

Theoretical Basis and Realization Path of Early Childhood Ecological Education

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Abstract: In today's ecological crisis, raising ecological awareness and shaping ecological civilization should be started from childhood, and the ecological education in early childhood stage focuses on enlightening young children to establish the ecological consciousness of harmonious coexistence between human and nature. The physical and mental development of young children's characteristics determine the ecological education of young children should follow the principle of organic whole, Whitehead's philosophy of organism also presents the ecological implications of organic whole, that is, the ecological implications of the harmonious coexistence of man and nature, as well as a kind of organic educational ideas, that is, pay attention to the process of education, organic, holistic. This is inherently compatible with the ecological education of young children, and brings value inspiration to the ecological education of young children. To realize an organic ecological education for young children, it is necessary to establish an organic ecological concept of harmonious symbiosis; to construct an organic ecological education content for young children that puts equal emphasis on knowledge, emotion, intention and action; to form an educational process that focuses on young children's life and practice; and to integrate the resources of kindergartens, families and the society to improve the synergistic mechanism of ecological education for young children.

Keywords: Early Childhood Ecological Education; Whitehead; Organic.

1. Introduction

With the development of social economy, people's desire for material needs is growing, and unreasonable lifestyles have caused irreparable damage to natural resources and ecological environment. Global warming, sharp decline in biodiversity, flooding of garbage, pollution and shortage of water resources, etc. as well as the ravages of the New Crown Epidemic in the last three years have come one after another, and the ecological crisis has intensified from local to overall, from regional to global. "General Secretary Xi Jinping pointed out in the report of the 20th Party Congress that 'Chinese-style modernization is a modernization in which human beings live in harmony with nature.'" [1] "The development of ecological education is a necessary way for China to carry out socialist modernization; raising ecological awareness and shaping an ecological civilization must rely on ecological education; ecological education is a new means of solving the ecological crisis and realizing the sustainable development of human society." [2] The foundation of ecological education lies in the ecological education of young children. The Guideline for Kindergarten Education also proposes that, on the basis of young children's life experience, help them understand the relationship between nature, the environment and human life. Starting from the small things around them, they can cultivate preliminary environmental awareness and behavior.

2. The Connotation of Early Childhood Ecological Education

Foreign scholars Pivnick (Pivnick) that "ecological education is based on ecological philosophy, to improve the relationship between human beings and nature, and that the fundamental way to solve the environmental problems is to carry out fundamental changes in our world view of

education." [3] Domestic scholars believe that eco-education is "an education that takes the symbiotic and co-prosperous relationship between human beings and the natural ecology and other organisms as the starting point, guides the education object to better care for nature and enjoy life for the sustainable development of human beings, and consciously forms civilized thoughts and overall awareness of cherishing resources, protecting the environment and maintaining ecological balance, as well as corresponding civilized behaviors." [4] Thus, ecological education in the early childhood stage is built on the basis of Whitehead's philosophy of organism, following the laws of physical and mental development of young children as a prerequisite, guiding young children to feel and experience the relationship between human beings and nature in a symbiotic and co-prosperous manner, helping young children to accumulate ecological knowledge and experience, stimulating young children's feelings of love for nature, and enlightening young children's ecological awareness of the unity of human beings and nature, as well as the spontaneous formation of ecologically civilized behaviors as a practical activity.

3. The Theoretical Basis of Early Childhood Ecological Education

Following the laws of physical and mental development of young children is the premise of early childhood ecological education. Whitehead's philosophy of organism with its organic holism of ecological implications and educational ideas is compatible with early childhood ecological education, and brings value inspiration to the ecological education of young children.

3.1. Early Childhood Development and Ecological Education

The development of young children is a constraint on the

content and choice of ecological education for young children. Eco-education should follow the law of physical and mental development of young children, so that eco-education can be more suitable for the development of young children

3.1.1. Physical and Mental Development Characteristics of Young Children

Young children are born with pro-nature instincts, like natural flowers, plants, animals, rivers and so on, like to get close to nature, explore nature, and have infinite curiosity and longing for nature. First of all, Piaget proposed that the physical and mental development of young children is characterized by panpsychism, in which young children believe that all objects are alive and have feelings, and they like to contact with natural objects, and they also have a richer sensitivity to nature, and they are able to empathize and feel with nature. Secondly, the development of young children is characterized by wholeness and the harmonious and unified development of body and mind. Thirdly, young children's learning is based on direct experience, and they construct cognition and accumulate experience through direct perception, practical operation and hands-on experience.

3.1.2. Principles of Ecological Education for Young Children

According to the physical and mental development characteristics of young children, ecological education for young children should follow the following principles. First, ecological education for young children follows the principle of pro-nature. Ecological education is about ecological education, ecological education for young children should start from young children's contact with nature, close to nature, understand nature, guide young children to understand the harmonious symbiotic relationship between man and nature, and then enlighten young children's ecological awareness and civilized behavior. Secondly, ecological education for young children follows the principle of wholeness. The holistic development of young children requires that the ecological education of young children has an organic wholeness, starting from the promotion of the holistic development of young children's knowledge, feelings, intentions and behaviors, to understand the reasoning, to move with emotion, to guide the behavior, and perseverance. Thirdly, ecological education for young children follows the principle of practicability. Let children accumulate experience in hands-on operation and cooperative experience. At the same time, the ecological education of young children should pay attention to the comprehensive, fun, activity, rich education in life and games

3.2. Whitehead's Organismic Philosophy

Whitehead's philosophy of organism, also known as process philosophy, presents the characteristics of organic holism, which contains rich ecological implications of harmonious coexistence between human beings and nature, and is mainly reflected in the ecological and natural concept of organic holism and non-anthropocentric ideas based on intrinsic value, which is of significance as an educational revelation for the ecological education of young children.

3.2.1. Organic Holistic View of Ecological Nature

Whitehead believes that "the world is a community of organisms." [5] Organism is different from material entity, organism is in the process of continuous generation and development, "this process is the process of generation of all kinds of actual existences." [6] Its "generative process is to

absorb or be absorbed by other actual realities." [7] Therefore, the organism is an organism composed of properties and relations, and is in contact with other organisms, thus constituting a complex and interconnected world. The whole universe is in the process of generation and development, an organically linked whole, human beings as a factor constituting nature, and all things natural are interconnected, inseparable community of destiny. At the same time, the organism is also a life organism, with vitality and vigor, not only human beings are attributed to the concept of life, "we also require that the concept of life includes the concept of nature" [8] "All functional activities of nature influence each other, require each other, and transform each other." [9] Whitehead "argues that nature is never finished, it is always transcending itself," [10] and this is the embodiment of nature's vitality. Nature, as well as the entire ecosphere including human beings, is in a self-developing dynamic equilibrium process, rather than an isolated, one-sided, passive existence in the ecosystem.

3.2.2. Non-anthropocentrism based on Intrinsic Value

Anthropocentrism is to put the interests and values of human beings in the highest position, to take the survival and development of human beings as the highest goal, to determine the value of natural existences by the subjective judgment of human beings, to pay attention to the instrumental value of natural objects, and to emphasize the rights and subjugation of human beings over nature. Whitehead "attributes intrinsic value to all dimensions of nature, which is a very important part of his pan-empiricism." [11] That is, before an individual has extrinsic value for the other, he or she first possesses intrinsic value for his or her own development. "Everything has value for itself, for the Other, and for the whole." [12] The intrinsic value of nature emphasizes the value of nature's self-development and the value of interconnecting and interacting with other natural objects to maintain the dynamic balance of the biosphere. Both human beings and nature are equally endowed with intrinsic value and need to be treated and respected equally. Harmonious coexistence between humans and nature is the long-term solution for the prosperity of the whole ecosystem.

3.2.3. The Inspiration of the Philosophy of Organism to the Ecological Education of Young Children

Whitehead's philosophy of organism presents the characteristics of organic holism, which brings some value to the ecological education of young children. First, the ecological view of man and nature as an organic whole reveals that ecological education should have the characteristics of an organic whole, and should regard education, nature, society and young children as an organic whole, and set up the concept of ecological education for young children that man and nature are interdependent and coexist harmoniously. Secondly, Whitehead's theory of intrinsic value reveals that ecological education for young children should be based on the whole of knowledge, emotion, intention and behavior to help young children form a comprehensive ecological cognition. Thirdly, Whitehead's view of knowledge holds that "all knowledge is a conscious discernment of the object experienced. But this conscious discrimination, i.e., knowledge, is merely an additional factor in the subjective form of the subject's interaction with the object." [13] "Whitehead's theory of knowledge embraces both the objectivist view of knowledge, which recognizes the objectivity of knowledge, and the importance of the logic of knowledge systems and disciplines, and the constructivist and

deconstructivist views of knowledge, which argue that education should respect the subjectivity of knowledge and recognize the immense value of students' subjective agency." [14] Therefore, ecological education for young children should focus on the logical system of knowledge on the one hand, and on the other hand, on the subjective initiative of young children in education.

4. The Realization of the Path

In order to realize an organic ecological education for young children, it is necessary to establish the ecological concept of harmonious coexistence between human beings and nature, and to enhance the understanding of ecology and ecological education; it is necessary to grasp the knowledge, emotion, intention and behavior, and to build an organic ecological education content for young children; ecological education for young children should pay attention to the process, life and practice; it is necessary to contact kindergartens, families and society, and to integrate resources of the three, so as to improve the synergistic mechanism of the ecological education for young children in an organic way.

4.1. Establish the Concept of Organic Ecological Education for Young Children

The direct cause of the ecological crisis is the excessive development and destruction of nature by economic development. At the level of human consciousness "it is believed that nature is fundamentally mechanical, inanimate, passive, unchanging, and lacking in subjectivity and mobility." [15] The anthropocentric stance that has developed is a deep-seated reason for the destruction of ecology. Therefore, the ecological education of young children needs to be led by the organic ecological concept, to change the anthropocentric thought from the root, and to establish the ecological cognition of the harmonious coexistence of man and nature.

4.1.1. Increase the Publicity of Organic Ecological Concepts

Scientific education needs to be led by scientific theories, the development of early childhood ecological education needs to be widely set up in the whole society organic ecological concepts. Organic ecological concept that man and nature are interconnected, coexistence and co-prosperity of the community of destiny. People as a factor in the composition of nature, and nature has an intrinsic, inalienable links, human life in nature, not human beings in the protection of nature but nature in the protection of human beings, human beings to destroy nature, destruction of the ecological environment is in the self-defeating. Organic ecological concept that man and nature should exist in the world on an equal footing, man and nature have for their own development of the intrinsic value of mankind can obtain from nature, does not mean that man can dominate nature, man and nature are ecosystems as a whole is an ordinary existence, all need to be treated with equal respect. Publicize the organic ecological concept in the whole society, so that harmonious coexistence becomes the ecological consciousness of all people.

4.1.2. Enhance the Ecological Concepts of Early Childhood Teachers

The ecological education concepts of kindergarten teachers have a direct impact on the generation and development of children's ecological awareness. To carry out ecological education for young children, it is necessary to update the

ecological concepts of kindergarten teachers, and to improve their ecological literacy and ecological teaching ability. First of all, early childhood teachers need to correctly understand the relationship between human beings and nature, and set up scientific ecological concepts to lead the ecological education of young children, such as scientific ecological view of nature, ecological worldview, ecological values, ecological civilization and so on. Secondly, early childhood teachers need to understand the basic connotation of ecological education, master the basic ecological knowledge, extensive exposure to geography, biology and other basic scientific knowledge, improve their own ecological literacy and knowledge reserves. Thirdly, early childhood teachers need to improve their teaching ability in ecological education, combine the developmental characteristics of young children, ecological knowledge, and educational principles, carry out ecological education activities suitable for the development of young children, and help young children grow up to be ecological human beings with harmonious development of body and mind.

4.1.3. Constructing Ecological Education Content for Young Children that Emphasizes Knowledge, Emotion, Intention and Behavior

The purpose of ecological education for young children is to help them accumulate ecological knowledge and experience, stimulate their love for ecology, inspire them to form a preliminary ecological awareness and guide them to develop spontaneous ecological civilized behaviors, so that they can grow up to be ecological human beings with harmonious physical and mental development. Therefore, ecological education for young children should start from the four aspects of knowledge, emotion, intention and action, set up integrated educational contents and form an organic organization of ecological education activities.

4.2. Constructing Ecological Education Content for Young Children That Emphasizes Knowledge, Emotion, Intention and Behavior

4.2.1. Romanticization to Acquire Coherent Ecological Knowledge Experience

Whitehead's concept of knowledge reveals that education should not only focus on the logical system of knowledge, but also emphasize the play of young children's subjective initiative, and guide young children to acquire coherent ecological knowledge experience in a romantic way. Whitehead suggests that young children are in the romantic stage of intellectual development, which is "the stage of direct knowledge of facts and occasional systematic analysis of facts," [16] a stage in which "in order to acquire knowledge we must first of all free ourselves from the bondage of knowledge." [17] Therefore, the content of ecological education for young children should not be set in an obvious range or field, and young children should be given the freedom to perceive the ecology and accumulate the breadth of knowledge and experience. Letting young children be in nature and know more about the names of birds, animals, grasses and trees satisfies their innate desire for nature and allows them to accumulate knowledge experience about ecology in a broad ecological environment. The experience that young children gain after romantic exposure may be disorganized, and at this point "education must be the ordering of the active and disorganized thoughts that already

exist in the brain." [18] Help young children develop a coherent experience of ecological knowledge.

4.2.2. Stimulate Ecological Emotion in the Process of Contacting Nature

Ecological emotion is a catalyst in early childhood ecological education. Ecological emotion includes interest, love, sympathy, care for ecology, etc., and its generation starts from contacting nature. The more exposure the more understanding, and the easier it is to create emotional connections. "Entering any discipline is a process of learning through contact" [19] The stimulation of young children's intrinsic ecological emotions begins with contact with nature. First, contact with nature can satisfy young children's curiosity and stimulate their interest in nature. Interest is the driving force that sustains young children's exploration of nature. Young children's journey from exploring isolated natural objects to discovering the connections that the entire ecosystem has is accompanied by an emotional experience of curiosity and excitement, which in turn motivates them to explore more deeply. Secondly, contacting nature, getting close to nature, and feeling nature can cultivate children's sensitivity to nature, and it is only when children are in nature that they can communicate with nature and develop a sense of ecological care.

4.2.3. Cultivate Children's Ecological Awareness in Contact with the Soil

Consciousness has a guiding effect on behavior, and ecological awareness should be an important part of ecological education for young children. Pre-school education is likened to education that is rooted downward, but is far from the soil that nurtures the roots. Ecological education is about education on the relationship between human beings and nature, but the content of education is missing the soil that nurtures human beings and nature. Therefore, ecological education for young children should use soil as an important carrier for cultivating ecological awareness.

The enlightenment of the ecological consciousness of young children is manifested in two aspects. On the one hand, contact with the soil, feel the heaviness and depth of the land and experience the simplicity of the earth in a down-to-earth manner. When the grains are in abundance, we can feel the spiritual quality of selflessness and dedication of the earth, so that the ecological spirit of young children can be nourished. On the other hand, young children's contact with the soil creates a sense of connection with the land and a sense of belonging. "Sense of belonging in this context refers firstly to identification with nature and secondly to identification with the local community where they are. A rooted education makes students realize that the human being is not a self wrapped in skin and detached from the world, but a "person in community" whose existence should include relationships with others and with the natural world." [20] Contact with the soil is strengthening the bond with nature, with home, and with loved ones. The earlier a person comes in contact with the soil, the easier it is to develop sensitivity to the environment, and "the more aware a person is of the environment, the stronger his/her desire to improve it usually is," [21] Not only does the land nurture everything, but the land breeds hope, and hope breeds the future. It is only when young children have a sense of belonging to a piece of land that they will develop a corresponding sense of responsibility, and it is only those with a sense of responsibility who will ultimately move towards the path of building a better ecology.

4.2.4. Develop Ecological Civilized Behavior in Practice

The ecological civilized behavior of young children is both the content of ecological education and the external behavioral manifestation of the results of ecological education. The generation of ecological civilized behavior is based on ecological knowledge and experience, regulated by a certain ecological consciousness, with ecological emotion as the link, and finally formed spontaneously in practice. The ecological civilized behavior in the early childhood stage focuses on the formation of good behavioral habits. For example, caring for flowers and trees, protecting animals, saving water, reducing garbage, etc. Starting from small things, we can move from theoretical education to practical experience, and practice ecological civilized behavior in our lives.

4.3. Forming an Organic Ecological Education Process for Young Children

The organic process of early childhood eco-education is to focus on the development of young children, their lives and their practical exploration in the process of eco-education, to form an organic process of education with young children as the main body, and to give full play to young children's subjectivity and subjective initiative.

4.3.1. Focus on the Process

Ecological education in the early childhood stage focuses on the enlightenment of young children's ecological awareness, and transforms anthropocentrism from the root, rather than guiding young children how to take ecological responsibility. Therefore, ecological education for young children should focus on the process of education rather than the results. First, focus on the design process of educational content, from knowledge, emotion, intention and behavior for all-round penetration, to help young children to deeply understand the relationship between man and nature, ecology and the environment. Secondly, the teaching process should pay more attention to the growth and development of young children and the ecological experience formed by young children in the teaching process. Once again, a good atmosphere should be created for teaching, the surrounding people, things, objects, and circumstances have a certain impact on young children's understanding of the relationship between human beings and nature, and the harmonious educational relationship formed among teachers, young children and the environment can provide environmental support and emotional support in the educational process. Emphasis on the process of ecological education for young children is not to disregard the results of education, but the process of silent cultivation, waiting for the flowers to blossom, the process of excellence, naturally will reap good results.

4.3.2. Focus on Life

"Whitehead believed that life and practice are the only source of education." [22] Ecological education for young children is education on the relationship between human beings and nature, which should start from the real life of young children and guide them to understand connection and symbiosis. Young children's existing life experience is the starting point for ecological education, and the process of education is the process of making ecological knowledge and young children's lives connected. On the one hand, the life of young children should be integrated into ecological education, and the life of young children should be used as an entry point

for ecological education. For example, we should use the concrete life situations of young children to create problematic situations, guide young children to think and explore, and enlighten their ecological awareness as well as form ecologically civilized behaviors in their life situations. On the other hand, ecological education should be integrated into the life of young children, and the day-to-day life of young children should be the theme of ecological education, not only in the collective teaching activities of kindergartens, so that young children can use their existing knowledge and experience to solve the ecological problems in their lives. "The importance of knowledge lies in its application, in people's active mastery of it," [23] the process of applying knowledge is not only the process of young children's active construction of ecological knowledge and accumulation of ecological wisdom, but also the process of growth of their life skills. It is necessary to make full use of the educational opportunities in life, so that ecological education goes out of the classroom and into life, so that young children can gain knowledge about nature in nature, harvest ecological experience in the ecological environment in which they live, form ecological wisdom in the process of solving ecological problems, and grow up to be ecological people in life.

4.3.3. Focus on Practice

The philosophy of practical education holds that "the most effective way of education is through practical activities." [24] In the process of young children's ecological education, first of all, we should pay attention to the practicality of ecological education activities, emphasizing the formation of ecological cognition by young children through direct perception, practical operation and personal experience, so that young children can understand the connection between human beings and nature through contact and experience. Such as guiding young children to contact nature, close to nature, more knowledge of the names of birds and animals, grass and trees, to help young children gradually eliminate the state of alienation from nature, and to discover the dependence of man and nature. Secondly, the use of cooperative inquiry to stimulate the interest of young children, attracting young children to participate in the practice. Through cooperation and division of labor, discussion and exchange, hands-on practice, young children construct knowledge and experience on their own, and young children's autonomy, subjectivity and creativity can be developed in practice. Finally, teaching should pay more attention to the process of children's exploration and self-experience in the exploration, teachers can make a systematic summary of the children's exploration activities, but should not make the results of the uniform rules.

4.4. Improve the Organic Synergistic Mechanism of Early Childhood Ecological Education

Eco-education is a kind of lifelong education, education for all, the ecological education of young children is the common responsibility of the society, kindergartens and families, and the three should work together to develop the ecological education of young children and form a perfect synergistic mechanism of ecological education of young children. First, kindergartens, as the main position of ecological education, should fully tap the resources in the garden to carry out ecological education, on the one hand, fully tap the material resources in the garden. On the one hand, the material resources of the garden should be fully explored. The unique

natural conditions and natural materials of the garden should be utilized to create a garden environment with ecological beauty. The ecological education activities with the characteristics of the kindergarten should be formed according to the local conditions. On the other hand, make full use of the human resources in the kindergarten, mobilize the leaders, staff, teachers and children in the kindergarten to devote themselves to ecological education activities and build an ecological civilization together. Harmonious, equal and friendly relationships between children and young children as well as staff can create a good humanistic environment for ecological education and help young children understand the relationship between human beings and nature in a harmonious symbiosis.

Secondly, families should play an important role in enlightening young children's ecological awareness. Parents should play an exemplary role, the atmosphere of the family, the parents' ecological concept and ecological civilization behavior have a certain ecological enlightenment for young children, parents should set an example, improve their own ecological literacy, and create a harmonious, ecological family environment. Pay attention to the two-way influence between families and kindergartens. On the one hand, parents' resources can be introduced into kindergartens, such as inviting parents of young children with relevant occupations to come to kindergartens to popularize ecological knowledge and share their experiences. On the other hand, kindergartens should actively disseminate scientific ecological concepts to parent groups, guide parents to establish correct ecological values and ecological education, and work together on ecological education for young children. Let the role of ecological education be continued in the family, and keep the consistency and continuity of the effect of ecological education.

Thirdly, the ecological education of young children should be combined with the society. On the one hand, the ecological education of young children can introduce the human resources of the society into the kindergarten, such as botanists coming to the garden to share their experience, and discovering the secrets of the common plants in the life together with young children. On the other hand, ecological education for young children should go into the society and let young children participate in the social practice activities of ecological education. For example, social practice activities such as organizing study tours, viewing natural scenery, visiting nature museums as well as eco-technology exhibition centers and other places. Let young children have more opportunities to perceive nature and ecology in society, enrich and expand ecological cognition, deepen young children's ecological emotions, strengthen young children's ecological awareness of symbiosis, and consolidate ecological civilized behaviors produced by young children.

Author Introduction

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