

What have We Done and Where will We Go? - Brief Review and Outlook of Education for Sustainable Development in China

Xianjuan Wang*

Life-long Learning and Education for Sustainable Development Institute, Beijing Academy of Educational Science(BAES), Beijing, 100176, China.

Abstract: Since the beginning of the United Nations Decade of Education for Sustainable Development (DESD) (2005-2014) in 2005, Education for Sustainable Development (ESD) has been started a new era of educational innovation progress in China. Up to now, China has created a new history of ESD for 21 years, and ESD, the abstract conception from international academia has been become a leading thought of teaching and learning innovation for more and more teachers in China, and in 2010, ESD was been written in the Outline of the National Program for Medium and Long-term Education Reform and Development (2010-2020) by Chinese Ministry of Education as a strategic direction of education development for the coming ten years. Exactly, ESD has really played a positive role in educational reform and innovation.

Keywords: Education for sustainable development, China, Review and expectation

Publication date: September, 2019

Publication online: 30 September 2019

***Corresponding author:** Xianjuan Wang, wxj6598@163.com

1 What have we done in the last 20 years?

1.1 Localization of ESD theoretical research

The 20-year history of ESD practice is a Synchronized advancement of localization of ESD theoretical research in China. Sustainable development, the principal concept of ESD, was first widely defined in the Brundtland report entitled 'Our common future', as follows: 'Sustainable development is development that

meets the needs of the present, without compromising the ability of future generations to meet their own needs'^[1]. This definition implies that there is a necessity of including all three dimensions (environmental, social, economic) of education^[2] and focusing on their interrelationship, as well as their interactions over time and space.

The idea of unity between human and nature is one of the important philosophy concepts in Chinese traditional culture, as well as the roots of sustainable development in China. Both of them emphasize the respect for nature, for human beings, for resources on the earth and for the descendants. So firstly, we found the connection of SD and Chinese traditional culture. Secondly, we connection ESD with the dilemma of education in China, especially the disconnect between knowledge and ability, school and society, thinking and innovation, regional and international context, present and future etc. Thirdly, the current situation of social development in China can't be ignored. Especially the imbalance between economic development and environmental protection needs a positive and sustainable innovation of education, as well as the sustainable social governance. So there are either the foundation or the needs of ESD in China.

Definition of localization concept of ESD is the theoretical study start point of ESD in China. In 2003, Chinese National Working Committee for ESD in China(CNWCESD) and Beijing Academy of Education Sciences(BAES), the leading institutions of ESD in China, defined ESD as a new educational idea generated in the sustainable development age, focuses on the cultivation of sustainable values, aims at gaining

scientific knowledge, building learning capacity, cultivating values, and forming lifestyle that sustainable development needs. In short, this definition emphasizes one core and three fundamental points of ESD. One core is that ESD is fundamentally an education of value on sustainable development; three fundamental points are that ESD should focus on cultivating students of scientific knowledge, learning capacity and lifestyle required by sustainable development. We also clarified that ESD is not simply specialized education like environmental education, resources education or multicultural education. Rather, it is an educational philosophy and education pattern with the holistic and critical perspective that helps the educated gain scientific knowledge, learning capacity, values and lifestyle required by sustainable development. It is a new education that meets the needs of sustainable development of a country and the whole world.

1.2 Explore and improve the development path of ESD

The path of ESD in China went through a development progress from thematic education related to sustainability to the educational reorientation towards future by ESD. ESD in schools is not a subject, activities or an appendix to the curriculum schedule, ESD is a steering to change our education: to pay more attention to changing the absence of humanistic spirit in current education, and focus on help students to acquire knowledge, values and life styles needed for sustainable development; to deal with the disconnect between knowledge and ability, and focus on cultivating students' sustainable learning ability; shift the focus from text score to literacy for sustainability as the starting point and foothold of education, update content, context, and method of teaching and learning with the result of high quality learning outcomes which could contribute to a sustainability future.

In recent 20 years, Chinese ESD researchers has promoted and guided primary and secondary education and learning innovation with the following main ideas:

Firstly, to understand and reform the current teaching from a critical perspective, which only focuses on the drawbacks of knowledge transmission and instant learning performance, and to reoriented teaching and learning objectives with the era function of education promoting sustainable development, so as to guide educators to pay more attention to the sustainable growth and sustainable development of learners.

Secondly, it examines the teaching content from

the perspective of the era of sustainable development, integrates the knowledge of social and economic environment and cultural sustainable development into the teaching and learning content, and promotes the innovation of school curriculum.

Third, initiated teaching and learning experiment research with the guide of sustainable development literacy and uphold the subject-inquiry, comprehensive-integrated, cooperative-activities as ESD classroom teaching principle, and completed learning with preview homework designed by teachers, completed research reports, peer discussion and evaluation, group work, preparation of solutions to problems such as teaching and learning methods, solid training students a variety of sustainable learning ability;

Fourth, make quality standards based on sustainable development literacy, and guide the right direction of innovative teaching and learning. It can be said that promoting the innovation of sustainable teaching and learning mode is always the core category of China's innovative practice of ESD, and it forms the innovative practice system of sustainable development education and learning with Chinese characteristics.

Fifth, take ecological civilization as the important track of the times, guide education and teaching reform and school development to make more efforts to promote the in-depth integration of the ecological concept and education, and promote education outcome and school development to play a driving role in the new civilization form of ecological civilization.

It was proved that, this is the key to the deep roots of ESD in a large number of experimental schools. More and more international experts pay close attention to China's practical and innovative experience, which is mainly from this aspect of attention.

1.3 Effect of policy innovation of ESD

Based on the evaluation and review of school ESD experiences, ESD gained more and more attention from governments, which initiated a significant policy process for ESD in China. In 2007, Beijing Municipal Commission of Education released an important document for ESD: "the Guideline for ESD in Primary and Secondary School in Beijing", which governs all primary and secondary schools to implement ESD.

2010 is a year of educational reform in China. The State Council issued the Outline of the National Program for Medium and Long-term Education Reform and Development (2010-2020) on the basis of extensive consultation, ESD innovation outcomes and experience

was included. So ESD was formally incorporated into the “strategic theme” section of the outline, which played a further promotion of ESD in the coming years, and the concept of Education for Sustainable Development entered the public domain as well as public policies.

1.4 Regional approaches of ESD

Focusing on the overall development of regional education, take ESD as an important guiding concept of regional education reform and development. In the past 20 years, China’s ESD has been committed to creating an overall environment and climate for regional advancement, thus promoting mass innovation practices in large areas of schools. Regional pilot studies conducted in Beijing have led to the spread of ESD in other parts of the country. For example, the Shijingshan district of Beijing has established an experimental pilot area for ESD, leading the way and creating an ecological educational model featuring green, harmonious, respecting children and putting people first.

Putuo district of Shanghai deployed the core educational concept of Shanghai together with the core idea of ESD into all forms of education at all levels by 12 regional plans, focusing on the complete set of education resources layout, update professional development for teachers, focus on students’ innovative literacy, modern school system, modern school culture construction etc.;

With ESD as the main line, Chancheng District, Foshan City, Guangdong Province, has made all-round progress in policy innovation, curriculum innovation, teaching and learning mode innovation, and achieved great strides in creating quality education in just four years.

1.5 School improvement of ESD

It is a basic strategy to build and train a batch of experimental and demonstration schools of ESD step by step in the past 20 years. At present, there are more than 1000 primary and secondary schools, kindergartens and other types of schools participating in ESD. During the process, ESD experts and local education authorities provide professional guidance, training and supports to schools. Major processes such as:

(1)The team of ESD experts work with local education commissions to organize general training on Education for Sustainable Development;

(2)Local education commission determine the list

of experimental schools according to the voluntary registration and expert recommendation;

(3)The expert team guide the candidate schools to develop their own plan of co-building ESD schools and start the implementation;

(4)The expert team visit the schools regularly to diagnose the implementation process (attending classes, evaluating classes, talking with the principal, teachers and students), evaluate and propose suggestions for future improvement;

(5)Expert teams, local education commissions and experimental schools jointly held the on-site meeting on the construction of schools outcomes on Education for Sustainable Development;

(6)Organizing and publicizing excellent experiences and cases of Education for Sustainable Development in schools.

After more than twenty years of efforts, the concept of Education for Sustainable Development has been transformed into a new idea of running schools, and rich and colorful educational practical experiences.

1.6 Curriculum innovation of ESD

One of the major challenges facing ESD is how to turn the abstract concept of sustainable development into reality. In the three-level curriculum system of China, namely, national curriculum, local curriculum and school-based curriculum, among which local curriculum and school-based curriculum are important fields that ESD is incorporated into the curriculum. The development of the local curriculum of ESD is oriented to the living local society, economy, environment, culture and other comprehensive issues and problems, which can make the ESD more tangible, interesting and fresh.

1.7 Changes of teaching and learning brought by ESD

ESD is not a separate discipline. Exactly, the integration of ESD into the disciplines brings the elimination of disciplinary boundaries on the premise of ensuring the completion of teaching tasks. It is not a signatu-like link between discipline and ESD, nor is it a classroom show of ESD far from discipline rules and discipline thoughts. The characteristic classroom of ESD explored in China has the following characteristics:

(1)The integration of discipline thoughts and humanistic feelings of sustainable development in the classroom. The core values of sustainable development namely “respect for the environment,

respect to resources on the earth, respect for diversity and differences, respect the current and future generations” gives a broader field of vision and the teaching innovation space, improve teaching levels. The improvement and deepening of humanistic feelings of sustainable development to the value orientation of subject teaching is the first standard to measure the classroom of ESD, and it is also the biggest charm and unique value of ESD in class.

(2) The integration of learning content and the reality issues of sustainable development. Updated the learning content according to the requirements of sustainable development, integrate many social events and problems in the field of social, economic, environmental and cultural sustainable development, such as climate change, biological diversity, haze and clean energy, Chinese traditional culture and cultural diversity, world heritage and intangible cultural heritage, etc. guiding students to analyze and solve the practical problems of sustainable development from the perspective of different disciplines is the second standard of ESD in class.

(3) The integration of basic learning ability and sustainable development literacy of students. In terms of teaching and learning methods, we advocate new teaching and learning methods, such as classroom learning advance by completing learning inquiry report, peer discussion and evaluation, and problem solving by group cooperation etc.. The purpose is to strengthen and cultivate students’ lifelong learning capacity in the process of independent learning, cooperative learning and inquiry learning.

(4) The integration of school learning and society learning in the classroom. The learning content of ESD is widely connected with the social situation. In essence, sustainable learning is learning across borders. In view of specific practical problems of sustainable development, the classroom should be turned into an open learning space for interaction with stakeholders, so as to realize the collision between disciplinary perspectives and diverse perspectives, further establish relevant connections, introduce reasonable learning methods and effectively solve practical problems of sustainable development. This is the biggest characteristic and important standard of sustainable learning.

2 Where will we go in the coming 20 years?

At present, the global community is working hard to

realize the 17 SDGs of the 2030 Agenda for Sustainable Development. In September 2015, President Xi Jinping, on behalf of the Chinese government, made a solemn commitment to participate in the 2030 agenda. According to the National 13th Five-year Education Plan, “strengthen ecological civilization education.....Education for Sustainable Development should be carried out extensively”^[3].

Faced with the requirements of 2030 Agenda for Sustainable Development and China’s Long-term Goal of Building an Ecological Civilization by 2035, we need to:

(1) Pay more attention to research on the intrinsic relationship between ESD and ecological civilization, continue to perfect the theory system of Education for Sustainable Development which is meet the needs of China’s ecological civilization construction, and promote the union of theory and policy of ESD and ecological civilization.

(2) It is imperative for us to further strengthen the capacity building of teachers of ESD, which is related to the overall progress of ESD in China in the future. Over the past 20 years, we have provided ESD-related trainings to teachers through series of national workshops and various thematic trainings, which has played an important role in promoting ESD in primary and secondary schools in some areas. But that’s not nearly enough to spur deep and broad changes in education. Many teachers in provinces, cities and regions have not accepted the concept of ESD, including education managers and other levels of educators besides primary and secondary schools, such as preschool education, vocational education, adult education, community education and higher education. In particular, we hope to integrate ESD into pre-service education and vocational training for teachers. In addition to traditional forms of training, we will develop MOOC as new form for training, and also train more ESD instructors to conduct systematic theoretical and practical training for the majority of teachers. Therefore, teacher capacity building with extensive coverage is an important task and challenge to promote sustainable development education in China in the future.

(3) How to establish the connection between ESD and regional development and create the regional brand characteristics of ESD? After 20 years of practice and exploration, many provinces, cities and regions in China have accumulated some experiences

on ESD and played a positive role in regional education and social development. How can ESD gain sustained vitality? It is necessary to explore the characteristic needs of different regions and respond to the social, economic, cultural and environmental development needs or dilemmas from the perspective of ESD. This is a realistic problem to be considered in promoting ESD in China in the future. Only when the ESD is connected with the practical problems in the region can the value of ESD be discovered and gain continuous vitality.

(4) The assessment of ESD quality is a problem that international community is trying to solve. The same is true for China. What are the contributions of sustainable teaching and learning to teachers' professional development and students' sustainable literacy? How to measure and evaluate quantitatively? The eight literacy put forwarded by Education for Sustainable

Development Goals- Learning Objectives give us great inspiration and guidance. However, how to combine these capability requirements with the current focus of China's education policy to reflect both international trends and China's needs is the problem to be solved in our future, establish the framework system of ESD quality, which is also an important link to evaluate the quality of ESD. This is a worldwide problem, but China is still working on it.

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