

## **Exploring Children's Language Cognitive Development: An Inquiry-Based on China Sinology and Montessori Teaching Method**

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### **ABSTRACT**

Montessori education is a popular way of education in the world. Although this method has been passed around the world for many years, it became popular in China's education system in the 1990s. However, parents in China either choose to believe in Montessori's influence and significance on their children or choose to keep their children educated only in traditional Chinese culture. There are some kindergartens in China where China Sinology and Montessori education coexist. Current studies lack discussion on the impact of the integration of Montessori education and Sinology education on children. Both Montessori education and Sinology have their special advantages for children's cognitive development. This research aims to explore the influence of the Montessori teaching method and Chinese traditional education on the language cognitive development of 3–6 years-old-children.

**Keywords:** *Children, Chinese traditional education, China Sinology, Cognition development, Language development, Montessori education.*

### **1. Introduction**

In the 20th century, Montessori education was introduced into China and has been popularized across the country (Suo, 2019). It is Montessori who initially developed the education methods. Montessori has had a tremendous and far-reaching impact on the world (Shan, 2019). The Montessori education intends to redefine pedagogy via encouraging a hands-off approach and guiding young children's behaviour with their natural curiosity. However, the Montessori education in China faces its unique obstacles. Is because the current education system fits well with the traditional parenting style Chinese young children are thought to be not suitable for the self-driven learning process proposed by the Montessori education. Despite the conflicts, Montessori schools have been growing in popularity in China over the past decades (Casey, 2018).

Nowadays, most regular kindergartens began to pay attention to the introduction of China Sinology education. Chinese re-examine the significance of China Sinology education and set off a "Sinology hot". Sinology is the treasure accumulated in Chinese culture and the crystallization of the thoughts of the cultural elites of the Chinese nation (Lv, 2018).

Faced with the competition with the preschool education with China Sinology, many Montessori kindergartens are actively exploring the introduction of Traditional Chinese culture into teaching and make efforts to integrate traditional culture and teaching with Montessori teaching. Montessori

education, as an early childhood education system introduced from the West, is bound to adopt localized teaching (Li et al., 2013; Qiao et al., 2016).

## **2. Children's Language Cognitive Development**

### ***2.1 Theories on Language Cognitive Development***

Cognitive development is an interactive and complex process, and cognitive ability is often used to predict children's academic and social outcomes in the environment (Archana et al., 2021). Over years, researchers and scholars have developed theories on language cognitive development. Piaget's (1936) Theory of Cognitive Development is applied in evaluating the student's language and cognitive development. Accordance to Piaget's theory, the cognitive development of children depends on their capacity to interact and relate with various elements.

The development of language among children will follow the capacity to enact their engagement and advances to relate to a series of factors in their learning process. Providing children with an interactive environment and schemas can help them continually learn about language and their ability to use it (McLeod, 2018). Evidence such as Light (2017), shows that language is a key factor in the development of children. McLeod (2018) indicates children's cognitive and language development follows various stages (sensorimotor, preoperational, concrete operational and formal operational).

Piaget's Theory of Cognitive Development provides a great framework for understanding children's language acquisition and cognition all through the four stages of development (Babakr, 2019; Sanghvi, 2020). Therefore, addressing the language development of children using various education frameworks provides a chance for an increasingly beneficial way to compound the values depicted in a series of models (Valentini et al., 2018). The development of the language is a critical component of assisting children in identifying with their intellectual formations (ALHammadi, 2017). Based on Piaget's Theory of Cognitive Development, many pre-schools are models (Huitt et al., 2003), including Montessori education and China Sinology.

### ***2.2 2.2 Influence of Montessori Education on Children's Language Cognitive Development***

Montessori education is a method aimed at meeting the development needs of children in preschool, and its effectiveness has been confirmed by many studies around the world (Denervaud et al., 2019; Dereli et al., 2019; Marshall, 2017a). The Montessori method develops communication and social skills through purposeful observation of all senses and the discovery of complexity (Marshall, 2017b). A teacher is an individual who guides or promotes students' learning instead of an individual who teaches students knowledge (Dereli et al., 2017). Children's learning shows that they are not the centre of the environment, but part of it. The multi-sensory learning approach and dialogic teaching avenue as proposed by Zhou (2021) are key traits of Montessori education. Montessori education models are key in advancing a student's cognitive development and capacity to learn a language. Children learn language through social interaction and communication with others (Bruner, 1981; Snow, 1999; Vygotsky, 1978). Communication and social skills are outstanding under the Montessori education system (Ahmad et al., 2018). Meanwhile, Lillard

(2006) observed students who had learned from Montessori had more effective communication and social skill.

According to Zhou (2021), multisensory learning appeals to the faster learning and engagement of students. In addition, Ellis (2017) considers that the creation of a sensitive environment provides the best channel to understand, engage and ensure students will learn throughout the period. Dereli et al. (2017) argue that Montessori education provides the opportunity for automatic education and the freedom to learn on your own. This kind of education cultivates children's self-care ability through daily teaching and meets the needs of children's cognitive development and adaptation to the social environment (Dereli et al., 2017). With Montessori education, children learn by themselves or together with their peers through kinds of activities or tasks, as well as games. According to Courtier et al. (2021), the Montessori curriculum had advantages over a conventional preschool program in assessing young children's language, math, and social competencies, as well as in executive functions.

### ***2.3 Influence of China Sinology Education on Children's Language Cognitive Development***

Sinology classics are a kind of high-quality cultural knowledge, which is one of the components of efficient language form in social communication (Yang, 2017). Chinese Sinology education aims at inheriting traditional Chinese virtues, it not only matches with deep psychological needs of children but also can lay a solid foundation for future smooth learning and development. China Sinology education is of great help to children's literacy, and it promotes truth, goodness, and beauty (Yu, 2012).

Chinese classic has beautiful artistic conceptions, exquisite writing style and unique flavour, and rich knowledge. Young childhood is at the stage of memory and language development, so they can guide to read, sing and recite some Chinese classics, which can help develop and improve children's language expression ability (Yao, 2020). Ding (2017) proved that children can fully mobilize the left and right brain functions, so that the left and right brain operation synchronization, improve the brain function. Reading words stimulates the right brain through visual stimulation, and the rhythm of chanting stimulates the right brain. Meanwhile, the left side of the brain is used to organize word distinctions for easy memorization (Ding, 2017). Hu (2020) focuses on nursery rhymes, which have strong educational value and are of great significance to children's physical and mental health development, as a traditional art form. Nursery rhymes are an important method of language education for children. Through catchy pronunciation and intonation, nursery rhymes can stimulate children's interest in learning, improve their language sense, build a sounder vocabulary framework, and better improve their language expression ability. Zhou and McBride (2018) document that Chinese provides phonological awareness as a key step to affirming a constant relevance of learning for the students. Wong and Zhou (2021) consider that Chinese learning provides a proper channel for learning the language through phonological, orthographic and homophone awareness.

### ***2.4 Influence of Combination of Both China Sinology Education and Montessori Education on Children's Language Cognitive Development***

The Montessori education philosophy and the traditional Chinese system have similarities in appealing to children's language development. Montessori education can be localized in China because its principle is to integrate with Chinese culture (Chen et al., 2021). According to Kristiyani's (2018) research, Montessori language learning advocates for a student's independence and natural learning environment. Interestingly, China Sinology education also advocates for the independence of the readers in learning languages and the provision of a chance to learn about phonological connections of the same language (Yeung, 2021). Chen and Guo (2021) indicate that students deal with language learning through the steps of natural absorption to ensure that they are organized and can recognize language well. In essence, both China Sinology education and Montessori education ensure respect transcends learning the language and every element of the language can be discussed by the students to bring a better perspective to them. Hence, the two education methods have a near-similarity in depicting children's development of language cognition. The combination of Traditional Chinese education with Montessori education can create a unique education model, adhering to the concept of "Nature, Respect and Love" and deeply pursuing the education system of "Body, Mind and Spirit". Theatrically, the combination of Traditional Chinese education with Montessori education has some positive influences on young children's language cognitive development. However, according to Lillard (2012), with Montessori supplementary courses and traditional courses for children, compared to the classic Montessori curriculum children in executive function, reading, math, vocabulary, and social problem-solving performance improved significantly, which means the combination of Chinese Sinology education and Montessori education may have a more significant effect on children's language cognitive development.

### **3. Conclusion**

Montessori education begins by treating children as free individuals who can fully communicate with their peers and thus improve their language development within a free environment. It is the same with Sinology education. Although the overall environment of Sinology education is not self-selective as Montessori's, there are also various forms of language absorption (including reciting classics, reciting, reproducing scenes and stories, and communicating from activities of flower arrangement and tea ceremonies). Both education methods may let children absorb, memorize, transform, and output language according to their own development stages by imperceptible means. In order to explore a better combination of Sinology education and Montessori education to promote children's language development, future research will use quantitative analysis techniques to study the impact of the integration of the two teaching methods on children's language development.

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