

Beyond the Involution of Education in China in Discussion Piaget's and Vygotsky's Theories

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Abstract: The theories of Piaget and Vygotsky have always been significant discoveries of cognitive development and have significantly contributed to the development of education and psychology. However, there are many contradictions between these two theories. Piaget mainly believes that cognitive development requires personal progress in stages, which are distinguished by individual physiological development. In contrast, Vygotsky believes that cognitive development is determined by the environment in which children live. Nevertheless, their arguments have always existed. This paper will use the “Nei Juan” phenomenon in Chinese education, that is, in education, students compete for opportunities for higher education. This article will use the theories of Piaget and Vygotsky to analyse what harm “Nei Juan” will bring to students and to distinguish the differences between the two theories.

Keywords: Education; Piaget; Vygotsky

The theories of Piaget and Vygotsky are landmarks in the development of education and psychology. They both present an epistemology that acknowledges that such theoretical constructs are developmental (Bruner, 1997). They were two of the most influential figures in the field of child development in the last century (Lourenço, 2012). They both argue that the learning process depends on the interaction with others and the importance of reflecting this interactive process into the individual's inner world (Erbil, 2020). However, to date, much discussion has been about both theories (Bidell, 1988). Scholars are discussing and studying both theories and using them in various fields. Nevertheless, most of them dispute the psychological differences between these two scholars (Cole & Wertsch, 1996) while ignoring their impact on education. That is, the learning process depends on the interaction with others and the importance of reflecting this interactive process into the individual's inner world.

In China, some vicious competition in people's education, a phenomenon known as “Nei Juan”. “Nei Juan” has led to a multitude of problems concerning the health of students and poses a latent threat to the future of China's younger generation (Li, 2022b). This essay will critically discuss Piaget's and Vygotsky's theories through the implications of “Nei Juan” in China.

Piaget's theory

Piaget developed a theory in which the individual constructs knowledge individually through different stages (Bruner, 1997). However, most of his theories are case studies, which means his theories are descriptive (Huitt & Hummel, 2003). Piaget thought that human cognitive development could be separated into four stages: the sensorimotor stage, pre-operational representation stage, concrete operations stage, and formal operations stage (Piaget, 1964). As for the first stage (sensorimotor stage), this stage is usually between ages 0-2 years. Children are willing to develop themselves in this stage through experience, movement and the five senses. After this stage, children can handle the construction of functional or sensory-motor space. However, we can only see the world from our perspective. In the next stage (pre-operational representation), the children aged between 2-7 begin to try to use language, symbolic function, and, therefore, thought and representation. The pre-operation representation stage has two levels: preconceptual and intuitive. They gradually understand the symbolic meaning of things without making specific cognitive calculations about them. During this period, they will ask many questions. In Piaget's view, this is the production of primitive reasoning. Moreover, they are still self-centred. The third stage is the concrete operations stage. Children at this stage (7-11/12 years old) have some concept of logic

and develop specific cognitive operations, and they know both order and conservation. In addition, children can classify and apply what they have learned. At this stage, the children understand that their thinking and feelings are unique to them, so they try to consider the feelings of others at this stage. In the last stage (formal operations stage), children enter their teenage years (12 or upwards). The abstract concepts are getting more accessible for them to understand. They can image virtual situations and understand emotions. Furthermore, teenagers have a specific awareness of their morality. They are more able to understand the actions or thoughts of others and become more empathetic (Piaget, 1964).

Besides the cognitive development theory, Piaget also pointed out cognitive growth's assimilation and accommodation model. He argued that cognitive development is a gradual, step-by-step process of structure acquisition and change and that people extend new stages of mental development through assimilation and adaptation, just as children's cognitive structures determine what they adapt to in their environment and how they assimilate what they are adapted to (Flavell, 1996).

Vygotsky's theory

In Vygotsky's cognition, he believes that human cognitive development is carried out through interaction with society (Topçiu & Myftiu, 2015). This shows that in Vygotsky's concept, physical maturity cannot represent children's cognitive maturity, and their cognitive development is more focused on participating in social activities and learning. Among them, the zone of proximal development (ZPD) is a crucial concept of Vygotsky in the development of social cognition. There are three stages for the ZPD. The first one is prior skills which means the children can do some simple tasks without any associations. The second stage is mediation, meaning children can do more complex tasks with some associations. The last stage is new skills which mean children cannot finish this task even with associations. ZPD helps to identify psychological functions in children who are not yet mentally developed, as well as functions that are in the embryonic stage but will mature tomorrow (Topçiu & Myftiu, 2015).

In addition, Vygotsky introduced the concept of constructivism in the 1920s, which emphasised that humans are a social group, and that cognitive development begins with the simplest cognitive activities (primary perception) and progresses through peers and teachers to acquire more advanced cognitive skills (reasoning, language, problem-solving). Vygotsky also introduced the concept of mediation, suggesting that people develop their understanding and experience from socialising or learning with others. This understanding and experience can better assist in further cognitive development (Vygotsky, 1978).

The differences of Piaget and Vygotsky theory

Piaget's theory focuses more on the cognitive development of individuals as they progress through the biological stages. In contrast, Vygotsky's theory is based on the cognitive development of the socialisation of the individual, involving the influence of others on the individual. In detail, Piaget focused on the importance of natural or innate factors in cognitive development, arguing that human cognitive development proceeds in stages corresponding to physiological development, with each stage providing the basis for the next, and that such development takes place primarily in terms of the enhancement of the individual's abilities. Nevertheless, Vygotsky believed that the critical factors in human cognitive development are the child's environment and social quality. This shows that Vygotsky does not think that age is the factor that limits children's cognitive development, but what kind of people and things they come into contact with.

Next, an example, which took place in China, will further illustrate the differences between Piaget's and Vygotsky's theories. In China, the term "Nei Juan" is becoming popular, meaning that people are engaged in vicious competition for better resources, which is undoubtedly present in the education system. The Chinese believe that those who stand out must undergo intense competition and that higher education is the only way to do so (Meng-ying, 2021). So, Chinese people have made themselves better and better in the face of massive competition from the population. Unfortunately, this phenomenon has led to many mental health problems among Chinese students (Li, 2022b).

Suppose we analyse the harm caused by this phenomenon from the perspective of Piaget's cognitive development. In that case, the Chinese educational model breaks the Piagetian cognitive development that children are supposed to undergo at each stage, which means that Chinese children are learning at the next stage when they should be. This can lead not only to resistance but also to psychological problems.

Let us look at this problem from a Vygotskian perspective. The phenomenon of 'Nei Juan', present in all areas of society, leads to a learning environment in which children constantly self-improve, lacking substantial cognitive development and only memorising what they must learn. This is compounded by the fact that the child's parents and teachers constantly transmit such concepts to the child, to the point where the child's peers are competing. In a way, this learning model, in Vygotsky's theory, limits the child's

cognitive development and the development of moral values. Vygotsky (1962) also believed that learning was a dynamic process and that such a learning style prevented children from thinking and developing more critically.

Conclusion

The theories of Piaget and Vygotsky have been the subject of debate among many critics, with Piaget's theory advocating individual stages of cognitive development and Vygotsky advocating cognitive development in the context of the individual's interaction with society. Moreover, in the education system, it is still impossible to continue with a model of education that is detrimental to children's cognitive development.

References:

- [1] Bidell, T. R. (1988). Vygotsky, Piaget and the Dialectic of Development. *Human Development*, 31(6), 329–348.
- [2] Bruner, J. S. (1997). Celebrating Divergence: Piaget and Vygotsky. *Human Development*, 40(2), 63–73.
- [3] Cole, M., & Wertsch, J. V. (1996). Beyond the Individual-Social Antinomy in Discussions of Piaget and Vygotsky. *Human Development*, 39(5), 250–256.
- [4] Erbil, D. G. (2020). A Review of Flipped Classroom and Cooperative Learning Method Within the Context of Vygotsky Theory. *Frontiers in Psychology*, 11.
- [5] Flavell, J. H. (1996). Piaget's Legacy. *Psychological Science*, 7(4), 200–203.
- [6] Lourenço, O. (2012). Piaget and Vygotsky: Many resemblances, and a crucial difference. *New Ideas in Psychology*, 30(3), 281–295.
- [7] Li, C. (2022b). From Involution to Education: A Glance to Chinese Young Generation. *Advances in Social Science, Education and Humanities Research*.
- [8] Meng-ying, L. (2021). "Nei Juan" in Exam-oriented Education in China. *Journal of Literature and Art Studies*, 11(12), 1028–1033.
- [9] Topçiu, M., & Myftiu, J. (2015). Vygotsky Theory on Social Interaction and its Influence on the Development of Pre-School Children. *European Journal of Social Sciences Education and Research*, 4(1), 172
- [10] Vygotsky, L. S. (1962). *Thought and language*.
- [11] Vygotsky, L. S. (1978). *Mind in Society: The Development of Higher Psychological Processes*.