

The Enlightenment of Piaget's Theory to Chinese Primary School Education

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ABSTRACT

Children's education, as one of the issues related to the future development of human generation, has raised great attention from schools, parents and the governments. This work aims to review Piaget's theory which was proposed by a famous psychologist Jean Piaget in 1927 by highlighting its contributions and possible applications. Piaget's theory divided children's development into four stages: the sensorimotor stage, the pre-operational stage, the concrete-operational stage and the formal operational stage. Piaget's theory has been considered one of the most front theories in the education field for its reasonable explanation on children's learning. However, there exists an aperture of understanding and application to the process of parenting because it was never represented to parents from a multi-scope prospective. By describing the current situation of Chinese, summing up previous related essays and giving implications, this review analyzed the benefits and drawbacks of applying Piaget's theory to primary school education. Here, we derive a thorough background of Chinese culture, the state of Chinese primary education, the influence of Piaget's theory and the inspiration on primary school students which is to turn "Tiger parenting" and "cramming teaching style" into peer learning. By giving advice to parents, we hope children can acquire helpful assistance for their cognitive development and attention to children's pressures from their parents. Piaget's theory has its flaws in insufficient considerations of culture, learning environment and so on. But it is a practicable way to establish children's cognitions as the following content describes.[16]

Keywords: Piaget's theory, Chinese primary education, Children's development.

1. INTRODUCTION

The different educational systems in countries have significant influences over the diverse population of students, as their uniqueness causes each student to be distinct from one another. Unlike western educational systems that focus on individual development, Chinese system of education is exam-oriented and is heavily dependent on memorization [1].

Knowing that the Gaokao, the university entrance exam, has played an important role in determining students' future paths, Chinese parents adopt a new way of parenting "dubbed" Tiger Parenting" to prepare students starting from primary school for their university entrance exam [2]. Tiger Parenting, which refers to a strict parenting method typically utilized by most

Chinese, propels children to meet higher learning expectations set by parents, regardless of their own wills and pressure. This parenting style originated from fierce competition mentally buried within the Chinese educational system, Chinese long-lasting cultural values and customs centered on obedience, and views of attaching great importance on education and its relationship with higher social status and more job opportunities. It certainly brings benefits to primary school students, some of which include developing their academic potential and cultivating good study habits. As this type of parenting style resulted in more positive outcomes, people started credit "Tiger Parenting" with higher academic performance as early as primary school.

However, this type of parenting style has negative impacts on students at an early age. Researchers argue

that it would bring detrimental effects on children's overall development in the long run, since parents often overlook some important aspects that affect individuals, including the pressure put on kids and their psychological needs.

The authoritative teaching style employed by most Chinese teachers is also a crucial part of the Chinese Primary School Education. The pro side of authoritative teaching style is that it is related to higher levels of students' academic and motivational outcomes. However, the dark side of it is that it can trigger students' natural phrase of rebellion and their feelings of inferiority.

The Cognitive Development theory, proposed by psychologist Jean Piaget, offers an insight into how Chinese parents and teachers could educate children in a more child-friendly way. The pro side of this theory is that it stresses the importance of gradual thinking development. Piaget proposed four distinct stages of development that individuals need to go through before reaching adulthood, suggesting that children's development is meant to follow a logical order.

Some researches explored the application of Piaget's theory to education, many of which discussed the potential of applying this theory to a classroom setting [3]. However, the researchers fail to take into account the traditional Chinese parenting and authoritative teaching methods, and the current situation of primary education in China.

Therefore, this paper aims to investigate the widespread phenomenon of authoritative parenting and teaching styles in school, their effects on children's development, and the application of cognitive development theory under Chinese primary school education.

2. CHINESE PRIMARY SCHOOL EDUCATION

Teachers in primary school do not always teaching effectively and parents sometimes fell their responsibility of taking care of their children mentally.

First of all, many teachers prefer cramming teaching style which ignores the development of children. Being affected by traditional methods, teachers choose to use blackboard and textbooks only. In the early development of learning, children have not learnt how to think logically. Teachers teach by giving lectures will confuse students. They may quickly lose focus or be attracted by other things because pupils' longest focused time is less than 30 minutes [4]. Some teachers would hold the classes to catch up with the teaching schedule which is beyond students' endurance. Teachers may aware of that, but it seems that they care more about what they give to their students rather than what students accepted.

Second, some pupils are not found of communicating

with their teachers or classmates about their studying. Data have suggested that some of them are afraid of being laughed about the questions they ask [5]. Teachers may criticize students learning attitude according to the mistakes they made and the questions they ask. Teachers are very authorized for the students. They may misunderstand and have self-doubt about their ability of learning and their attitude. Hence, they will probably lose confidence and interest in the subjects.

Thirdly, parenting is also crucial for children's development. Most families can satisfy children's basic needs such as warm clothes and nutrition's they are not aware that children have mental needs as well [6]. Children may have trouble in social, worrying they cannot get high grades. Parents should be aware of children's troubles and try to support and comfort their children. If the parents cannot realize that children need their help, children are likely to fail in learning subjects. Anxiety may arise when children feel that they cannot manage to do something. Children's anxiety may stop them from focusing on school and receive high grades. They may try to delay their homework in order to resist their parents [7][8].

3. PIAGET'S THEORY

In the 20th century, Jean Piaget proposed his famous cognitive theories about children's development. To Piaget, cognitive development was a progressive reorganization of mental processes as a result of biological maturation and environmental experience. Children construct an understanding of the world around them, then experience discrepancies between what they already know and what they discover in their environment. Beilin (1992) reckoned that the influence of Piaget's work on developmental psychology is like that of Shakespeare's influence on English literature [9]. Piaget's theory is so prevalent that psychologists need to reconceptualize the concept of cognitive development [10].

The cognitive developmental of children consists of four stages, including sensorimotor, preoperational, concrete operational, and the formal operational stage. The sensorimotor stage is the first stage of cognitive development, starts from birth until two years old. Infants at this age seek to understand objects by using sensor activity and characterized by object permanence and deferred imitation [11]. The preoperational stage is the second stage of cognitive development. This stage starts from 2 years to 7 years old. During this stage, an infant's symbolic ability develops such as using images and words as symbols to understand the physical world. However, they cannot think logically [11]. The concrete-operational stage is between the age of 7 years until 11 years old [12]. According to Piaget, thinking in this stage is characterized by logical operations, such as conservation, reversibility or classification, allowing

logical reasoning. These mental acts cannot be applied in hypothetical situations and are still limited to concrete situations. Therefore, concrete-operational thinking is examined using specific tasks depicting concrete-operational concepts [13]. The formal operational stage is the last cognitive stage among children. From about 12 years children can follow the form of a logical argument without reference to its content. During this time, people develop the ability to think about abstract concepts, and logically test hypotheses. This stage sees emergence of scientific thinking, formulating abstract theories and hypotheses when faced with a problem.

However, in some opinion, Piaget ignored cultural, educational, social influence and children's intelligence on the cognitive development. In a series of Piaget's experiments about Cognitive Development among children, Piaget did not examine children from diverse societal backgrounds, children that he examined all from European society, and did not take into account children who from Asia, Africa and Latin America [11]. Compared with non-western society, these European children offend received formal education [10]. Moreover, Piaget also underestimated the effects of interaction influence among peers on cognitive development. Communication with peers can change children's thinking to understand the external world. Also, Piaget did not take into account that children living with their families usually are influenced by their families [14]. In addition, Piaget did not consider students with learning disabilities show lower levels of concrete-operational thinking than their peers [11].

4. IMPLICATION

Piaget's cognitive development theory has four inspirations for Chinese primary school students' education, namely More chances for peer learning should be provided in schools, teachers should evaluate the characteristics of the concrete operational stage when teaching, rather than mindlessly raising the difficulty of learning and result in students lose interest in studying, teachers should not sightless teach in a cramming method, as this prevents pupils from learning and developing their intelligence, and Parents should pay attention to their children's emotional concerns, rather than disregarding their cognitive growth and focusing solely on their academic success.

First of all, schools should provide students with more opportunities for peer learning. According to De Lisi and Golbeck, they pointed out that Piaget emphasized peer experiences as an important factor in child development [15]. Also, they provided evidence that within a developmental context, peer interactions can improve learning results in the tasks. Peer interactions also encourage cognitive improvement more efficiently than individual effort through discourse and discussion. In other words, during peer interaction, children can not

only complete assignments better, but children can challenge each other's thinking in the process of communicating with peers, and learn different knowledge, thinking, a spirit of collaboration, and so on. Besides, schools that encourage children to learn with their peers can better develop their logical and expressive skills, because in communicating with peers, children need to organize their language so that their ideas are expressed coherently and reasonably, thereby improving their logical and expressive skills. In addition, most elementary school students are in the concrete operational stage, and children also become less self-centered and begin to think about the thoughts and feelings of others. Peer learning meets their needs, allowing them to understand the thoughts and feelings of different people, so they are perfect for learning with their peers.

Secondly, Wang believes that instead of mindlessly increasing the difficulty of learning and causing pupils to lose interest in studying, teachers should take into consideration the features of the concrete operational stage while teaching [16]. To be specific, most primary school kids are at the concrete operational stage, which is marked by children's beginning to think logically about specific occurrences, in other words, their thinking becomes more logical and organized, but restricted. Therefore, many abstract ideas and hypothetical problems, such as math Olympiad problems, are difficult for children at this stage. As we all know, the mathematical Olympiad is very popular in Chinese primary schools. Not only are some school teachers require students to study, but the mathematical Olympiad is one of the most popular courses in Cram schools. It is so common to see that some titles of articles or videos are math elementary school math Olympiads problems stumped father who graduated from Peking University, and math Olympiads problems of elementary schools stumped international math masters, Tsinghua University professor complains that elementary school mathematics Olympiads is too difficult, and so on. That shows the difficulty of the elementary school math Olympiad. Furthermore, because teachers do not pay attention to kids' cognitive development, they teach tough math Olympiad questions for an extended period, causing many students to fail many tests and lose interest in studying.

Thirdly, teachers should not blindly teach in a cramming style, so that students cannot learn knowledge and cannot promote intellectual development. Specifically, cramming means trying to squeeze a significant quantity of knowledge into a student's short-term memory in a short period can lead to tension, fear, and anxiety, making it far more difficult to absorb information. In China, when some primary school teachers find that the learning progress of the class is slower than most of the other classes they may catch up with the learning progress of other classes in a few

lessons, even occupy students' physical education, art, or music class to catch up. They teach a lot of knowledge and assign too much work. This makes it difficult for students to fully absorb what they have learned today and can result in negative emotions, such as disgust and anxiety. Furthermore, Chen and Zheng emphasize Piaget's notion that new information can only be absorbed if it is incorporated into an existing knowledge system [17]. Teachers should also give students enough time to absorb and digest what they've learned so that they can understand it. Therefore, teachers should adjust their teaching techniques appropriately, to improve students' knowledge and comprehension abilities rather than cram instruction to keep up with the learning progress.

Finally, instead of ignoring their children's cognitive development and focusing only on their academic performance, parents should pay attention to the emotional problems their children may have. Faced with the competitive pressure of further education, many parents of primary school students show tiger-style parenting which refers to a severe, authoritarian parenting style, the purpose of which is to give their children an advantage in the competition for further education. As a result, parents disregard their children's cognitive growth and push them to attend plenty of extracurricular programs, such as piano lessons, math Olympiad lessons, writing classes, English lessons, and so on, often for entire weekends. Chen and Zhang pointed out that the hefty workload of extracurricular tuition will have a harmful influence on pupils' physical and mental development, such as affecting children's cognitive abilities and emotions [18]. In other words, students have poor rest for an extended period due to too many extracurricular classes, causing their cognitive ability to deteriorate. Also, a large number of extracurricular classes occupy students' rest time, putting them under understudy pressure for a long time, leading to them being irritable, anxious, and even tired of studying. Therefore, parents should pay attention to their children's possible emotional problems and cognitive development and avoid tiger-style education forcing their children.

5. CONCLUSION

Overall, this article examined the "Tiger Parenting" and the authoritative teaching style adopted by most parents and teachers in Chinese society. It is concluded that the parenting style, which has been affected by factors such as cultural values and fierce competition among peers, continues to bring significant pressures on young children and negative impacts on their development, regardless of some positive influence. While setting high learning expectations and evaluating children based on their standards, the parents often neglect the psychological needs of the young children, leading to possible mental issues in young kids. On the

other hand, the authoritative teaching style has also played a role in shaping the primary school education environment in China. As mentioned in the passage, teachers put a great emphasis on students' academic performance due to the current situation of Chinese education, which is mostly exam-oriented and intense. Therefore, they might speed up their teaching to ensure that the elementary school kids are staying on track compared with kids in the same grade. To be more specific, this way of educating elementary students may overwhelm them as the amount of content might exceed their capabilities as a kid. Whether students truly understand the concept is not guaranteed under pressure.

The article was inspired by Jean Piaget's famous cognitive theory regarding children's development, proposed in the twentieth century. Children develop a sense of the world around them, then encounter contradictions between what they already know and what they find in their surroundings. The idea of cognitive development has to be rethought by psychologists. The sensorimotor stage of cognitive development is the first. Object persistence and postponed imitation are characteristics of infants' use of their senses to comprehend objects. Between the ages of 7 and 11, the concrete-operational stage begins. Children 12 years old can follow the structure of a logical argument. The article suggested that Piaget did not study children from various socioeconomic settings, nor did Piaget study children from Asia, Africa, or Latin America. He also ignored the effects of peer contact on cognitive growth, which can alter children's perceptions of the world around them. Students with learning difficulties have lower levels of concrete-operational reasoning than their counterparts, which is the concrete operational stage, the third stage in Piaget's theory of cognitive development, according to Piaget.

Piaget's theory has four implications for Chinese elementary education. Above all, more chances for peer learning should be provided in schools. Individual effort via dialogue and debate can improve learning results in tasks and drive cognitive progress more effectively than peer interactions. Children must structure their vocabulary while speaking with peers so that their thoughts are presented logically and appropriately. Furthermore, most primary school kids are at the concrete operational stage, which is marked by children's beginning to think logically about specific occurrences. Many abstract ideas and hypothetical problems, such as math Olympiad problems, are difficult for children at this stage. Because teachers ignore kids' cognitive development, they teach tough questions for an extended period, causing many students to fail many tests and lose interest in studying. In addition, teachers should not blindly cram teaching to prevent them from learning and developing intellectually. Cramming is the process of cramming a large quantity of information into a student's short-term memory in a short period, which can cause

stress, worry, and anxiety, making it harder to absorb information. Last but not least, tiger parenting, a severe, authoritarian parenting style that overlooks their children's feelings, is among parents of primary school pupils. They compel their children to participate in plenty of extracurricular activities, such as piano lessons, math Olympiad lessons, and English lessons which lead to detrimental to students' physical and mental growth.

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