Differences between piaget and vygotsky's

Profession

Introduction

The manner in which children develop cognitively, is essential in expanding their overall learning and thinking capabilities. Jean Piaget (1896-1980) and Lev Vygotsky (1896-1934) are among the most significant researchers in the discipline of cognitive development. Both Piaget and Vygotsky contributed information of great magnitude to studies of the learning and thinking abilities of children, however they offered different hypotheses in order to reach their research conclusions.

Piaget posed that human thinking begins with motor capacity growth. Consequently, infants acquire early knowledge through awareness, behaviour and the resulting changes that their actions impose on theirenvironment(Dubuc 2002). During his lifetime, as Dubuc continues, Piaget linked brain development and behaviour, thus leading the way in the research field of genetic epistemology. By studying young children, he was able to observe their thoughts, and how such thoughts are formed; leading him to conclude that cognitive development is a result of complex connections between the maturation of the nervous system and language. This in turn posed the theory that such maturation is dependent on the way in which children interact physically and socially with their environment. Language and literacy assessments are a useful too for investigating brain development in young children. Exposure to sounds from early infancy has an important influence on auditory neurons and how these neurons differentiate and perform. This would support Piaget's idea that the immersion of a child in a learning environment is how they develop – what they hear, see, and feel (Mustard 2006).

Through his research, Piaget developed his stage theory. He posed that the thinking and reasoning abilities of a child develop at different rates across different stages throughout their life. In relation to brain development, Piaget's stages of intellectual development can be correlated with some of the foremost periods of brain growth in young children (Child DevelopmentInstitute 2010). Human brains do not reach total maturity until at least the adolescent period, and it is important to ensure that expectations of a developing child are realistic for any given age. Piaget's sensorimotor stage, for example, is based on children from birth to approximately two years. Their development and learning is sequential, commencing with learning to undertake small repetitive actions, such as grasping, through to having the ability to stand, and eventually walk.

The theories of Piaget have, however, faced much criticism. Russian-born Lev Vygotsky is one of the most famous psychologists to challenge Piaget's ideas. Although he also saw the child as an " active constructor of knowledge and understanding" (Smith et al 2003 p 493), his notions differ because of an emphasis on the way in which social interactions by more knowledgeable peers aided the child's learning journey. The Vygotskian approach also believes that children's growth proceeds in a more continuous manner than a maturationally determined stage theory such as Piagets. While this perception highlights the beneficial contributions of biological and environmental factors, greater emphasis is placed on predetermined progression path through rigid developmental sequences (Kessenich & Morrison 2011). Vygotsky's way posed the notion of a more gradual developmental process which was equally influenced by brain maturation

and stimuli within the environment.

Vygotsky formulated the Zone of Proximal Development, which can be defined as the difference between a child's current level of knowledge, and subsequently, their possible capabilities with correct and proper guidance. He posited that instruction always preceded learning, and quotes " learning is a necessary and universal aspect of the process of developing culturally organized, specifically human psychological function" (1978, p. 90). He theorised that a child's social or external speech, develops into egocentric or inner speech, prior to total internalisation as an adult. This can be defined as the manner in which children describe or narrate their actions aloud prior to developing the ability to think to themselves. In contrast, the Piagetian approach viewed egocentric speech as a mere an auxiliary to behaviour, which subsequently disappeared as the child matured. (Ginsbury and Opper 1979).

As Smith et al state, Vygotsky placed a higher importance on language in learning than Piaget, however he also emphasised that the learning process must take into consideration a child'sculture, and the interactions with significant people within the culture and immediate environment. Whereas Piaget focussed on the notion that learning occurs through interactions with objects and subsequently creates a foundation on which develop further, Vygotsky believed learning is achieved through cooperating with peers, parents, and teachers, for example, and also through the culture in which the child is immersed – the language, play and beliefs. Some years after Vygotsky's death, his works were translated into English and although, as Smith et al have discovered, he had failed to give intricate detail of how an

adult may " lend consciousness to the child who did not already have it" (p 502). This led to Jerome Bruner (1915-) and colleagues developing the notion of scaffolding, which is interactional support, mainly by way of adult-child discourse that is structured to increase the child's intrapsychological performance. Eventually adult support will be withdrawn gradually as the child masters a given task. This idea is still the subject of much research in present day, and Bruner has ensured that the Vygotskian way is still very much present in theeducationand childcare system

According to Piaget, two major notions direct brain and biological maturation: adapting and organising (Bhattacharya & Han 2001). In order to survive in any situation, children should adapt to physical and mental stimuli. As Bhattacharya and Han continue, Piaget theorised that assimilation and accommodation are integral to the process of adapting. He believed that humans have the ability to assimilate new information and subsequently adjust this data to fit into their existing mental structures. These mental structures accommodate, or adjust to constant changes that are faced within the external environment.

Further research on child development attempted to describe how genetics underpinned learning processes and abilities. Piaget's developmental theory was also referred to as genetic epistemology, owing to his interest in human knowledge development. The scientific explanation of genetic epistemology is the study of knowledge and intellect advancement, throughout a person's life. Although Piaget studies such intellectual growth, his stage theory failed to cover beyond adolescence. In contrast, Vygotsky's theory saw that human knowledge is constantly evolving, throughout many more ages and stages in

life. Knowledge of genetic structures and operations convinced some psychologists to consider that psychological characteristics could have been inherited. While they believed in the prominence of genetic factors in child development, others theorists, such as Vygotsky, argued that other issues also had a bearing on the development of the human mind (Child Development Blog 2008). Whilst he recognised that genetics do play a role in development, he believed that it is the transmission of cognitive abilities because of social interactions, as opposed to transmission of genetic traits (Rathus 2007) which develops the mind.

The theories of Swiss-born Piaget and Russian Vygotsky can be related to the ongoing nature versus nurture deliberation, which has been in existence for many generations. " Nature" focuses on set genetic traits much like the theory of Piaget. However, " nurture" considers learning through social and environmental experiences, which is how Vygotsky saw the learning process.

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