

The Status of Sustainable Development Education in Taiwan

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ABSTRACT

The Taiwan Sustainable Campus Program and the Green School Partnership Program are two important endeavors supported by the Ministry of Education in Taiwan to promote education for sustainable development. The former encourages schools to transform their campuses into sustainable development in terms of alternative energy, water conservation, material recycling, and health, and the latter highlights a whole school approach which consists of administration, facilities, curriculum, and school life.

Key words: Taiwan Sustainable Campus Program, Green School Partnership Program

Introduction

World Commission on Environment and Development (WCED) issued the report "Our Common Future" in 1987, and then United Nations' Earth Summit proposed Agenda 21 action strategies in 1992. Obviously, sustainable development has been adopted as a guiding principle for nation and world development in the 21 century. Following this trend, Taiwan government established a Council for National Sustainable Development under the Executive Yuan in 1997 to plan and implement the affairs of environmental protection, ecological conservation, resource management and international environmental protection activities.

The Environmental Protection Council of Ministry of Education in Taiwan recognized the importance of education in the national endeavor to promote sustainable development, and proposed a master plan "Stepping into 21 century – an action strategy for sustainable development education of MOE". Three goals were highlighted: 1. sticking to the fundamental education law to practice sustainable development education for environmental protection, ecological conservation, and resources management; 2. educating citizens aware of environmental problems, understanding and caring the mutual relationships between resources and living quality, and taking actions to maintain ecological balance and environmental quality; 3. culturing citizens with environmental literacy and ethics, knowledge, attitudes, skills, and values of environmental conservation.

The concept "sustainable development" has different interpretations, however, the most frequently quoted definitions are that human's consumption of natural resources should not exceed the carry capacity of the earth and human's pursuing of their life quality should not decrease future generations' capacity to pursue their own life quality. These definitions direct to the core concepts that natural resource is limited, and the earth is like a spaceship.

An Action Plan for Education for Sustainable Development

The government in Taiwan treated the issue of sustainable development education seriously. An action plan has been drawn to lead the endeavors toward sustainable development education. It includes three objectives as following.

1. Introduce and incorporate the concept of sustainable development into the school education and citizen's daily life
 - Clarifying the definition and contents of the concept of education for sustainable development
 - Passing the laws and setting up the institutions for implementing education for sustainable development
 - Infusing the visions and principles of sustainable development into school curriculum
 - Conducting sustainable development education workshop for in-service teachers
 - Encouraging research for sustainable development education

2. Coordinating the resources of governmental agencies, private sectors, business, and schools to implement education for sustainable development
 - Establishing learning centers for education for sustainable development
 - Encouraging related governmental and non-governmental institutions to hold activities of education for sustainable development
 - Empowering all groups (women, children, aboriginal people...) to participate in the education for sustainable development
 - Training governmental employees to ensure their policy making and implementing will be agreement with the principles of sustainable development

3. International cooperation of education for sustainable development
 - Inviting related international organizations to share the experiences of sustainable development education
 - Holding international conference and symposium of education for sustainable development
 - Encouraging scholars and graduate students to participate in international activities for sustainable development education
 - Supporting mutual visit and exchange programs of academic institutions

The Education for Sustainable Development (ESD) in Taiwan

In light of UN's declaration for the Decade of Education for Sustainable Development (2005-2014), the Division of Environmental Protection Education at the Ministry of Education in Taiwan, established in 1990 as a mission-oriented unit, has long recognized the important role of education in promoting sustainable development, and proposed a master plan, entitled "Stepping into 21 century – an action strategy for sustainable development education of MOE" in 1999. Three goals had been highlighted in this document: 1. abide the country's "Fundamental Education Law" to practice sustainable development education for environmental protection, ecological conservation, and resources management; 2. educate the citizens to be aware of environmental problems, understanding and caring about the mutual relationships between resources and living quality, and taking actions to maintain ecological balance and environmental quality; 3. culture the citizens to be with environmental literacy and ethics, knowledge, attitudes, skills, and values of environmental conservation. Since its publication, most of the programs and activities, either directly orchestrated or indirectly funded by the Ministry have been following the core values and principles of the above-mentioned strategies to promote the environmental education in Taiwan.

In addition, "Education for Sustainability" is now among the subject matters selected by the 8 working groups reporting periodically to Taiwan's Premier for its progress, and the Ministry of Education (MOE) is the responsible agency to ensure that the "Action Plan" is properly executed, and to coordinate activities among other governmental departments in the regard. The 3 main objectives designated to examine such an endeavor are as following:

- Introduce and incorporate the concept of sustainable development into the school education and citizen's daily life
- Coordinating the resources of governmental agencies, private sectors, business, and schools to implement education for sustainable development
- International cooperation of education for sustainable development

Several national projects have since then been conducted, in terms of the curriculum plan and development, renovation of hardware and infrastructure of campuses, and vigorous interactions between schools and communities to truly illustrate how the spirit of exemplifying sustainability in educational environment and life. While many teaching modules and activities have been invented surrounding the theme of "sustainability", "Taiwan Sustainable Campus Program" is considered the one national project that may have fundamentally changed the way how the school's design, operation, and renovation has meant to the contents of education, especially as far as "education for sustainability" is concerned.

The Sustainable Campus Program in Taiwan

"Taiwan Sustainable Campus Program", calling for a physical renovation and utility operation of campuses to demonstrate the concept, and meet the requirement, of sustainable development, is now officially a component project in Taiwan Government's "Challenge 2008-National Development Plan". In essence, the Program had aimed to ensure that the future campus, regardless of the scales in size, should, at least, be one that:

- can be participated by all members of interest during the design, construction, and future operation
- has ecological concerns during the construction and operation afterwards
- can respond to the changing needs in future curriculum consisting a wide array of activities
- can serve as a community center for life-long learning, culture-preservation, and shelters during emergency

A in-depth and detailed proposal-review mechanism, executed by a Central Advisory Committee at MOE, including experts for architecture design, community development, energy and water conservation, and environmental education, was established to ensure the selected proposals could truly grasped the spirit of "sustainable campus" where discussion forums had been formed, natures of individual's campus had been reviewed, and a study module/program had been developed for every renovation item proposed, etc. During the past few years, the Program has successfully revitalized the interest of studying the land and life closest to our hearts in almost every corner of the country. People from within and outside of the campus, basically the adjacent community has come together to work directly on the land that is right underneath their feet, and to bind with the people that are their dearest neighbors whom may have been strangers before the program took place. More than 160 schools have been supported in the first phase of endeavor, and now the Program has further identified the goal to encourage joint project by collaborating with schools from nearby or other towns to create a sense of larger community in a rapidly globalized era. By the end of 2004, 93 schools, out of 564 applications, were successfully integrated, and resulted in 26 joint projects with different themes identified as their core values to establish a learning experience that has gone beyond their campus borders and enriched by the natural variations embedded between their individual schools.

Taiwan Green School Partnership Program

The Taiwan Green School Partnership Program is a system designed to assist Taiwan's schools to become Green Schools. Its focus is to provide Green School concepts, action plans, instructional materials, and government and private resources. After becoming a partner, the Green School center will present Leaves of Hope as encouragement and incentive to participate in related forums, exchange experiences and assist in developing the program.

The Green School emphasizes core development of ecological thought, humanistic concern and active learning in the following four areas.

1. Administration: Ideal Green School leaders have made environmental commitments and work toward planning departmental integration, environmental evaluation as well as implementing environmental improvement projects and encouraging spontaneous environmental actions.

2. Facilities:

As for special design, an ideal Green School's architecture and environmental management are in agreement with low pollution, ecology and education demands. Facilities are appropriately designed for local environmental conditions and provide opportunities for participation, planning and maintenance by both students and teachers.

3. Curriculum:

A Green School plans and designs its school's own environmental education instructional materials. EE planning emphasizes life, land and active education as well as encourages outdoor hands-on learning activities. Education on environmental issues is implemented by integrating many areas of study and exploring values.

4. School Life:

Teachers and students learn to appreciate and adopt lifestyles that are more in tune with nature, as well as foster responsible behavior to protect the environment. This includes energy conservation, pollution prevention, and efficient use of resources to benefit society, so as to create an atmosphere of mutual support for environmental conservation.

Conclusion

Education for sustainable development has become the important issue in Taiwan during the past several years. The MOE and EPA fully support the visions and principles of sustainable development education and also put it into effect on formal education settings, such as:

- Offering undergraduate courses on sustainable development.
- Developing teaching materials for SD at K-9 level.
- Conducting education for sustainable development in-service teaching training for elementary and secondary teachers.
- Networking with local NGOs on sustainable development issues.
- Establishing appropriate education demonstration facilities such as energy conservation, water conservation, wastewater treatment by man-made wetland, organic farming on rooftop, etc. for university students and community.
- Implementing and advising Green School system on campus environmental management, curriculum development, instruction development, and teacher's professional development.

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