

Hubei's Water Culture Developed and Applied in Kindergarten*

Kai Yuan

School of Education
Huanggang Normal University
Huanggang, China

Abstract—Water culture is profound and it is an important part of excellent Chinese culture. Hubei's water culture refers to the Hubei native culture which includes the material and spiritual aspects of science and humanity related to water. This paper attempts to explore Hubei water culture resources to kindergarten education in four aspects, namely, understanding water, using water, protecting water and appreciating water. Moreover, through establishment of rich water environment, implementation of specialized water education/teaching activities and perfection of the cooperation amongst kindergarten, family and community, multi-field education can be carried out so as to more effectively promote the comprehensive and harmonious development of young children.

Keywords—Hubei's water culture; kindergarten education; development and application

I. INTRODUCTION

The Chinese water culture is profound with a long history. As one of the contents of cultural education, it is an important part of excellent Chinese culture. National Water Education Plan (2015-2020) (hereinafter referred to as "Planning"), as China's first water education plan, it emphasizes that water education should start from the early childhood stage. Mr. Chen Heqin, the father of the famous preschool education in China, once pointed out: "Both Nature and the big society are living teaching materials." It is necessary for us to fully explore the abundant educational connotation of Hubei's water culture, and develop and apply it in the process of early childhood education in order to promote the harmonious and comprehensive development of our young children. In practice, some kindergartens in China have organized the exploration and application of water culture, such as activities of playing sand-water-area games, water transporting, water conservation, and even leading children to visit the hydraulic simulation laboratory, water-saving demonstration base. Generally speaking, there are relatively few studies on water education in China at early

childhood education stage; therefore, the value of early childhood education on Hubei's water culture has yet to be systematically and deeply explored.

II. THE BASIC CONNOTATION OF HUBEI'S WATER CULTURE

A. Water Culture and Hubei's Water Culture

Water culture refers to the sum of material and spiritual aspects accumulated in the progress of human society and history on how to recognize water, control water, use water, protect water, and appreciate water. Known as the "Thousand-of-Lake Province", Hubei lies in the midstream of the Yangtze River and its water network is very developed with lakes densely covered. Hubei's unique water resources create profound water culture and bring benefits to the land of Jingchu¹. The cities of Wuhan, Qianjiang, Danjiangkou, Zhijiang and counties of Jiangling, Xishui in Hubei Province are famous for their beautiful scenery and play important roles for their culture. Since more than two thousand years ago, it has formed an indissoluble bond with water and thus formed a unique water culture during the accumulation of history. Hence, Hubei's water culture refers to the Hubei native culture which includes the material and spiritual aspects of science and humanity related to water.

B. Early Childhood Education of Water Culture

According to the water education involved in the Planning, and basing on the children's intuitive actions and specific image thinking, as well as children's characteristic direct perception, personal experience, practical operation, this paper believes that the early childhood education of water culture is that children's interest in exploring water culture resources is stimulated, their water awareness, concerns, safety and ethics are enhanced, and the ability to participate in water conservation and protection is improved through a variety of ways by relying on water culture resources. The core of this education is to guide young children to know water, save water, protect water and be close to water.

¹ Jingchu refers to the ancient domain including the present and surrounding areas of Hubei province, and now refers to Hubei Province.

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III. THE BASIS OF HUBEI'S WATER CULTURE RESOURCES APPLIED TO EARLY CHILDHOOD EDUCATION

A. *The Construction of Beautiful China Starting from a Baby*

The CPC² brought forward constructing ecological civilization, beautiful China, and raised the construction of ecological civilization to a prominent position, emphasizing to leave a beautiful homeland with blue sky, green land, and clean water for future generations in The 18th CPC National Congress. Water is the source of life, the key to production, and the foundation of ecology. The Planning emphasizes "Through the edification and education of water culture, guiding the public to review the water issue from a cultural perspective, correctly understanding and dealing with the relationship between people and water, enriching the cultural connotation of water culture, and promoting and inheriting excellent water culture." Preschool children are the priority of water education. They are at the important stage of outlook on world, life and values. Their behavioral habits and ideology are directly related to the water safety, water crisis awareness and water morality of future generations of citizens, which also play an important role of the overall improvement of the quality of the people. Therefore, Hubei's water culture should penetrate into the early childhood education, so that children can feel the charm of water and the value of water, and initially experience the importance of harmony between people and water.

B. *Utilization of Local Resources to the Construction of Kindergarten Curriculum*

The Guidelines for Kindergarten Education emphasizes that "The urban and rural kindergartens should make full use of local resources to build a curriculum suitable for local children's development", "Kindergartens should make full use of social resources to guide young children to actually experience the richness and excellence of the motherland's culture and to feel the changes in their hometowns, so as to stimulate their loves of hometowns and the motherland." Hubei Provincial kindergartens should combine the local water culture resources, actively pay attention to children's life experience and interests, fully explore the content of early childhood education, and actively enrich and construct the kindergarten-based curriculum. This curriculum will become more diverse, lifelike, empirical and appropriate.

C. *Non-separation from Water Culture in the Children's Development in Hubei Province*

Children in Jingchu (Hubei Province) grow up in atmosphere of water, and water is not only an important nutrient for the growth of children, but also a part of their spiritual activities in life. The Planning pointed out: "Encourage locals to carry out water education according to local conditions and organize characteristic water education activities." Hubei's water culture contains rich educational

values in the five fields³ since it is profound with a long history. Especially, in the process of water awareness, use and care, children's water culture will make it easier for them to stimulate their interest of exploration in water and other things as a carrier. It will germinate the concern and love of their hometown culture when their water awareness, water safety, water concern and water ethics awareness are enhanced and the ability to participate in water conservation and protection is improved.

IV. RICH VALUE OF EARLY CHILDHOOD EDUCATION CONTAINED IN HUBEI WATER CULTURE RESOURCES

Hubei is rich in water culture resources. Teachers must follow the principles of being suitable, being for life and being for interest in the development of scientific water culture education. Teachers also must explore the relevant contents that are suitable for children's physical and mental development, close to children's life experience and content with the interests of young children. This study attempts to apply Hubei's water culture resources to kindergarten education in four aspects, namely, understanding water, using water, protecting water and appreciating water. It enables children not only to get close to Nature which they have much curiosity and desire to explore under stimulation, but also to perceive and discover features of water, value of water, so that they can recognize the importance of water conservation.

A. *Understanding Water*

Water is an important resource for human survival and a common thing in daily life of young children. Efforts should be made to develop activities of understanding water in terms of water types, aquatic organisms and water buildings.

The first is the types of water. It is much needed to understand the three states of water, i.e., ice (solid), water (liquid), and vapor (gaseous). It is also considerably needed to understand water from its classification into groundwater (For example, Yangtze River, Honghu Lake, East Lake, and Yi'ai Lake) and underground water (Hexagonal well water). The second is aquatic organisms. The vast water area of Hubei Province not only makes the fish resources rich, but also creates a variety of plants that depend on water. Young children should be led to know about the protected animals such as the Yangtze sturgeon, the Yangtze alligator, the Yangtze finless porpoise, and the white dolphins. The children should also be guided to realize the importance of protecting the endangered animals. In addition, let them learn about the common animals such as the four major domestic fishes (black carp, grass carp, silver carp, variegated carp) and guide them to raise those fishes in kindergartens and observe the life habits and changes of fishes to stimulate children's desire to explore. At the same time, it is pretty good to cultivate water-like plants, floating plants and algae plants in the kindergarten to guide young children to observe and record in the growing process in order to develop a good observation consciousness and train young children to have

² CPC refers to Communist Party of China.

³ Five fields refer to the field of health, language, society, science and art.

active exploration spirit. The third is the water buildings. There are 26 built bridges over the Yangtze River. The most famous is Wuhan Yangtze River Bridge that is known as "the First Bridge over the Yangtze River". Children can be organized to visit famous buildings such as the Yangtze River Bridge and the Yellow Crane Tower, and integrate these buildings into the science activities of young children. Even young children can be provided with modeling construction materials to construct them actively in simulation.

B. Using Water

The value of water is enormous, and it plays an important role in the human body, in engineering and in life.

For people, on one hand, water is an important component of human life structure. Children can be guided to understand the proportion of water in the body and to explore the changes before and after drinking. Water still includes drinking water, tea, alcohol, etc. For example, the Chinese industry influential brand "Nongfu Spring", its slogan "We are not water producer, but only Nature's porter" has been deep into the heart of people. Meanwhile, combined with Danjiangkou in Hubei Province as one of the Nongfu Spring's eight high-quality water bases, it helps to understand the source of drinking water for young children. Moreover, Lu Yu of Hubei, respected as the "Tea Holy", can be introduced as an entry point to guide children to understand the types of tea and tea arts in Hubei. On the other hand, people's health can be improved by water sports as well, such as the challenging games - Hubei water sports rowing and dragon boat racing.

For engineering, water conservancy is foremost. Throughout the ages, Hubei has been vigorously developing water conservancy construction. There are ancient Jiangnan dikes, over-50-kilometer dike of Hanshui South Bank, Yichang long channel, etc. Modern buildings include the Three Gorges Dam, Gezhouba Dam, water conservancy hubs of Danjiang Water Reservoir, Shuibuya, and the Nianpanshan, and the South-to-North Water Diversion infrastructures. Those play an important role in flood control, power generation, irrigation, and aquaculture. Children can be organized to understand the construction of water conservancy projects such as the Three Gorges Dam and Danjiangkou Reservoir, and guide young children to explore how to use materials to schedule water in the pool. Then it is water transport. Ancient water transport vehicles are mostly made up of wooden rafts, bamboo rafts, canoes, etc., which are taken from nature. They are slow and time-consuming. While, modern vehicles are on the contrary, which are mostly seaplanes, submarines etc. Children can be organized to experience the difference between ancient and modern means of transportation, explore their characteristics, and also allow children to build their own ideal water transport, so as to enhance their desire to explore water and improve their hands-on ability. In addition, children can be guided to understand the buoyancy of water through the nature of floating on the water. They can be guided to observe the phenomenon of stones and wood falling into the water for further exploration.

C. Protecting Water

China is a country with a serious shortage of water resources, and the waters are also suffering from different levels of pollution. The problem of water pollution in the Yangtze River has become increasingly prominent, and the number of endangered animals that have died from eating garbage in the water has gradually increased. Therefore, it is particularly important to carry out water conservation and sewage prevention activities in kindergartens. On one hand, it is needed to develop not only good water-saving habits for young children in daily life, but also abilities of constructing a recycling water system for young children. On the other hand, it can help children discover the mysteries of the circulating water system by perceiving it in its construction process. At the same time, it is important to treat its purpose of re-use. The children can be guided to try to manage the sewage by simple means of organizing them as cleaning little guards, so as to cultivate the children's hands-on ability and exploration ability of the surrounding things and the phenomena.

D. Appreciating Water

It mainly refers to water-related ideology, values, industry spirit, literature and art, customs, religious rituals, and water control figures. There have been a large number of famous works that praise the water of Hubei since ancient times. For example, the "Yellow Crane Tower" by the poet Hao Cui of the Tang Dynasty, the "Three Gorges" by the poet of Daoyuan Li of the Southern and Northern Dynasties, and the "Early Set-out From White God City" by the poet Bai Li of the Tang Dynasty. Besides, there have been many deeds and people in regard to controlling water and flood, such as the heroic deeds of 1998 against floods. Through experiencing and edification of water resources, children can feel the spiritual connotation of goodness, perseverance and even respect of life. So they can carry forward and inherit the excellent water culture.

What needs to be specially stated here is that the educational content explored herein includes both the universal resources on water and the water resources with local characteristics in Hubei. These resources contain a large number of values implicated in water, which are mainly discussed in four aspects.

- Scientific education values of water cognition and exploration.
- Language education values on the famous poems of Hubei's water.
- Values in health field, for example, unique meanings of water felt by the children as human beings gradually at different ages.
- Values in social field, such as water conservation, water-saving and water protection.

All in all, it is quite necessary to comprehensively explore the water resources and carry out multi-field education to more effectively promote the comprehensive and harmonious development of young children.

V. THE IMPLEMENTATION APPROACH OF HUBEI'S WATER CULTURE RESOURCES IN KINDERGARTEN EDUCATION

A. Establishment of Rich Water Environment in Hubei

Most importantly, a corner area should be created vigorously, which supports and encourages young children to explore water and carry out lively and interesting corner activities.

- Some common plants and animals around Hubei waters should be tried to find. They can not only cultivate lotuses of aquatic plants, but also keep four major domestic fishes in kindergartens' waters. The children should be guided to observe and record the growth and habits of animals and plants in order to trigger their curiosity and interest by exploring and understanding attributes of water.
- It is critical to create an exploration corner area in the scientific area based on the "Hubei's Water Culture". It is practicable to add abundant water exploration materials, such as water pumps, droppers, water tables, wooden blocks, etc. in the water exploration corner, so that children can explore the characteristics of water flow and water force in an open environment. Through the South-to-North Water Diversion project, let young children use existing materials to dispatch water from water area to the planting area and develop the ability to solve problems in the process of exploring water transfer.
- It is a great idea to put picture books on water and other cosmic books in the reading area or language area so that children can feel the various characteristics of water in the book.

The next, a theme wall or other forms on "Hubei's Water Culture" should be arranged. Around the Hubei's water culture, the theme wall of "Yangtze River Conservation Animals" should be set up to guide children and their parents to collect relevant information together, such as information of the Yangtze River conservation animal — Yangtze finless porpoise, Yangtze Sturgeon, Yangtze alligator, the white dolphins, Chinese giant salamander, mullet, etc. Subsequently, they should have discussions on the related topics.

B. Development of Special Education and Teaching Activities

Hubei has rich water culture resources, and therefore, the education and teaching activities to realize the educational value of water resources can be initiated. Firstly, regarding the understanding of water, it is significant to organize the theme "secret in the water" in collective activities, guide children to use the microscope to observe and discover the difference between raw water and pure water, understand the processing process of pure water, and let the children know not to drink raw water as a result. Secondly, it is about using water. Teaching activities of specialized "Floating and Sinking Experiment" can be organized to guide children to

understand the buoyancy of water through the nature of vehicles floating on water. What's more, it is meaningful to compare and explore the changes of stones and wood falling into the water with young children, which can stimulate children's awareness of inquiry. Finally, it is about protecting water. It makes great sense to organize the activities of "Where is the sewage in our life?" Young children can be told about the serious shortage of water resources, so that they can be stimulated to protect water resources and decrease daily sewage.

C. Improvement of the Cooperation Amongst Family, Kindergarten and Community

Firstly, it is very necessary for parents to participate in related activities. Let them know about Hubei's water culture resources and lead their children to visit famous buildings such as Hubei Water Conservancy and Yangtze River Bridge, so that children can understand water, use water and protect water in their daily life.

Secondly, it is very important to establish a close contact with the community. It plays the key role in the educational cooperation among family, kindergarten and community, and performs fully the value of water culture resources by using its water resources towards young children's exploration. For example, according to the function of hydropower generation in water conservancy facilities like the Three Gorges Dam, it is possible to let water conservancy experts come, that is, invite them to construct a small hydropower model with young children to enable children to develop preliminary exploration capabilities in the process of the operation activities. Apart from that, three parties can also organize children to experience the ancient and modern water transportation, so as to explore the differences and characteristics of them and lead children to construct any of them by their own, increasing their desire for water exploration and hands-on ability.

VI. CONCLUSION

In summary, this paper proposes educational approaches through environmental design, collective teaching activities, and cooperation with community families by briefly refreshing and fully exploring the resources of early childhood education about Hubei's water culture. Furthermore, it is ensured that a "beautiful China" must be better built. First of all, it is needed to further systematically explore and utilize educational resources of Hubei's water culture. And then, it is also needed to carry out targeted exploitation and utilization in this way of combining with its local water culture. In the end, the comprehensive and harmonious development of young children can be more effectively promoted as multi-disciplinary water education through various channels is well done.

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