Introduction

Since the early 1990s, the Zigen Fund, a US based non-profit organization, and its sister organization in China, the China Zigen Association for Rural Education and Development (a China based NGO), have supported programs in the educational domain in rural China. Zigen, which means to nourish the roots, started its operations by supporting girls living in poverty-stricken rural villages to attend elementary schools, high schools and colleges and become the first generation of female teachers and healthcare workers, enabling many of them to become the major force in village development. Over the years, Zigen has also expanded its programs beyond the formal education to adult education and to include environmental awareness, primary healthcare and cultural preservation.

In the past 30 years, Zigen has witnessed tremendous change in China. Economic growth has improved living standards, but in the meantime, rural China has paid a great price, including environmental degradation, widening income disparities, and the disappearance of local traditional culture. Many rural villages are disappearing and include many left-behind children, women, and the elderly as the young work in cities as hired labor. The school education is academic-oriented and urban-biased, has little relevance to daily life, and is focused on test scores and preparing students for entering university and leaving the countryside. Together with the merging and closing of rural schools, the educational policies are extremely unfavorable for the sustainable development in rural China.

The sustainable development of rural villages in China is facing great challenges.

Education for Sustainable Development (ESD) is the Key

Given that a population of 577 million, or 41.48% of the total population of China, still lives in rural areas, (UN DESA 2018) the sustainability of rural villages has become one of the most urgent tasks facing China in the present. There is growing international recognition of Education for Sustainable Development (ESD) as an integral element of quality education and a key enabler for sustainable development. ESD is fundamentally about values, with respect at the center, particularly respect for others, including both present and future generations. The purpose of ESD is to educate learners to build knowledge, awareness, and skills in key areas of sustainable development (environmental responsibility, economic vitality, social equity, cultural diversity) and to enable everyone to participate in promoting sustainable development in local communities. The United Nations used 2005-2014 as the Decade of Education for Sustainable Development (DESD) and has further promoted “education for sustainable development” as an important means of achieving the 17 SDGs outlined in the 2030 Agenda for Sustainable Development. (UNESCO 2017).
Zigen’s emphasis on promoting ESD in rural China

For the past ten years, promoting ESD in rural China has become Zigen’s major task. In 2016, China Zigen established a China Rural Education for Sustainable Development Center (the Center). The Center focuses on three major areas: 1) In the framework of ESD, development of training programs 2) establishment of experimental programs in green eco-schools, and green eco-villages 3) advocacy and promotion of lessons learned. In collaboration with the local education bureau, Beijing Normal University and China Agricultural University, Zigen has developed training programs in the framework of sustainable development education.

The objective of the training programs is to cultivate the learner’s knowledge, attitudes, skills, and participation in the themes of the programs. The programs are:

1. “Building sustainable villages together -- teachers training program”, which is aimed at teaching elementary and junior high schools in rural China.

The teachers training program aims at transformation of attitudes, knowledge, skills and practices with regards to a wide range of topics, such as climate change, biodiversity, health, sustainable consumption, gender equality, and cultural heritage protection. In the teachers training program, six major topics are covered. They are: (1) student-centered teaching; (2) environmental education; (3) inheritance of rural culture; (4) school, family and village; (5) gender education; and (6) action and practice. (The Zigen Fund 2016)

Fig 1. Diagram of Teachers’ Training
(2) “Revitalize Village - Sustainable Development Leadership Training” is aimed at rural activists. The program includes the six topics of environmental protection: economy and sustainable development; good governance; cultural preservation and innovation; and sustainable development and gender equality.

(3) “Rural Adolescent Girls Sexual and health Education – Teacher Training Course”; the program is implemented in cooperation with Beijing Normal University to train rural health teachers.

(4) rural women’s reproductive health training program

(5) women’s sustainable development leadership training program

The establishment of rural green eco-schools/villages

Since 2016, Zigen has promoted ESD through the establishment of experimental rural green eco-schools. The green eco-school program is a natural outgrowth of the teachers’ training program, and contains many action items aimed at changing attitudes, knowledge, skills and practices in schools.
(Zigen Fund 2016)

In 2019, Zigen supported systematic teachers’ training in 74 green eco-schools in 14 counties of ten provinces. All training has to meet the basic requirement: (1) At least 80% of teachers at each school must participate in the training; (2) Ensure three days, or a total of 18 hours, of training and (3) All thematic topics have to be covered.

The aims of green eco-schools

a. The school curriculum must have new content: in addition to Chinese, mathematics and other subjects, the sustainable development content will be included, such as climate change, land, water, garbage pollution, poverty, consumption lifestyle and production, gender equality, local cultural heritage.

b. Teachers will use student-centered teaching methods, Students will participate in the learning process. Students’ critical and innovative ability should be cultivated.

c. Teachers will integrate the content of the teachers training program into their classroom teaching, school projects, and village projects

d. Students are the agent of change, participating in the projects to improve local environment and culture preservation activities

e. Students’ awareness of social responsibility should be cultivated; they are required to participate in the practice of building and promoting the sustainable development of their own villages.
The establishment of green eco-schools and villages pays special attention to the preservation of local culture and the protection of local environment. Local culture enters the classroom, and local artists are invited to teach the students the local music, dance and crafts. The village sets up groups such as musical instrument bands and women's embroidery teams to promote the interaction between the village and school. The village develops adult education in rural areas, supports rural women's literacy, and trains women in reproductive health and agricultural technology. In many villages, fuel-saving stoves and biogas digesters have been implemented in order to promote a clean environment and save energy. Zigen also supports planting trees, interplanting of Chinese herbal medicines, and economic crops to protect the environment and increase income. (Yang 2016)

In 2019, 10 experimental rural green eco-schools supported by Zigen were awarded as the ESD experimental schools in rural China by UNESCO CHINA ESD National Committee, and will also serve as the model schools for others in the possible expansion of the ESD program.

**Five Pillars of Green Eco-Schools**

Since 2015, Zigen has supported 74 rural green eco-schools in 14 counties of 10 provinces.

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1. In experimental green eco-schools, all teachers are required to participate in teachers’ training program. School teachers can integrate the training themes (such as environmental protection, garbage separation and recycling, local culture, and hometown history) into the classroom teaching, school activities, and village and family projects, and guide students to take part in activities related to the theme. All these will be written as teaching plans.
2. The school has basic energy-saving and environmental protection facilities, such as: solar-heated water, solar-powered street lights, garbage recycling facilities, non-smoking schools, and small plot of farm land.

3. Students participate in environmental actions and cultivation of values for ecological and environmental consciousness

Students participate in the following activities:

Green campus, garbage separation and recycling; cultivation of diligence and thrift; human-nature harmony and the three savings (reduce, reuse and recycle) life habits and consciousness.

Fig. 3 Students participate in garbage recycling

Fig. 4 Students planting trees in loess dust (left) and participating in the work of ecological agriculture (right)
4. integration of local culture into classroom and school activities

- Local music, arts, dance, and handicrafts
- Local herbal and health knowledge
- Local history, songs and fairy tales
- Cultivation of traditional values of respect for elderly and love for children, diligence and thrift, respect for nature

![Image](image.jpg)

Fig. 5 Local culture enters the classroom

5. Village-school-family holistic cooperation

School, family and village collectively launch environmental education and local culture training

**Examples of teachers’ participation in teachers training: teachers’ lesson plans**

**Local rural culture:** Vibrant and colorful Mongolian costumes; Protecting the cultural heritage of Miao in their villages; Making drawings from corn stalks; Making drawings from tree leaves; Home village fresh fruit tasting; Recognizing local Chinese herbs; Thrift starting from small things in life

**Environmental education:** Planting Activity Sharing Session; Experimental Study on Rural Waste Treatment; Scientific Recognition of Water Resources; The greenhouse effect of climate change; Saving water starts from oneself.
Students are the main agents in designing and carrying out sustainable activities related to environmental protection, labor practices, local cultural heritage, and the construction of homes and villages and school. From these activities, students’ social responsibility can be cultivated, they can have an awareness to care for their hometown and participate development of their villages.

Unfavorable educational factors in promotion of ESD in rural China

In the course of promoting ESD through training programs and setting up green eco-schools and villages, Zigen has encountered some of the unfavorable factors, including the following:

- The school education in rural China is academic-oriented and urban-biased, and has little relevance to daily life,

- The evaluation of teachers is largely reliant on students’ subject test scores and preparing students for entering university and leaving the countryside. Teachers seriously lack training opportunities, especially training in student-centered teaching methods and concepts. Most of the teachers still use traditional teacher-centered teaching methods, Together with the merging and closing of rural schools, the educational policies are extremely unfavorable for the promotion of ESD.

- Prevailing values view local rural culture with disdain; it is seen as backward, and farmers are treated with disdain and as being of low quality. The purposes of schooling is to get to university, and leave the countryside. There is very little local rural knowledge and a lack of students' responsibility for rural development.

- In rural adult education, especially in poor rural areas; there is a serious lack of short-term training opportunities for villagers after leaving school, and a small number of short-term training programs are related only to low skill agriculture in planting and breeding; there is basically no training related to life-related health, environment and cultural heritage. A lifelong learning environment can enable villagers to enjoy non-formal education, but the mechanism for non-formal education is very lacking in the countryside.

These unfavorable factors are widespread in rural areas, especially in poor rural areas, and make it very difficult to promote ESD in rural areas. (Yang 2016)

Conclusion

ESD in rural China is lacking, but it is urgent and it is necessary. In advancing education for sustainable development in rural China, Zigen has developed training courses, integrated pilot programs, strengthened advocacy, and held meetings with many different organizations. The conferences on sustainable development related to education, culture, environment and rural governance have aroused attention to education for sustainable development in rural areas and the importance of sharing practical experience. As a civil society organization, Zigen supports issues in areas where the government has not paid attention to them or implementation is still not perfect; through in-depth research, development of training courses, establishment of pilot
programs, summing up experience, and promotion, Zigen has attracted public and government attention. However, without the active involvement of the government and the education sector, as well as the policy support for the promotion of education for sustainable development, the power of civil society organizations is still very limited.

References:


