

Throughout this essay I intend to write a detailed analysis, description and evaluation of Piaget's work towards cognitive development and his theories based around a child's development such as the four stages of learning he proposed. I will also apply his methods to practices in society today and judge whether these methods are applicable to current practices such as schools and private nurseries to name a few. Psychologist and author Kendra Cherry creates an analysis of the key aspects of Piaget's work and focuses on the topics I will be investigating and have intent to produce work on. I will be providing academic evidence throughout my work to support my points.

Piaget's cognitive learning theory is a comprehensive theory which focuses on the nature of how humans learn and acquire knowledge, specifically the cognitive development of children and how they develop a 'mental model of the world' (McLeod 2018). It is important to consider his idea that a child's cognitive development isn't a quantitative process but qualitative. Piaget disagreed with the idea that knowledge and intelligence is premade and fixed within a child's brain but believed it was developed through interactions with environments around them and a cognitive process which occurs with biological maturation. These environments could be outdoors for example. A child may not understand how a flower grows for example until they experience it through interactions with the outdoors thus relating to his idea that cognitive development occurs with interactions rather than fixed traits. Piaget was focussed on how children learn and the mechanisms they use to develop their cognitive skills rather than the levels of intelligence a child could reach. It differs from other theories proposed such as Vygotsky's theory where he suggested that a child learns through social interaction in comparison to Piaget's idea that children are more independent and can create their own learning methods. As well as that, Vygotsky believed that with correct tools used in The Zone of Proximity, a child's development could excel quicker whereas Piaget argued that children will only learn when they are ready and work at their own pace.

Jean Piaget believed that children go through four stages of learning. These include sensorimotor, preparational, concrete and the formal operation stage. Piaget developed this intellectual stage theory after making observations of children throughout his career. Between birth and two years, Piaget believed this was the sensorimotor stage of a child's development. This stage is where infants use their senses to begin learning and start to use their fine motor skills such as holding items before they can move forward onto gross motor skill such as walking. During this stage of development, Piaget suggested that infants are able to understand that their actions and movements affect those around them, such as crying if they need affection or feeding. He believed that babies and toddlers at this age of birth to two years can use basic actions such as grasping and sucking to learn about the world around them. Psychology research created by TPN (2017) stated that from this stage of learning "The child is ruled by his sensations and actions and, as such, learns by sensing and doing". From using actions such as this, they can tell the difference in materials such as solids and liquids. In practices today such as nurseries, sensory activities are used to help this stage develop. The use of Piaget's first stage of cognitive development is practised through the use of paint, messy play with materials like shaving foam, ice and water play. In this stage Piaget described how object performance is learned and children can progress onto the next stage of learning as they grow older. Through sensory learning, children's cognitive development develops at a rapid rate and Piaget argued that from their environments they are continually adding to their knowledge and intelligence. It is however important to note that every child is different and not all children will develop these skills at this age and this is just one criticism of Piaget's work. The sensorimotor stage was also separated into six substages to give a more accurate and detailed review of how a child develops their cognitive knowledge between the age of birth to two years.

Between the ages of two and seven, the preoperational stage takes place according to Piaget. Language may have been put into the foundations of a child's cognitive development throughout the first stage but as they grow further into the preoperational stage a child's language progresses and they begin to think symbolically and start to make use of objects and pictures to communicate and help represent different needs. Piaget believed that "play is the work of childhood" and within this stage suggested that children struggle to think logically but learn through pretend play. In practices pretend play is often a rotated system that changes in seasons, such as being Santa's grotto at Christmas. Children learn basic skills from pretend play, such as how a shop works in basics with the use of pretend money and tills. Although this is a key characteristic of Piaget's work and is evident in children in mainstream schools and other settings, this isn't available for all children so may not be applicable to every child that will be at the stages of cognitive development. Children make use of egocentric thinking during the preoperational stage and have little regard for other's feelings which is when the use of norms and values being taught in settings is used such as saying sorry. Piaget believed that during this stage "Children do not understand concrete logic" (Piaget, 1936). A child's imagination develops at a greater pace in this stage in comparison to the previous and their cognitive learning will change by the use of other objects and techniques such as asking or directing, e.g. pointing at a child to show what happened. Although cognitive skills have developed further during this stage, Schonberg (2013) highlighted that "Notable cognitive characteristics of this stage are *centration* and, relatedly, a lack of understanding of *conservation*".

Once a child has reached the age of seven, they will move onto the concrete operational stage until the age of eleven. The major difference to the preoperational stage is the development of logical thinking on concrete events. During this stage, the understanding of conservation becomes apparent. Children will begin to understand different concepts of things such as height and weight and as Dasen (1975) wrote, children are "expected to attain concepts of conservation of quantity, weight" at this age. For example, a child may begin to understand that a smaller but wide cup of juice will have the same amount of liquid as a tall but thinner cup. Naturally, a child would pick the taller glass because it appears to have more liquid in but as their cognitive development expands in this stage, they start to learn the differences. As well as this, Piaget noticed that the quality of being egocentric starts to fade and children become more aware of their peers' feelings and learn from the environments around them, such as schools where their behaviour will be punished or highlighted if it has affected another's feelings. As well as this, it was suggested by Piaget that children discover and realise that their thoughts are their own and unique, and not every child will have the same as them. This is often noticeable in situations where children say their favourite superhero for example, is better than another's child's favourite and they understand that other children have their own favourite. Piaget also recognised that during this stage children can understand reversibility. An example being that they may have a baby brother, their sibling is a boy and a baby boy is a human. It was recognised that at this age children can now apply logic to numbers, ideas, classifications and create rational ideas and interpretations.

The final stage that Piaget named the formal operational stage occurs between the ages of twelve and into adulthood. At this stage of cognitive development adolescents and young adults will start to think abstractly and understand hypothetical problems. These hypothetical problems come into use during comprehensive school studies showing Piaget's theory is correct and still being used in current practices in that sense. It is not to be said all will understand but the beginning of this skill develops. Adolescents and young adults will develop on their ability to think abstractly and begin to use the skill of reason and become capable of producing solutions to problems and have a more scientific outlook on the world around them. Mcallister (2003) mentioned how "During this stage, the individual will demonstrate the ability to critically analyse situations, taking into consideration reasoning

and argument”, showing current support of Piaget’s theory. At this stage, adolescents develop on their understanding and knowledge of political issues, philosophy and social studies. It could be said that the significant increase of logic and deductive reasoning is the key development in this stage. Problem solving is far more common at this age and adolescents and young adults further their knowledge on this through practice in schools as well as jobs. Problem solving at this age becomes more methodical and through topics such as science and maths this skill will be used frequently and is practiced in the work place also. The work place pushes for more independence and a young adults problem solving skills will develop further and be practiced in more significance. Salkind (2004) suggested that “The formal operational thinker has the ability to consider many different solutions to a problem before acting”.

Although Piaget’s work may be most well-known due to his four stages of learning theory, it is important to mention his concepts he used to better explain his work on cognitive development. Piaget believed that other factors influenced how children learn and develop such as schemas, assimilation, accommodation and equilibration. Schemas being the mental and physical actions that are involved in developing knowledge. Piaget believed that schemas have a category of knowledge and how we obtain that knowledge. An example being if a child has only ever seen a pink lollipop, they might believe all lollipops are pink. They have obtained the knowledge mentally, but it must be expanded to complete. Assimilation is adding to our current knowledge and is processed differently in all children because their knowledge differs so is subjective. Accommodation is another concept Piaget brought light to and believes it is the process of changing and adapting current knowledge when new things are learnt or experienced. Like the previous example, once a child learns that not all lollipops are pink, they have adapted their knowledge which is the process of accommodation. Although all children develop cognitively differently, Piaget suggested that all children will try to find a balance between assimilation and accommodation during their development. They will try to apply previous knowledge to situations but also change due to new knowledge and try to keep an equal balance between the two. This is the process of equilibration.

Piaget’s theory is applicable to practices today and is used throughout education and natural learning outside of the education system. Schools, nurseries, clubs and social influences make use of Piaget’s ideas through activities such as physical play, academic study and his theory can be proven by looking at the number of children that fit the criteria for his theory. Although Piaget’s theory can be supported by evidence such as exam results and research studies conducted by sociologists such as Parson’s proposal of the home being a bridge to education, Keating (1979) created a report that showed 40-60% of college students fail at formal operation tasks, As well as this, Dasen (1994) stated that a mere one-third of adults reach the last stage of Piaget’s four stages of development (formal operational stage). It can be said that Piaget’s theory is now out-dated, but his main proposals are effective in practices in current times.

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