



“Jean Piaget's Theory of Cognitive Development” : A Review

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Abstract

Piaget's (1936) theory of cognitive development describes the process by which a child forms an internal representation of the external environment. He did not think that one's intellect was fixed, but rather that it grew as a consequence of biological maturation and contact with one's environment. In other words, he felt that intelligence developed through time rather than the other way around. During the 1920s, Piaget was employed by the Binet Institute, where he was responsible for generating French translations of English intelligence test questions. He found himself utterly enthralled by the reasons that students made to justify their erroneous solutions to questions that required the use of logical thinking. After hearing all of these incorrect responses, he came to the conclusion that adults and children think in very different ways.

Key words: cognitive, development, adults, thinking etc.

Introduction

Piaget (1936) was the first psychologist to carry out exhaustive research of how cognitive abilities evolve over time. “Among his many achievements are the invention of a stage theory of cognitive development in children, a series of observational studies of cognitive development in children, and a set of simple yet imaginative tests to distinguish unique cognitive talents. Prior to the study that Piaget did, it was often believed that adults were more cognitively capable than children. According to Piaget, the brains of children are noticeably distinct from those of adults. Jean Piaget, a French psychologist, was of the opinion that children are born with a relatively simple brain structure (which is both genetically inherited and has changed through time). Its purpose as a theory is to shed light on the mechanisms and processes that contribute to the development of a person who is capable of reasoning and thinking through hypotheses. Its goal is to do this by providing an explanation. Piaget believed that the process of cognitive development consisted of a progressive reorganisation of mental processes that took place as a direct result of biological maturation and interaction with the outside environment. The world around them is gradually assimilated by children, at which



point they become aware of discrepancies between what they already know and what they see in their surroundings”.

Piaget's 4 Stages of Cognitive Development

Piaget identified four stages of cognitive development that indicate how children's mental processes go from more simple to more complex through time.

The sensor and motor stage of the process (birth to age 2)

The second stage is the beginning of operations (from age 2 to age 7)

Step 3: a specific stage of operation (from age 7 to age 11)

Operational Stage 4 is also known as "Adolescence and Adulthood," and it refers to ages 11 and above.

Review of Literature

It is impossible to overestimate the significance of Jean Piaget's Theory of Cognitive Development, which is widely considered to be one of the key works in the area of developmental psychology. According to Lourenco (2012), Piaget's ideas have served as a solid foundation upon which future research has been constructed, developed, and discussed.

According to Piaget, these phases are sequential, hierarchical, and universal, and each stage reflects a completely different style of thinking than the one that came before it.

Infants and young children utilise their senses to gain an understanding of their surroundings throughout the sensorimotor stage of development. The development of object permanence is one of the hallmarks of this stage. At this point, toddlers begin to comprehend that items persist even when they are unable to see them (Piaget, 1952).

During the preoperational stage, a person will gain the ability to think symbolically and will begin to utilise language. Children who are at this stage are egocentric, which means that they have a hard time seeing things from the views of other people (Piaget, 1951).

When children have reached the concrete operational stage of development, they are more suited to comprehend logical and operational thinking, but they still have difficulty understanding abstract notions (Piaget, 1964).

Last but not least, the formal operational stage is characterised by an individual's capacity to comprehend hypothetical scenarios and to reason abstractly (Piaget, 1972).



However, Piaget's theory has been subjected to a number of critiques, most notably from Vygotsky, who pointed out that Piaget's phases do not fully account for social impacts on cognitive development (Vygotsky, 1978).

In addition, there is evidence from empirical study that points to the possibility that the stages of cognitive growth are more of a continuum (Siegler, 1996). In addition, the universality of Piaget's phases of development has been called into doubt since there is evidence to show that variations in cultural norms might influence the development and character of these stages (Nucci & Saxe, 2003).

Piaget's theory has offered a core framework that continues to affect developmental psychology as well as education, despite the critiques that have been levelled against it. Indeed, as a result of his work, major advances have been made in our ability to comprehend and support the educational processes that occur in children (Flavell, 1963).

Educational Implications

- “Although it was not explicitly stated, other academics have shown how some features of Piaget's theory might be applied to the process of teaching and learning. Piaget's ideas have had a significant effect on educational philosophy as well as classroom practise. A government study of primary education that was conducted in the United Kingdom in 1966 was greatly inspired by Jean Piaget's theory, among other things. The concept that children learn best when they are actively involved in the process of discovery served as the foundation for curricular improvements that were implemented in primary schools.
- The greatest way for children to learn is via play, and teachers shouldn't assume that just the things that can be assessed are valuable; instead, they should concentrate on the things that can be learnt through exploration. The idea of "readiness" is essential since Piaget's theory is founded on the biological development and stages that occur throughout life. There is a great deal of discussion over the appropriate timing for the presentation of certain concepts or pieces of information. According to a number of hypotheses about the development of cognitive abilities, children should not be instructed on certain subjects until they have reached the appropriate cognitive level.



- Piaget (1958) contends that the ability to solve problems is not something that can be taught; rather, it is something that must be discovered by the learner on their own.
- The classroom setting should be conducive to learning that is discovery-based and student-centered. It is not the role of the teacher to educate the pupils; rather, the teacher's job is to assist the students learn. The following should be supported by teachers if they want their kids to be successful in school.
- When it comes to education, you shouldn't be concerned with the outcome of your efforts.
- Using methods that require the "finding" or "reconstruction" of "truths" via the use of active processes. Using these methods.
- Utilizing a mix of activities for individuals and groups at the same time (so children can learn from each other).
- Create situations for the kid to play out that will teach them valuable lessons while also throwing them off balance. This will be beneficial to the child.
- Determine the stage of development that the kid is now in so that suitable duties may be given to them.

Important Concepts

It is vital to study some of Piaget's most important ideas and concepts in order to have a better grasp of the processes that take place during the course of cognitive development.

Among these influences on children's development are the following:

Schemas

In order to comprehend and know anything, you need a schema, which specifies the mental and physical processes involved. It is via the use of schemas that we are able to make sense of the world around us.

When we talk about a "scheme," we're talking about not just what we know, but also how we know it. As new experiences arise, current schemas are enhanced, supplemented, or completely rewritten to take use of the newly acquired knowledge.

When it comes to animals, a youngster could have a schema regarding dogs, for example. If a youngster has only ever seen little dogs, he or she may come to assume that all dogs are diminutive, fuzzy, and four-legged. Then, imagine that the kid meets a huge dog. This new



knowledge will be assimilated by the youngster, who will then adjust the old schema to include these new observations”.

Assimilation

The process of incorporating newly acquired information into our existing schemas is referred to as assimilation. There is an element of subjectivity involved in the process due to the fact that we have a propensity to shape our experiences and our information so that they conform to our assumptions. Children who have seen a dog before are more likely to refer to another animal as a "dog" since their mental models of dogs have already been formed.

Accommodation

We engage in the process known as accommodation whenever we are confronted with new information that forces us to modify our previously held schemas. The alteration of existing notions or schemas may result from the accumulation of new information or through new experiences. 5 In the course of this process, new schemas could potentially be constructed.

Equilibration

According to Piaget, the process of equilibration is the method by which all children attempt to strike a balance between assimilation and adaption in their environments. As children go through the many phases of cognitive development, it is essential for them to strike a healthy equilibrium between the processes of integrating previously acquired information and modifying their behaviour to take into account newly acquired information (accommodation). Equilibration is a theory that attempts to explain how children go from one stage of cognitive development to the next.

Conclusion

This article focuses on youngsters not only being passive recipients of education but rather active participants in their own education. They, on the other hand, conduct ongoing research and experiments in order to gain knowledge about the environment that surrounds them.

Piaget saw the process of learning as analogous to the work of scientists, with children acting as researchers as they conducted experiments and made observations in order to gain knowledge about the world around them. Children continue their education throughout their lives, picking up new information, expanding on what they already know, and reevaluating their opinions in light of fresh evidence.



References

- [1] Bruner, J. S. (1966). *Toward a theory of instruction*. Cambridge, Mass.: Belkapp Press.
- [2] Dasen, P. (1994). Culture and cognitive development from a Piagetian perspective. In W .J. Lonner & R.S. Malpass (Eds.), *Psychology and culture* (pp. 145–149). Boston, MA: Allyn and Bacon.
- [3] Hughes , M. (1975). *Egocentrism in preschool children*. Unpublished doctoral dissertation. Edinburgh University.
- [4] Inhelder, B., & Piaget, J. (1958). *The growth of logical thinking from childhood to adolescence*. New York: Basic Books.
- [5] Keating, D. (1979). Adolescent thinking. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 211-246). New York: Wiley.
- [6] Piaget, J. (1932). *The moral judgment of the child*. London: Routledge & Kegan Paul.
- [7] Piaget, J. (1936). *Origins of intelligence in the child*. London: Routledge & Kegan Paul.
- [8] Piaget, J. (1945). *Play, dreams and imitation in childhood*. London: Heinemann.
- [9] Piaget, J. (1957). *Construction of reality in the child*. London: Routledge & Kegan Paul.
- [10] Flavell, J. H. (1963). *The developmental psychology of Jean Piaget*. D. Van Nostrand Company.
- [11] Lourenço, O. (2012). Piaget and Vygotsky: Many resemblances, and a crucial difference. *New Ideas in Psychology*, 30(3), 281-295.
- [12] Nucci, L., & Saxe, G. B. (2003). *Culture, thought, and development*. Lawrence Erlbaum Associates Publishers.
- [13] Piaget, J. (1951). *The child's conception of the world*. Routledge.
- [14] Piaget, J. (1952). *The origins of intelligence in children*. International Universities Press.
- [15] Piaget, J. (1964). Part I: Cognitive development in children: Piaget development and learning. *Journal of Research in Science Teaching*, 2(3), 176-186.
- [16] Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. *Human Development*, 15(1), 1-12.
- [17] Siegler, R. S. (1996). *Emerging Minds: The Process of Change in Children's Thinking*. Oxford University Press.



- [18] Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Harvard University Press.