

# A Comparative Study of the Dutch Piramide Curriculum and the American Tools of the Mind Curriculum

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With the continuous deepening of the reform of preschool education curriculums, some high-quality preschool curriculums stand out. The Piramide curriculum in the Netherlands and the Mind of the Tools curriculum in the United States are two high-profile preschool education curriculums. Although these two curriculums are widely used, their differences and similarities must be further studied. This study explores the similarities and differences between the Piramide and Tools of the Mind curriculums. It was found that the two curriculums have similarities in curriculum theory, teaching form, and teaching strategy. There are differences in curriculum theory, teaching process, curriculum objectives, curriculum evaluation, and home education. This study provides a new reference for developing the Chinese preschool curriculum through the comparative study of these two kinds of curriculum.

*Keywords:* Piramide curriculum, Mind of the Tools curriculum, comparative study

## Introduction

In today's global society, where education is changing rapidly, curriculum reform is considered one of the critical factors in the development of education. Many countries have been experimenting with new curriculum models to improve students' abilities and knowledge and promote lifelong learning. The Piramide curriculum in the Netherlands and the Mind of the Tools curriculum in the United States are two high-profile preschool education curriculum projects, both of which are educational curriculums that promote children's overall development and learning ability. These curriculum items include many aspects, such as curriculum, learning methods, teaching strategies, and assessment methods. Learning from international high-quality curriculum models is a crucial way to promote the development of the Chinese preschool education curriculum. Although these programs may be very successful in their respective countries, their differences and similarities must be further studied. Therefore, this study aims to compare the Piramide curriculum and the Tools of the Mind curriculum, explore their commonalities and differences from perspectives: of curriculum theory, teaching form, and teaching strategies, and analyze their potential in preschool curriculum practice, to provide a new reference for developing the Chinese preschool curriculum.

## Concept Definition

### The Dutch Piramide Curriculum

The Dutch Piramide curriculum, also known as the pyramid curriculum, is a preschool education curriculum

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designed by Dutch psychologist Dr. Jef J. van Kuyk to improve the quality of education for children aged three to six (Hu, 2016). The Dutch Piramide curriculum is based on the dynamic system theory combined with Piaget and Vygotsky's theoretical thinking, Bobby's attachment theory, and Siegel's distance theory to balance the coordinated development of children's physical, cognitive, and emotional intelligence. It highlights the cultivation of children's self-cognition construction ability under the guidance of self-regulation and teacher construction scaffolding in the environment of games and independent learning, takes the theme curriculum learning as the core, and applies the teaching mode of "positioning-demonstration-expand-deepening" and distance issues. And it also interacts and dialogues with children, expands children's cognition and thinking ability, and provides guidance and support for children's academic development and lifelong learning.

### **The American Tools of the Mind Curriculum**

Tools of the Mind curriculum, one of the early education programs in the United States, was jointly developed by Russian scholar Elena Bodrova and American scholar Deborah Leong in 1993 (Ke, 2007). The Mind Tools curriculum is based on Vygotsky's theory of cultural history and the theory of executive function in neuroscience. Multi-domain curriculum activities achieve the early childhood education curriculum that develops children's self-regulation ability and provides teachers with practical teaching strategies (Goble et al., 2021). The Mind Tools curriculum was listed as an "Exemplary Educational Intervention Project" by the International Bureau of Education of the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2001 (Hou, 2018).

## **Method**

### **Research Design**

This study explores the similarities and differences between the Dutch Piramide and American Mind of the Tools curriculum. Through a comprehensive and systematic comparative analysis of the two curriculums, the differences and similarities provide new references for developing the Chinese preschool curriculum.

### **Data Source**

This study mainly used the literature method for data collection. The literature method is mainly to conduct a comprehensive and in-depth investigation of the Piramide curriculum and the Mind of the Tools curriculum by collecting relevant academic journals, books, expert interviews, and other channels.

### **Research Process**

First, the study collects literature and conducts a comprehensive analysis of the Piramide curriculum in the Netherlands and the Tools of the Mind curriculum in the United States. Second, the research adopts a qualitative analysis method to collate and analyze the collected data. We summarize their respective advantages and disadvantages in education by comparing the similarities and differences between the curricula regarding curriculum theory, teaching form, and teaching strategies. Finally, we analyze the similarities and differences between the two curriculums and put forward optimization suggestions for developing a Chinese preschool curriculum.

## **Result and Discussion**

### **Commonalities Between the Dutch Piramide Curriculum and the American Tools of the Mind Curriculum**

**Curriculum theory: Integrating the educational theories of Vygotsky and Piaget.** Although both the Piramide course and the Mind Tools course have put forward their curriculum theories, they integrate the

educational theories of Vygotsky and Piaget, emphasizing the subjectivity of teachers and children's initiative.

The "Dynamic System Theory" and "Amplified Thought" theories put forward by the Piramide curriculum and the Mind of the Tools curriculum are further extensions of the educational theories of Vygotsky and Piaget. The dynamic system theory believes children's development is a long-term and short-term alternating cycle. In the cycle, children's self-regulation and teachers' scaffolding work together to promote children's development to a higher and more mature level. This suggests that it emphasizes both self-construction in children's learning and teachers providing scaffolding in teaching (Cao & Liang, 2010). Consistent with the theory of "Dynamic System Theory", the concept of "magnifying the mind" contains two aspects: The answer to the "push-down" curriculum and an alternative to children's "self-development". The concept advocates both the self-development of children and the appropriate design of activities by teachers to achieve the optimal level of development of children.

Therefore, the "children's self-regulation" of the dynamic system theory and the "children's self-development" of magnifying ideas emphasize children's initiative. "Teaching" is essentially the embodiment of teachers' initiative. These two are the organic combination of Piaget's theory of children's cognitive development and Vygotsky's theory of social and cultural history. They are the perfect sublimation of the two educators' thoughts and theories.

**Teaching form: The curriculum mode of gamification teaching.** The Dutch Piramide and American Mind of the Tools curriculums follow the gamification teaching model. Gamification teaching is an educational method that emphasizes game-assisted teaching and infiltrating teaching.

The gamification teaching of the Piramide curriculum is purposeful and meaningful. It encourages educators to participate in the game. By continuously introducing characters and plots to enrich the games designed by children, it guides children to think about the past and future. It solves the limitations of children's imagination in independent games (Hu, 2016). Then, The Mind of the Tools curriculum emphasizes the role of play in improving children's self-regulation skills, and pretend play is a curriculum feature. Pretend play stipulates the time range of the game so that children can play their respective roles according to the game plan arranged before the game in the real or imagined game scene, according to the rules of the game, use symbolic props with the help of imagination and representational thinking, and play under the guidance of the teacher game.

Both curriculum models use gamification teaching. Although there are differences between the two in their respective game implementations, this teaching format makes learning more exciting. It helps students develop essential cognitive and social skills such as problem-solving, cooperation, communication, and creativity. The vivid image of teaching activities can improve the effectiveness of teaching.

**Teaching strategy: An interactive curriculum model based on "scaffolding".** The Dutch Piramide curriculum and the American Mind of the Tools curriculum emphasize the role of the teacher's subjectivity, and they both embody the interactive curriculum model of the "scaffolding" teaching strategy (Muhonen et al., 2016).

The basic concept of the Piramide curriculum embodies the "scaffolding" teaching strategy. Based on Siegel's distance theory, teacher initiative is one of the four fundamental concepts of the Piramide curriculum. It emphasizes that teaching is a process of teacher-student co-construction, focusing on three levels of teacher intervention (low, middle, and high) in the context of children's play, autonomous learning, and projects.

Similarly, the American Mind of the Tools curriculum believes scaffolding interactions are crucial to young children's learning (Bodrova & Leong, 2019). Among them, scaffolding writing is carried out with the "scaffolding" teaching strategy, which aims to exercise children's reading and writing skills (Dong & Wu, 2019).

In short, applying the "scaffolding" teaching strategy in these two curriculums runs through the whole teaching process. In this approach, teachers or mentors provide appropriate support to students to help them develop self-confidence and independent thinking during the learning process.

### **The Difference Between the Dutch Piramide Curriculum and the American Tools of the Mind Curriculum**

**Curriculum theory: Different theoretical basis.** Although the Piramide curriculum and the Mind of the Tools curriculum combine the educational concepts of Vygotsky and Piaget, these curriculums are curriculum models formed by integrating various ideological theories. The theoretical basis of the Piramide curriculum not only includes Geert's dynamic system theory but integrates Bobby's attachment theory, Siegel's distance theory, and Gardner's theory of multiple intelligences. Proximity is one of the four major concepts of the Piramide curriculum, proposed according to Bobby's attachment theory. In contrast, the long-distance theory is proposed according to Siegel's distance theory. Similarly, the theoretical basis of the mind curriculum also incorporates knowledge in the field of neuroscience, with a particular focus on executive function (Solomon et al., 2018), so the content of the curriculum is also aimed at improving the executive function of young children (Dong & Wu, 2019). These two curriculums integrate diversified educational theories as the theoretical support of the curriculums. Therefore, they have similar theoretical foundations, integrate other subject knowledge theories, and generate two unique curriculum models.

**Teaching process: Differences in the implementation of the "four steps" teaching.** Although both the Piramide curriculum and the Mind of the Tools curriculum are based on the "four-step" teaching implementation form, there are differences in their teaching process. The "four-step" teaching procedure of the Piramide curriculum is the most direct embodiment of the pyramid curriculum. It is the inheritance and development of the generative curriculum concept with the characteristics of presupposition and flexibility. The "four steps" teaching procedure mainly includes orientation, demonstration, expansion, and deepening. Then, pretend play is a featured activity in the Mind of the Tools curriculum (Selda, 2015). The teaching implementation of pretend play is divided into four steps: creating the environment, choosing props, obeying the rules, and reflecting on the game. These two-curriculum models carry out game activities according to the "four-step" teaching process. However, the teaching implementation of the two is only based on the consistency of the form. There are apparent differences in the essence of the teaching implementation, and they are two different teaching modes.

### **Curriculum Objectives, Curriculum Evaluation, Home Education: Other Differences**

There are differences between the Piramide curriculum and the Mind of the Tools curriculum in three aspects: curriculum objectives, curriculum evaluation, and home education. In terms of curriculum goals, the curriculum goal of Piramide is to balance the development of children's three bits of intelligence: physical, cognitive, and emotional, while the Mind of the Tools curriculum aims to help children learn how to become "the master of their behavior". Regarding curriculum evaluation, the Piramide curriculum achieves a balance in developmental evaluation, organically combining the authentic evaluation from the children's perspective with the systematic evaluation from the teachers' perspective, but the Mind of the Tools curriculum advocates

multiple learning evaluations to promote the joint development of teachers and children (Zhong, 2021). Regarding co-education at home, the Piramide curriculum attaches great importance to parent participation curriculums, but the Mind of the Tools curriculum focus more on the role of the teacher and lack a perspective of parental involvement in the curriculum.

### Conclusion

This study adopts a qualitative analysis method to explore the similarities and differences between the Dutch Piramide curriculum and the American Mind of the Tools curriculum to provide a new reference for developing the Chinese preschool curriculum. The similarities between the two curriculums are mainly reflected in curriculum theory, teaching form, and teaching strategy. The differences between the two curricula are mainly reflected in curriculum theory, teaching process, curriculum objectives, curriculum evaluation, and home education. Through the comparative study of the Piramide and Mind of the Tools curriculums, it is easy to find that the two curriculums have their characteristics and something in common. China's preschool education curriculum reform must be based on the local cultural background and kindergartens' actual situation to develop and learn from these curriculum models creatively.

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