Asia-Pacific Institute for ESD

NEWSLETTER

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The Greeting Message for 2022 New Year-Spring Festival

Starting a New Journey

We' re still Young as Teenagers

——Concurrent Review the 15 Major Events of China' s Education for Ecological Civilization & Sustainable Development in 2021

Chinese National Working Committee for UNESCO on ESD

Executive Director Shi Gendong

A bumper harvest of education for sustainable development is in sight, and everyone works hard.

As "a year of flourish and amazing development in education for ecological civilization and sustainable development ", 2021 must be written into 21st century Chinese education chronicle.

On March 1, six Chinese national departments including Ministry of Ecology and Environment, Publicity Department of the Communist Party of China, Ministry of Education, etc., jointly issued the "Beautiful China, I am an agent" action plan to enhance citizens' awareness of ecological civilization (2021-2025). The action plan clarifies the following work such as to advance school education on ecological civilization, embed education for ecological civilization in national education system, improve discipline construction on ecological environment protection, strengthen the cultivation of high-level talents for ecological and environmental protection, and actively promote laws and regulations construction of education for ecological civilization.

From March to December, under the leadership of Principal Zhong Chun, a series of articles were worked out and published in the 2021's issue 1 of Journal of Beijing Xuanwu Hongqi Amateur University (quarterly, editor Zhang Zhiye), which focused on theoretical and practical issues: education for ecological civilization and sustainable development with the construction of high level education system, education for sustainable development with the construction of life-long , learning system, ecological-civilization learning community

Exploring Teacher Education for Climate Change Education:

Challenges in Asian Countries

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Teacher Education for Climate Change Education – An Urgent and Challenging Task

Education for Sustainable Development (ESD), stipulated in the Sustainable Development Goals (SDGs) – target 4.7, is a new area of education that pursues and advocates for the sustainability of life and society on earth. Climate change rests at the heart of ESD themes and thus, is inextricably linked to almost all ESD themes, for example, renewable energy, biodiversity, disaster risk reduction, sustainable consumption and production, poverty, peace and international understanding.

The beginning of climate change education (CCE) is Article 6 of United Nations Framework Convention on Climate Change (UNFCCC) in 1992. The article listed education and training as one of the priority action areas. However, full-scale efforts in CCE finally started in the 2010s. The Doha Work Programme, adopted at COP18 in 2012, required that climate change should be included in school education and teacher

towards SDGs, education for ecological civilization in rural area from the perspective of lifelong education, and etc. (the authors are Shi Gendong, Zhang Jing, Shi Feng, Zhao ZhileiLiang Long, Sun Kai, respectively).

After publishing a numbers of articles on education for ecological civilization and sustainable development, and ranking as the top level among the national universities in years, the team of Beijing Academy of Educational Sciences, keeps on the publication with new 25 academic papers and 5 monographs: The Curriculum and Pedagogy of Education for Ecological Civilization (Wang Qiaoling, China Social Sciences Press, 2021); Learning society on the perspective of sustainable development : crossover·integration·innovation (Shi Feng & Wang Qiaoling, Intellectual Property Press, 2021); The leadership of green school——for the sustainable development of our children, community and planet(Zhang Jing & Shi Feng, Tianjin University Press,); Education has the way, life is priceless—the theory and practice of preventive education on child injury from a global perspective (Ma Li, Beijing Press, 2021), The research and design of local education resources under the perspective of ecological civilization (Ma Qiang, Jiu Zhou Press, 2021).

Huo Huibin, Ran Yun, and Gao Song of Tsinghua University, Xu Jinxi of Peking University, Zhou Jianhua of Renmin University of China, Xu Linyu, Wu Wenhao of Beijing Normal University, Yue Wei of Central China Normal University, etc., respectively published the papers, aiming at the topics such as the practice exploration on education for ecological civilization, the realistic pattern and the trends of education for ecological civilization, education for ecological civilization helps the construction of green school, optimization of the route of undergraduate teaching management, the legislative guarantee on education for ecological civilization.

*ESD in China (*Chief-editor: Wang Guiying, Wang Qiaoling; Executive editor: Wang Peng, Wang Xianjuan), has been published to 100 issues, *Newsletter of APIESD(*Chinese and English version chief-editor: Zhang Jing, Zhou Juan) has been published to 25 issues.

——On May 27-29, Zheng Fuzhi, Vice Minster of Education led the delegation to attend the 3rd UNESCO World Conference on ESD and declared that“ China will focus on education for ecological

training. Since the Doha Work Programme, various reports written by and conferences organized by UNFCCC and United Nations Educational, Scientific and Cultural Organization (UNESCO) have stated the importance and urgency of CCE and have made suggestions for its concrete educational activities. For example, UNESCO (2017) has proposed learning objectives for achieving the SDGs including the SDG 13 - “Climate action: Take urgent action to combat climate change and its impacts.” It is our task to consider the school level (or the level of a learner’s development) and the subject and learning areas in which we will implement practices while referring to the proposed learning objectives.

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Globally, advanced efforts in CCE have been developed by UNESCO Associated Schools. One of these is a worldwide school network project entitled “Getting Climate-Ready.” This effort introduced whole-school approaches to climate action (for example, UNESCO, 2016; Sustainability and Education Policy Network, 2018). The outcomes of this project involve identifying good practices and accumulating cases throughout each country. Furthermore, another UNESCO CCE project “Sandwatch: Adapting to climate change and educating for sustainable development” (Cambers & Diamond, 2010) has provided a framework for children, youth and adults, with the help of teachers

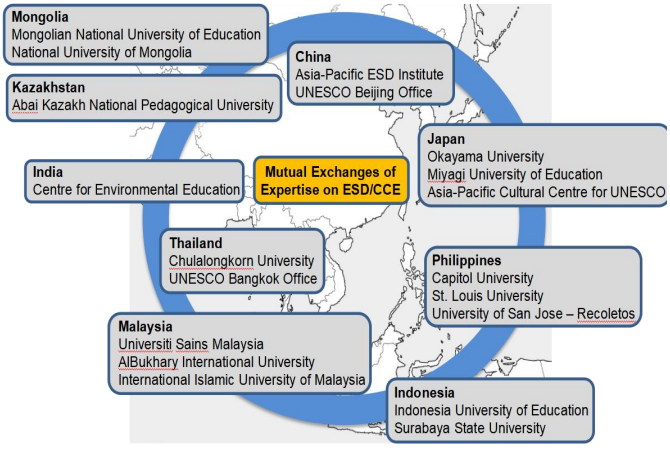


Fig.1 Participating institutions

civilization, integrating ESD into national education development plan". Qin Changwei, Secretary-General of China National Commission for UNESCO, and the heads of Department of Textbooks and Department of Teacher Education at Ministry of Education, together with the representatives (Shi Gendong, Shi Feng, Wang Qiaoling, Zhang Jing, Zhu Beihong, Futao) from the secretariat of ESD Programme of Beijing Academy ofEducational Sciences, attend the Chinese branch venue meeting at Ministry of Education. The team of Beijing Academy of Educational Sciences submitted the national report entitled Education for Ecological Civilization and Sustainable Development: To promote achieving sustainable development goals (EECSD for SDGs) to the conference.

——On May 28-30, the first conference of Chinese Academic Committee on Principles for Responsible Management Education (PRME) and the inaugural conference of China Academic Network were held in Changzhou, Jiangsu Province. The relevant leaders, Yao Wang, Liu Jinghui, Liu Xiuhua, Jiang Juncheng, and Lu hualiang, attended the meeting and gave speeches. The chairman of the meeting, Professor Huang Haifeng pointed out that the construction of PRME will promote to carry out responsible management education and ESD in higher education, advance the higher education to fulfil its responsibility in the education for ecological civilization, and expand the international influence of ESD. Some experts, such as Qian Xiaojun, Yu Zhihong, Cao Xuanwei, Guo Yi, Yin Gefei,Liu Zhiqin, Shi Gendong and etc., delivered special reports. At the Asia Education Forum held in September, the Committee called on colleges and universities and even all sectors of society actively to carry out academic communication on ESD, in accordance with the national policy of the construction of ecological civilization.

——On July 16, UNESCO's 44th Session of World Heritage Committee was held in Fuzhou, and then Chinese Ministry of Education also hosted a side event on the theme of "World heritage education towards a sustainable future". Qin Changwei, the General-Secretary of China National Commission for UNESCO, presided over the event. Tian Xuejun, Director of China National Commission for UNESCO delivered a keynote speech. Ms. Yuan Aijun, Director of UNESCO World Heritage Education Center for Youth delivered a special report and hosted a special exhibition.

——On October 16, Zigen Association in China for Rural Education and Development and Hubei Wuchang University of Technology jointly sponsored the 3rd Ecological Civilization and Education for Sustainable Development Forum cum an on-site observation conference and local communities, to work together to critically evaluate the problems and conflicts facing their beach environments and to develop sustainable approaches to address these issues.

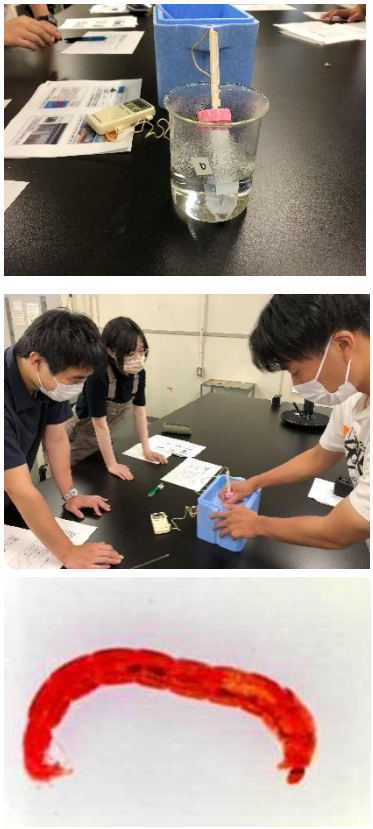


Fig.2 Experiment of the relationship between activities of chironomos and water temperature

Teacher education for CCE has been also expanding in conjunction with school education for CCE. However, its efforts are often aimed at the development of teaching materials and courses in each teacher education institution. Notably, the educational strategies and development of systematic educational programmes for CCE has made little progress, particularly in Asia. Directing teacher education for CCE is an urgent and challenging task.

ATECCE: New Research Project of Teacher Education for Climate Change Education

Based on our experiences in teacher education for ESD, we have launched a new research project to tackle this challenge in collaboration with Asian countries. This project titled "Promoting Teacher Education for Climate Change Education through Collaboration

Yang Guiping, Chief-expert of Zigen, Luo Yixian, President of Zigen, Wen Tiejun, famous expert of agriculture, rural area and peasant, Shen Tiyan, Vice Dean of Development Institute at Peking University, and Dr. Wang Qiaoling, Secretariat of Chinese ESD Programme for UNESCO, delivered keynote speeches. More than 100 representatives from governments, colleges and universities, civil organizations, and enterprises attended the meeting and over 12 thousand people watched the online live streams.

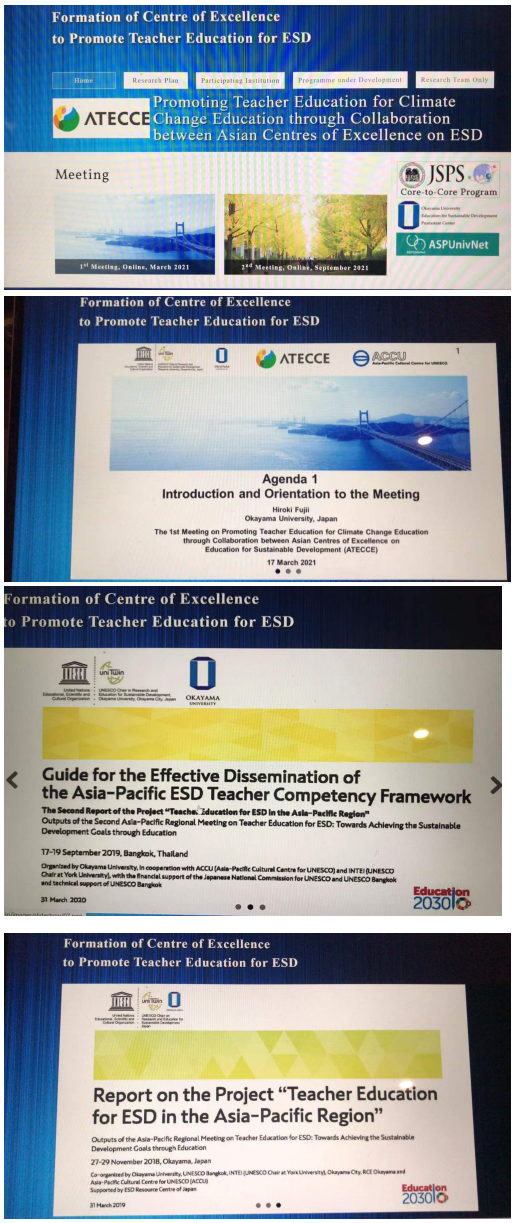
——From October 20 to 22, the team of Beijing Association of ESD visited Qinglong Manchu Autonomous County, Hebei Province, for a three-day educational instruction and donation activity with the theme of "ESD advances rural revitalization"

——On October 24th, CPC Central Committee & State Council published The Opinions on Completely, Accurately and Comprehensively Implement New Development Concept and Do Well in Carbon Peaking and Carbon Neutrality, which formally made the deployment for fully embedding the goals of peaking carbon emissions and carbon neutrality in the medium and long term planning of social and economic development, and integrating the development of green low-carbon into national education system.

From November 7 to 8, the ESD team of Green Light-Year Environmental Service Center, Shanghai, China, was invited to attend China Enterprises Pavilions at UNESCO COP26 Glasgow Climate Conference, working as volunteers and communication consultant; Project Manager Liu Shan hosted the preview press conference of issuing three new ESD books (co-edited with 100 university students from 45 universities at home and abroad). Previously, Ni Huan, the president of the Center hosted a series of seminars on Education for Ecological Civilization in Changjiang Delta in 2021, co-sponsored by Department of Communications and Education at Ministry of Ecology and Environment and China Children's Center.

——From March to November, under the leadership of Dr. Dai Jian, a team of Education for Ecological Civilization and Sustainable Development at China Welfare Institute Children's Palace, organized teacher research and training activities for 7 times, advancing the construction of 100 ESD schools, with focusing on the SDGs and the construction of teenagers' two carbon ability. At the 8th Kubuqi international desert forum and the Chinese site of World Cities Day, on behalf of Shanghai, they launched the initiatives of "looking for low-carbon password, striving to be a zero-carbon pioneer". At the cooperation meeting of Asian excellence centers of ESD, they introduced the experience of teachers' training for advancing climate change education in Shanghai.

between Asian Centres of Excellence on Education for Sustainable Development (ATECCE)" aims to develop the "Asian Framework of Teacher Education Programmes for Climate Change Education," and its dissemination guide through the collaboration between centres of excellence on ESD in nine Asian countries: China, India, Indonesia, Japan, Kazakhstan, Malaysia, Mongolia, Philippines and Thailand (Fig. 1).It will embody a leadership



in teacher education for CCE in Asia and create a widely applicable framework for teacher education programmes.Furthermore, the guide of the framework will be informed and disseminated to teacher education institutions in Asia, UNESCO regional

——On November 18, at the 12th UN RCE global conference, a project of "The messengers for a sustainable development future" submitted by the ESD team of Green Zhejiang, led by Dr. Xin Hao, was awarded Outstanding Flagship Projects. The project organized nearly 10 thousand students to participate in the science field trip related to SDGs, and edited 5 textbooks and set up 5 bases, and nearly million people profited from it.

——From January to November, the research team of Guan Zhou educational experimental research association, led by Professor Feng Guowen, continued to guide the construction of the ecological school at Xiehe High School,a National ESD Demonstration School. Under the guiding idea of Ecological Education,they completed nearly 100 inquiry learning projects,won 68 awards of provincial innovation achievements, and got 15 patents authorized. Under the guidance of this team, the event of "Being the manager of a river" was carried out by Huilong Primary School, Liwan District, which developed and improved the school-based ecological course on the integration of water and bank, as well as the 5-ways of education. They also carried out other initiatives, such as building "the school with small farmland", which was co-developed with Zhongxing Primary School; "the planting labor-base", co-developed with Luofeng Primary school; "Baixiang plant course", co-developed with Canglian Primary School; "the kindergarten with flowers and joy", co-developed with Fangcun Kindergarten. These outcomes of ecological education are praised by the superior department.

——On December 15th, the meeting of first ESD Forum and Building Dream Classroom for Youth in 2021, co-organized by Nissan (China) Investment Co., Ltd, China National Commission for UNESCO, and China Sustainability Tribune, was held in Beijing. The meeting was hosted by Yu Zhihong, president and chief-editor of China Sustainability Tribune. Relevant leaders and experts, such as Du Yue, Zhao Yang,Suzuki Zhaoshou, Liu Yong, Shi Gendong, and etc, delivered speeches or special reports. Participants of the meeting conducted in-depth discussion on the theme of sustainability education, and the teachers and students from more than 10 regions nationwide watched the online live-stream meeting.

——On December 22, Alliance of Innovative Education in Sustainability of China (AIESC) launched the establishment schedule. AIESC is co-initiated by the related institutions of UNESCO and the United Nations Industrial Development Organization, the relevant agencies of Ministry of Education, the relevant think tanks of Beijing Normal University and Beijing Academy of Educational Sciences, and Tencent Sustainable Social Value Division.According to the report, the alliance will build an information communication and sharing platform for international organizations, government departments, academic institutions, schools and communities and enterprises,to promote the coordination between high-level policy discussion, scientific research and innovative practice, on the other hand to

offices and/or national commissions for UNESCO and the Ministries of Education (divisions of teacher education), for mainstreaming CCE in the existing teacher education programmes.

By developing teachers who actively practice CCE through these programmes, this project will also contribute to the mainstreaming of CCE in schools.

Participating institutions in ATECCE project are currently developing a teacher education programme for CCE. For example, Okayama University, Japan is incorporating CCE into pre-service teacher education in several departments. In science education department, we offer existing compulsory and elective courses incorporating CCE, such as of Secondary Science Teaching Method and Secondary Science Content (Botany and Meteorology). In the course Secondary Science Teaching Method, we give a lecture on creating classes for CCE in secondary school science and introduce science experiments related to climate change. These experiments include a chemistry experiment on the synthesis of biodiesel (trans-esterification of colza oil with methanol) to consider the utilization of renewable energy and a biology experiment on the relationship between activities of chironomus and water temperature to consider the northward movement of mosquito-transmitted infectious diseases (Fig. 2). Students as prospective science teachers divide into groups and discuss how to teach science classes incorporating these experiments.

In addition, we are developing

carry out many forms of sustainability education and the practice of learning-innovation.

——Late in December, according to the deployment of Beijing Academy of Educational Sciences, made by the leaders such as Fang Zhongxiong, Feng Hongrong, Liu Zhanjun, Zhong Zurong, and etc, Shi Feng, Wang Qiaoling, and Wang Tieying , led the secretariat of Chinese ESD programme for UNESCO, Institute of Life-long Learning and ESD at Beijing Academy of Educational Sciences, and the research team of Beijing Association of ESD jointly to complete the Achievements Exhibition (1998-2021) of Education for Ecological Civilization and Sustainable Development. The exhibition focuses on the important achievements of the research team of Beijing Academy of Educational Sciences in the implementation of ESD and subsequent Education for Ecological Civilization in the past 23 years, theoretical and policy research, important meetings, suggestions to the government, school practice research, regional promotion and international cooperation research, and showed up some paper and actual achievements. In the future, the exhibition will become an important training, cooperation and exchange base for the upcoming Educational Innovation Studio on Education for Ecological Civilization & Sustainable Development at Beijing Academy of Educational Sciences.

There are so many extraordinary days in the past.

Recalling the eventful years, we deeply cherish the memory of Mr. Tao Xiping, a famous contemporary educator, and we are very grateful to the respected Professor Gu Mingyuan, the leaders of the Ministry of Education: Zhang Xinsheng, Chen Xiaoya, Liu Limin and Zhang Li, Du Yue and Qin Changwei, the leaders of the Beijing Academy of Educational Sciences: Ma Shuping, Ji Mingming, Shi Long and Fang Zhongxiong, and the research team of the Beijing Academy of Educational Sciences and thousands of principals and teachers in more than a dozen provinces and cities across the country.

It is precisely because of their foresight, strategizing, firm faith and persistent action, we built the first national organization platform for early ESD in China, launched the first National Workshop on ESD, created the first professional publication ESD in China, held the first Beijing International Forum on ESD, published the first batch of ESD series, submitted five reports of suggestions on ESD, released three biennial research reports on ESD, established the first batch of ESD experimental schools and experimental districts, held the first Asia-Pacific expert meeting on ESD, launched the first Beijing Ecological Civilization Education Forum, and participated in the three world conferences on ESD on behalf of the country, submitting national reports and making a national voice.

Time flies! From 80-90s last century to the present, the trickle of education for environment and sustainable development has formed today's big tidal of education for ecological civilization & sustainable development. What makes us extremely proud and excited is that it is in the difficult, tortuous and magnificent historical process, various teams of Education for Ecological Civilization & Sustainable Development (EECSD) developed the outstanding EECSD team spirit for standing bravely at the forefront, taking the initiative, forging ahead and growing together. This is the spiritual source and driving force for the great cause of EECSD.

Fig. 3 Study tour to sites of a biomass town where woody biomass is developed and utilized

a new course, aimed at helping the students learn about the development and utilization of bioenergy in reality. The course contents include a lecture about high school chemistry lessons focused on bioenergy and a study tour to sites of a biomass town in Okayama

Crossing these blue hills adds nothing to one's years; the landscape here is beyond compare.

Looking forward to 2022, when facing up the test of building a high-quality education system and the first national survey on implementing the initiatives in ESD five priority action areas suggested by UNESCO Berlin Conference, the researchers and practitioners of EECSD, with experiencing many difficulties & regardless of any difference, will continue to carry forward the spirit of excellent EECSD team, show the due beauty of excellent agents with the updated results of theoretical innovation and practical innovation, and make new contributions to the realization of ecological civilization and a better future of sustainable development, as well as to the early realization of the gorgeous vision of a beautiful China and a beautiful world.

Take a new mile
We're still teenagers,
Ambition is still there, and.
Live up to your youth,
Never forget the mission,
Cherish the scenery here;
Towards 2030,
You and me move forward hand in hand,
Forge ahead side by side.
You and me work hand in hand
Forward, forward,
side by side
Forge ahead,
Whet - sharpen - forward - go!

December 31, 2021
At 95 North Fourth Ring East Road

where woody biomass is developed and utilized (Fig. 3). Through this course, the students have a great opportunity to gain a better understanding of the reality of society and to think about how to create science classes on CCE when they become teachers.

In the near future, through the experiences of the programme developments in the participating institutions, we will analyze the successful factors for the program development. Based on these factors, we will propose a programme framework that contributes to the expansion of teacher education for CCE in Asia.

For more information on this project, refer: http://ceteesd.ed.okayama-u.ac.jp/

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ESD Excellent Case in China

Promoting Teacher Education for Climate Change Education:

——Practice and exploration from Shanghai

China Welfare Institute Children's Palace

Dai Jian

After the launch of *UN's 2030 Agenda for Sustainable Development*, and *Global Action Programme,* we recognized that inside and outside school education plays an important role in educating teenagers to realize sustainable development. The salient trait of out-school education is expressed as

“ Arousing students’ interesting, Practice experience, Individual education, Interdisciplinary learning”, which are also the important factors in talent growing. The learning of climate change goals enables teenagers to develop their cognitive ability, understand and master the critical skills and expand their understanding on the society which they lived, explore the right values, attitude and action， and master the ways to solve personal and social problems that affect their lives. Therefore, promoting teacher education for climate change education is the important work for us to explore together.

Ⅰ Focus on the internationalization: the practical thinking on teacher education for climate change education

In order to further cultivate interdisciplinary teachers with international ideas, starting with the professional learning in the field of sustainable development and relying on the professional guidance from Chinese National Working Committee for UNESCO on ESD, we organized the training of a lot of working teachers in Shanghai. Through programme learning and research, we made a certain regional exploration about the climate change education, and preliminary formed the following education thinking and practice.

1 International vision: organizing the theory learning on the learning objectives of climate change

Through workshops, organizing the front-line teachers to learn Education for Sustainable Development Goals: Learning Objectives and Education 2030 Framework for Action, we learned that the objectives of climate change of ESD can be divided into three aspects: cognitive learning objectives, social-emotional learning objectives and behavioral learning objectives.

2 Professional experts’ leading: focus on the research of core literacy framework of climate change education.

Capacity dimension	Concrete content
learning ability	The learner should know the relevant basic concept and knowledge about climate, understand the characteristics of global climate system and climate distribution of their own country, and understand climate related knowledge, such as green-house effect, carbon emission and extreme weather.
adaptability	Actively response to climate change, flexible use the relevance between climate and people’s life and production, predict and prevent disastrous weather and extreme weather in advance, and master the capacity to deal with the issues in subsequent life and production under different weather conditions
scientific evaluation ability	Rationally judge and effectively disseminate the correct information on climate change, reflect on their role in climate change, and take appropriate actions to improve the climate.
innovation ability	Be good at discovering problems related to climate change and conduct experimental exploration through investigation or model-making.
self-awareness ability	Raise awareness of climate protection, regulate their own behaviors, engage in climate action.
Social-service ability	Utilizing climate knowledge what they learned and practical action, serve and mobilize public to real engage in the climate action.

Under the leadership of Shi Gendong, Executive Director of Chinese National Working Committee for UNESCO on ESD, Dr. Wang Qiaoling, and Zhang Jing, we carried out a preliminary study on the core literacy framework of climate change education.

3 Professional development: make clear the teacher’ implementation concept on climate change education.

(1)It is beneficial to establish the life-long learning philosophy

Education for sustainable development (ESD) is a part of quality education.The United Nations’ SDGs point out the need to cultivate individual literacy and consider the impact of their own action on current and future society, culture, economy and environment according to the characteristics of local and global. All educational institutes--from preschool education to high education and informal education--can and should consider their responsibility on tackling sustainable development business and cultivating sustainable development literacy. In front of today’s challenge, ESD provides the important education to each learner.

(2)It is conducive to the overall reform of learners’ learning environment

Educational workers need to integrate the content of climate change into ESD course, and embed the course content, learning method and learning environment to the teaching from the perspective of overall thinking. It requires an action-oriented and transformative pedagogy, which supports self-learning, cooperation-engagement, problem-oriented, interdisciplinary learning, and combine formal education with informal education, so as to promote the cultivation of learners’ core literacy.

(3)It is conducive to giving young people the opportunities of challenging learning

The effective conduction of ESD can help young people understand their ideal situation in the society and learn the series problems facing the world, such as climate change issues, and combine with their own life, Change the behavior of teenagers to deal with climate change and adopt more sustainable life style, so as to form the good cycle in learning process on education promoting sustainable development.

4 Training experience: enrich and clarify the teacher training forms of climate change education

Teacher education for climate change education requires fully considering the characteristics of the first-line teachers, and we conduct it in many ways: organizing and guiding the first-line teachers to participate teacher training activities organized by the special teacher studio of China Welfare Institute Children's Palace, to visit the climate change education bases, such as the one belong to UN Environment Programme -- Tongji University’s Environmental and Sustainable Development College, for practical research and training activity, to participate in the online “My Green University” training course of Ministry of Ecology and Environment as well as the offline interactive course of World Wide Fund For Nature, so as to enable the teachers to have an in-depth understanding on climate change education.

Ⅱ Focus on projects：Local practice on teacher education for climate change education

We promoted the teachers’ study competencies of education and teaching, through the following ways: organizing the research and development of picture books for children, practical action in the primary school, exploration activities in secondary school and research programme in high school, and we published “Response to climate change”, the first series of books in national wide, and organized the first-line Interdisciplinary teachers to develop the popular science course of low-carbon science and technology, which includes the basic knowledge on combating climate change.

1 Completing the research and development of series books on climate change

Kindergarten curriculum: in the form of picture book, according to the children’ s nature of the curious, inquisitive and willing to explore, through the small phenomenon in daily life, to explore the reason behind the climate change.

Primary school curriculum: disaster prevention and reduction, energy-saving and emission reduction. Explore ways to deal with disaster weather by explaining and analyzing the definition, impact and defensive measures to the students. Call on the students to do what they can through organizing green creative activities for energy-saving and emission reduction. Call on the public to take action to deal with climate change.

Secondary school curriculum: popular some basic knowledge about climate change and the students are expected to apply their knowledge of handling climate change and trigger in-depth thinking on current climate change.

High school curriculum: from multiple angels, expound multiple-dimension performance forms of climate change, from popularization basic knowledge to latest research development, in each unit,

2 Conducting the research and development of series science education courses on popularizing the technology of low-carbon

This project aiming to provide the best low-carbon practical guidance for young people, was developed together by six teachers from China Welfare Institute Children's Palace, and it includes low-carbon topic, regular carrying out low-carbon science-technology innovation series activities and carbon footprint-reduction action.

Through popularizing the scientific knowledge of climate change, such as, carbon emission peak, carbon neutrality, guide the teenagers to carry out low-carbon learning based on science, explore operable ways of activities, so as to cultivate innovative spirit, creative thinking and practical ability, and to lead teenagers and citizens to a low-carbon lifestyle.

This series of courses has a total of 6 class hours, which is suitable for students in grades 4 to 6. It is recorded and produced in the form of animated image + real teacher. The six teachers from China Welfare Institute Children's Palace, together with a cartoon figure “Tantan”, lead children to search for the password of low-carbon.

Introducing the IP Image of low carbon education

“Tantan” is a cute green little bubble. Its design inspiration is from the carbon dioxide. National low-carbon day on 25th August is its birthday. IP “Tantan” is enthusiastic and lovely, full of curious. Under the guidance of teachers from China Welfare Institute Children's Palace, it understands the importance of low-carbon life. Its biggest hobby is to look for a low-carbon password and strive to be a zero-carbon pioneer.

Name: Tantan

Birthday: Aug. 8, National Low-carbon Day

Hobby: look for low-carbon password

Personality: enthusiastic and lively for exploration

Purpose: under the leadership of teachers, together with everyone, grow up to be a zero-carbon pioneer.

Online courses: each class lasts for 20 minutes, with a total of 6 class hours. It will be launched on the official Wechat subscription number of the China Welfare Institute Children's Palace and Shanghai Science Communication and other platforms.

Offline courses: establish the club of low-carbon science-technology, offer the club course at China Welfare Institute Children's Palace, and send the relative teaching to schools.

Course name	Online course and interaction	Offline exploration and practice
Leading a Low-carbon life first: preface	Online interaction：what is carbon peak and carbon neutrality?	Imitation of Green-house effect experiment
Leading a Low-carbon life first: clothing	Online interaction：what is your suggestion on low-carbon clothing?	Design and manufacture of environmental protection clothing
Leading a Low-carbon life first: diet	Online interaction: Will you consider the low-carbon when you choose your food?	Design and production of proposal on diet and cooking.
Leading a Low-carbon life first: home furniture	Online interaction: what is the energy around you?	Design and manufacture of energy-saving night light
Leading a Low-carbon life first: travel	Online interaction: which way to school is greener?	Design and manufacture of solar car
Leading a Low-carbon life first: innovation	Online interaction: what is the low-carbon ideas in the life?	Design and production of low-carbon scientific and technological innovation achievements

Addressing climate change is a challenge for all mankind. Let's work together to promote teacher education for climate change education, and for our common planet home.

中国福利会少年宫

Chinese National Working Committee for UNESCO on ESD, Asia-Pacific Institute for ESD

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