibration. Assimilation refers to the process by which children absorb new information into existing schemas. Accommodation refers to the process by which children adjust their schemas to accommodate new information and experiences. When a child can deal with these new experiences they then enter a state of equilibrium. However, Piaget recognised that children sometimes cannot deal with these experiences and that their schemas can sometimes be unable to cope thus suggesting that disequilibrium occurs (Gross, 2001).

The first stage of Piaget's four stages of cognitive development is the sensorimotor stage. The second is the preoperational stage. This is when children begin to associate images and symbols with the world around them and occurs at two to seven years of age. The third stage is the concrete operational stage. This is when children can reason logically about events and classify objects into different sets and occurs at around seven to eleven years of age. Lastly, the fourth stage is the formal operational stage. This is when children, known as adolescents can reason in more abstract, idealistic and logical ways and normally occurs at eleven years of age through to adulthood (Santrock, 2014).

Furthermore, Piaget put forth the idea of egocentrism meaning that preoperational children only see the world from their own point of view and cannot understand that other individuals may have a different point of view. To prove this, Piaget used the swiss mountain scene test and found that four-year olds were only aware of their own perspectives and not of the perspectives

of others. Six-year olds showed some awareness of different perspectives but it was only seven and eight-year olds that were completely aware of different perspectives thus, he suggested, that children below the age of seven are bound by, what he called, the egocentric illusion (Gross, 2001). However, according to McDonald & Stuart-Hamilton (2003), critics of Piaget have suggested that children's poor performance during the task may be because they don't understand the task rather than them having a lack of knowledge of other people's point of view. If a less demanding task is used then it's thought that children's performance will improve.

In addition to the swiss mountain scene test of egocentrism, Piaget advocated that preoperational children cannot understand the idea of conservation. Conservation is the understanding that any quantity such as length, liquid quantity etc remains the same despite physical changes in the arrangement of the objects. He used the conservation of liquid quantity test and found that children under five and seven have difficulty understanding the idea of conservation whereas children older than seven to eight are capable of understanding that volume of liquid, after changes in form, still remains the same (Lozada & Carro, 2016). However, after carrying out their own study where they evaluated the role of hands on experience in cognitive processing, where Lozada and Carro (2016) let the children handle the materials first, they found that active participation during learning can help connect children's experiences more closely with cognitive processes thus possibly suggesting that had Piaget let the children handle the materials first in his study, they would have possibly been able to understand the concept of conservation.

On the other hand, a psychologist named Lev Vygotsky (1892-1934) was also interested in the cognitive development in children but unlike Piaget, Vygotsky, focused more on the importance of a child's social knowledge in explaining cognitive development. However, his work wasn't translated into English until 1960 He argued that social knowledge can be either psychological

which could include numbers, language and art or technical which could include books (Eddy, 2010). Central to Vygotsky's studies was that of the sociological cognitive theory. One idea that Vygotsky proposed was that of scaffolding and the zone of proximal development. Scaffolding is the role played by certain individuals in a child's life by which they learn their knowledge and skills. These could be parents, teachers or siblings. They will guide learning within the child's proximal development which refers to the functions that are not yet matured but are in the process of maturing (Gross, 2001). The zone of the proximal development shifts as the child develops.

Furthermore, Vygotsky also suggested that language plays a crucial part in the cognitive development of children. He argued that children use speech not just to communicate but to help them solve tasks too. Additionally, he believed that young children use language to regulate their behavior as in to plan, guide and monitor it. This is what is known as self-regulation (Santrock, 2014).

According to Vallotton & Ayoub (2016), self-regulation is generally recognised as an important social-emotional skill constructing children's abilities to act pro-socially, productively take part in activities and adapt to new or challenging situations. Kopp (1982, as cited in Vallotton & Ayoub) proposed that in early childhood, the basic development of self-regulation would be the shift from early reactive reflexes to proactive and conscious planning processes. Between the ages of one and three, self-regulatory skills are still quite simple but yet are still growing rapidly. He also suggested that children gain awareness of what is required and expected of them socially at around two years old, and that they can initiate and terminate actions to comply with these expectations to achieve social goals. However, as not every child develops at the same time, there have been studies carried out into what happens to cognitive development when a child's

speech is delayed which concluded that there is a link between delayed language and behavioral problems. Qi & Kaiser (2004, as cited in Vallotton & Ayoub), found that after observing children with or without language delays in a classroom setting, Preschoolers with delayed language skills were more likely to act aggressively and disruptively and were less likely to initiate and engage pro-socially.

As Piaget and Vygotsky were both pioneers in the understanding of cognitive development. It was inevitable that others would start to make comparisons of them both. With Piaget's theory of child development there was little emphasis on sociological context, it was a cognitive constructive theory, there was a strong emphasis on stages. The main key processes were schema's, assimilation, conservation etc. He didn't see the role of language as being important. He emphasised the idea that cognition primarily directs language and that education refines the child's cognitive skills that are already there. Additionally, he viewed teachers as a facilitator and a guide to help support the children (Santrock, 2014).

In contrast, Vygotsky put a strong emphasis on sociocultural context, it was argued from a social constructivist view and no stages were proposed. The key processes central to his theory was the zone of proximal development, language, dialogue and culture with language playing a major role in shaping cognitive behavior. He also suggested that education plays a central role in cognitive development, that helps children learn the tools of culture. Similarly, like Piaget, Vygotsky also saw teachers as facilitators and guides to help support the children (Santrock, 2014)

However, according to Lourenco (2012), there is a crucial difference between Piaget and Vygotsky's theories that seems to have gone unnoticed and this is the idea that Piaget's approach is basically concerned with the individual having the freedom to act independently in the

physical and social world. Piaget argued that the development of cognitive behavior is an autonomous process rather than a secondary consequence. In contrast, Lourenco (2012) argues that Vygotsky almost always appeals to the heteronomous individual whose development relies heavily on social structures that they experience throughout their life. In other words, Vygotsky believes that cognitive development is a result of an action or operation which initially represents an external not internal activity or operation.

In conclusion, cognitive development is an important theory for psychologists to study as its main aim is to see how children learn and process information gathered from the world around them. Two psychologists who paved the way into the research into cognitive development were Jean Piaget and Lev Vygotsky. Piaget argued that children are active in forging their own development and understandings of the world and suggested that children are active learners. He proposed the idea that children go through four stages of cognitive development to try to make sense of the world around them. This is when they devise schemas or organised notions that are built up through repeated experiences. Vygotsky, on the other hand, focused more on the child's social knowledge in explaining cognitive development. He proposed the idea of scaffolding and the zone of proximal development. Scaffolding refers to the role played by caregivers in a child's life by which they learn their knowledge and skills from. Caregivers will guide the child within their proximal development which refers to the functions that are not yet matured but are in the process of maturing.

Furthermore, as was shown in this assignment there were a few similarities and differences between the two theories but however, Lourenco (2012), argued that there is one difference between the two that is generally overlooked, and this is that Piaget approach to cognitive development is an autonomous process rather than a secondary consequence whereas Vygotsky's

theory to cognitive development appeals to the heteronomous individual meaning that Vygotsky believed that cognitive development is result of an action which initially represents an external activity not an internal one.

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