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## Forum

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### Environmental Education in China – The Context

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This Forum on Environmental Education in China follows earlier collections of papers on Environmental Education in Europe and the former Soviet Union. Writing about Environmental Education in China is fraught with difficulties. The literature is sparse and what literature exists largely reflects central policy; the ways that central policy is interpreted in the various provinces of this enormous country is another matter and there is huge variation. This set of papers is thus more of a set of “snap-shots” or vignettes than in any way a comprehensive picture, but they do give a flavour of the form, style and context of environmental education in China.

That there is a need for Environmental Education in China is indisputable. China's environmental problems are mainly those of environmental pollution and ecological destruction. In addition, the country is faced, as elsewhere, with global issues such as climatic change and ozone depletion (Xie, 1994). Environmental pollution became evident in the early 1970s as rapid industrialisation occurred but there was a general lack of public appreciation of the need to protect the environment at that time. However, a number of major cases of severe pollution and other environmental problems led China to take a series of measures to protect the environment and stem environmental deterioration. For example, China now has in place over six hundred nature reserves covering an area of over four hundred thousand square kilometres to protect endangered species. There has been a decade or more of family planning. Large scale afforestation schemes to hold back desert encroachment have been set up. There is a clear understanding in China that the environment must be carefully managed if it is to be sustained.

Nevertheless, despite efforts to mediate against the worst effects of environmental deterioration, environmental monitoring in the five hundred or so major cities in China shows that few meet acceptable standards of air quality, that acid rain is on the increase and that 86% of the rivers in urban areas are polluted. About one third of the country's farmland suffers from soil erosion, forest cover has dropped to 14% of the land area and overfishing is increasing. At the same time, there is net annual population growth of 16 million.

## THE ORIGINS OF ENVIRONMENTAL EDUCATION IN CHINA

The PRC started work in the area of environmental protection and environmental education during the early 1970s following the 1972 United Nations Conference on the Human Environment. It adopted environmental protection as a basic national policy in 1973 when, in August of that year, the State Planning Committee of the People's Republic of China (PRC) held the first national environmental protection congress in China during which a tentative Act for Environmental Protection was formulated. This in effect marked the formal beginnings of Environmental Education in China (Zhang, 1992). The nature, purpose and expectations of Environmental Education, however, were not clearly defined by that time and the proposals for environmental protection were overtaken and submerged by the events of the Cultural Revolution and were not to surface again until the 1980s (Gu & Lee, 1984).

In 1981, however, the central government renewed its attention on Environmental Education and highlighted two components – environmental protection legislation and environmental science. The central government explicitly required that ... *in all regions and departments, Environmental Education has to be included in training courses and ... environmental protection legislation and environmental science have to be strengthened so as to make environmental protection a responsibility of everybody and a social norm* (Zhang, 1992: 2). In June 1991, the State Education Commission (the Ministry of Education in the PRC) sought to give environmental science, the focus for Environmental Education, the same status as mathematics, physics and chemistry in tertiary institutions. An environmental science curriculum was gradually introduced in the first and second years of tertiary education and a State Tertiary Institution, the Environmental Science Pedagogical Supervisory Committee, was established (Zhang, 1992).

In 1992, the first national working meeting of Environmental Education took place in Su Zhou and this was a turning point for the development of Environmental Education in the PRC. At this meeting sustainable development as a guiding concept was hinted at for the first time although there was little if no elaboration (Yen, 1993). Environmental Education at the meeting was conventionally defined as:

*...environmental science cognition permeating into art, arithmetic, language and games in kindergarten; and into biology, geography, chemistry and physiological hygiene of primary and secondary curricula* (Zhou, 1992: 6).

Four directions for Environmental Education were highlighted at the meeting and these emphasised the social and economic context, namely through the desire to see:

- (i) the strengthening of the public's environmental consciousness and awareness via social education;
- (ii) the provision of technical and managerial expertise for environmental protection via professional education;
- (iii) the upgrading of the quality of environmental protection workers through the training of cadres; and

- (iv) the fostering of environmental consciousness within children and adolescents by implementing Environmental Education in kindergarten, primary and secondary schools (Yen, 1993: 5).

From that point, a permeated or integrated approach to Environmental Education in the kindergarten, primary and secondary curricula was promoted and has been widely accepted in schools. In tertiary institutions, however, environmental science has become a separate area of study.

Environmental Education in the PRC is, thus, largely directed by the central government and perceived as focusing on underpinning environmental protection legislation and emphasising environmental science. It is mainly, to use the terminology of Lucas (1980) and Huckle (1983), education *about* the environment within a framework of infusion in the traditional mainstream school curriculum.

## THE FOCUS OF ENVIRONMENTAL EDUCATION

A parallel interest in environment and development has been seen, and one suspects will continue to be seen, as an important thread weaving the pattern of Environmental Education in China. Xie Zhenhua, from the National Environmental Protection Agency, has noted that China seeks *the simultaneous development of economic construction, urban and rural construction and environmental construction complemented by a series of regulations* (Xie, 1994, p.3). These phrases echo the words of the Prime Minister in the Preface to China's Agenda 21 and reflect the central tension between economic development and environmental conservation which confronts China:

*Economic development should be pursued in parallel with economic protection. Economic development is essential for the very survival and progress of mankind. Furthermore it provides a material guarantee for the protection and improvement of the global environment. For many developing countries, their primary task is to develop the economy and eliminate poverty. Their reasonable and urgent needs should be taken into full consideration when we try to tackle the question of global environment (Agenda 21, 1991: 2).*

What then is the perspective of China towards environmental protection? The underlying view would seem to be technocentric, accommodating and with many attributes of the Dominant Social Paradigm of environmentalism rather than the concepts of the Dominant Environmental Paradigm and more ecocentric environmentalism. This is emphasised in the three major principles adopted by the PRC in its environmental initiatives:

- to put prevention first;
- to hold those who cause pollution responsible for cleaning it up; and
- to strengthen environmental control and management.

Environmental education then has largely grown out of a concern with environmental protection and environmental science and this focus is apparent in China's Agenda 21. Environmental Education in Agenda 21 is only alluded to in Chapter 6 which links "education and capacity building for sustainable development". In its basis for action it declares:

6.16 *The key to eliminating poverty through developing the economy is in scientific and technical progress and improving labour skills. The development of education is fundamental to sustainable development (Agenda 21, 1994: 42).*

Explicit reference to environmental education *per se* only comes in 6.21 where under activities it is stated that teachers should *encourage the idea of sustainable development in student's thinking. Incorporate information about natural resources, ecology, the environment and sustainable development into primary school nature courses and middle school geography classes (p.43).*

China, however, is having to tackle enormous social and economic problems and these quotes highlight the age-old dilemma of economic development and maintaining environmental quality, of accommodation and conservation. Indeed it is something that is realised in China:

*The aim of environmental education is to train professionals to tackle environmental pollution prevent damage to the ecosystem as well as protecting and improving the quality of the work and living environment through strengthening education and training (Jiang, 1994: 1).*

But the writer, Jiang Xiang-Li, also recognises the need to develop appropriate environmental ethics and continues that the aim is:

*to cultivate ethical habits among people from all walks of life ... Environmental awareness is not only of science but of morality (Jiang, 1994, p.1).*

## THE FORUM PAPERS

Environmental Education policy in China is thus centrally directed in a top-down manner. Nationally defined intentions are, however, subject to much local interpretation in their implementation. At times, only lip service is paid as other forces of social or national/regional interest take precedence. The papers that follow attempt to show what is being done in Environmental Education in the schools although it is hard to generalise too far. The first four papers describe the present pattern of Environmental Education in the schools. The last two look at the constraints and challenges that have to be faced if Environmental Education is to expand.

The first paper by Xu Hui, Professor of Education at Hangzhou University, is intended to provide a brief national context of the pattern of Environmental Education in China. It indicates the problem, found in so many countries, of teacher attitudes to Environmental Education and lack of teacher training.

Zhu Huaixin, who is also at Hangzhou University, writes about environmental education in primary and secondary schools. This, with the two papers which follow, attempts to show how central policies are being interpreted in practice. The article brings out the central concern with environmental science albeit tempered at times by an aesthetic thread. The second part of the paper gives an insight into the varying directions – some complementary, some opposing – that Environmental Education is taking in China.

Zhou Lanjuan is a secondary school teacher involved with Environmental Education. His article recounts some the approaches used in his school and some of the measures the school is taking to encourage implementation.



Feng Huaqing is another teacher, but from a primary school, and in the fourth article vividly describes the environmental education activities conducted in one primary school in Hangzhou. It is interesting to compare and contrast the goals in the primary school, where a social and aesthetic dimension seems stronger, with the goals in the secondary school.

Wong Bing Kwan directly addresses the issue of “Rhetoric or reality in environmental education” with reference to research he is carrying out in Guangzhou in southern China. His article sets out the aims for Environmental Education in Guangzhou and discusses these within a framework of comments from teachers on their actual practice. He emphasises the factual nature – education about the environment – that is to be found in China and gives us an insight into teacher attitudes towards Environmental Education.

Zhu Huaixin, in a second paper which brings this Forum to a close, looks at the crucial influence of public examinations on the development and adoption of Environmental Education. He argues that development in China requires people who can think and who are environmentally responsible rather than people who have shown that they can pass examinations.

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