

# Reflecting and Rethinking Environmental Education Research in Korea

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## ABSTRACT

It is said that those who do not know history are condemned to repeat it. The purpose of this paper is to reflect the environmental education and environmental education researches in Korea from the past till the present and to make a vision for the future based on the reflection and rethinking on it. Environmental education in Korea can be classified as three periods: the quickening period before 1980, the developing period of 1981-1991 and the stabilization period from 1992 till the present. The environmental education researches of each period were carried out, started at the late 1970s' Korea Educational Development Institute and led to Korean Society for Environmental Education. Based on the reflection, issues related to environmental education research were raised and discussed for improving the practices as well as the researches in environmental education, including the issues of research methodology, research themes and contents, relevance to local community coupled with consideration of context, the importance of participatory action research for sustainability.

Key words: Environmental Education Research, research methodology, research themes and contents, relevance to local community, participatory action research for sustainability

## Introduction

The concept of sustainable development is based on the discussion about the environmental limit of the earth's system and the equity among various stakeholders. However, when we talk about the concept of sustainable development, we mention the harmony among three perspectives such as social sustainability, economic sustainability and environmental sustainability. To embrace such perspectives, we emphasize the cultural aspects (UNESCO, 2005). However, without securing environmental sustainability, any type of development is impossible, because it's deeply related to our survival in this planet. Therefore, the importance of environmental sustainability and the role of environmental education are far bigger than other areas.

In such a context, Fortner (2001) saw the environment as a bridge that connected the present and the future, and emphasizes environmental education and environmental education research as a foundation to support the bridge. That environment is being shaped each day by the human understanding (or misunderstanding) of science, by applications of technology (or mis-applications), and by the way young people are taught to connect, apply, and deal with the effects of that science and technology. Focusing on the "systems" aspects of these forces, and relating them to the school setting and responsibilities, provides environmental educators a strong rationale and methods for teaching a subject that is also a preparation for living. As educators, our responsibility is to help learners prepare for their future, and in so doing, we configure our own future as well.

This paper is for reflecting what environmental education research has done in Korea, what does in Korea and what will have to do in Korea. First of all, I'd like to reflect past and the present of environmental education in Korea briefly and discuss several issues which should be considered in

environmental education and environmental education research for the future.

### **Overview of Environmental Education Research in Korea**

Environmental education in Korea can be classified as three period: the quickening period before 1980, the developing period of 1981-1991 and the stabilization period from 1992 till the present<sup>1</sup>. The environmental education researches of each period were carried out, started at the late 1970s' Korea Educational Development Institute (KEDI) and led to Korean Society for Environmental Education (KOSEE).

#### **Quickening Period: Before 1980s**

In the 1970s, starting from the IUCN conference, there were many international efforts which can be milestones in the history of environmental education of the world. In Korea, some scholars began to mention environmental education. However, the national policy of Korea at that time was focused on the economic development and income growth. So, the environmental education was not differentiated from natural environment protection and it was not much different from general public relations work. Moreover it was not equipped with the system that can induce or persuade common recognition from the people.

During this time, environmental education researches were conducted by the researchers in the field of Social Studies and Science in KEDI. The research included 'Research on Population Growth and Environmental Management (1976)', Workshop on Environmental Education (1977), Basic Research on Educational Curriculum Development for Environmental Education (1977), Research on Environmental Education Model Development (1979) etc.

#### **Developing Period: 1981 – 1991**

During this period, environmental right was stipulated in the constitution of Korea and Korean Environmental Administration was promoted as Office of Environment in 1990. Since 1985, the Environment Conservation Model School initiative was operated and supported by Ministry of Environment<sup>2</sup> to promote environmental education in schools. Also during this period, the 4<sup>th</sup> and 5<sup>th</sup> national curriculum included or emphasized environmental education in the guideline of the introduction<sup>3</sup>. Therefore, the dispersed environmental education started in each curriculum. At the same time, the environmental education activities by non governmental organizations were being implemented in the society.

These kinds of results are closely related to the activities of environmental education research groups, which actively operated during this period including KEDI and KOSEE. KEDI established the Division of Environmental Education to support school environmental education in 1991. The major researches and developments by KEDI include research on 'Strengthening Measures for Environmental Education (1987)', 'TV Program Development for Improving Environmental Education (1989)', 'Development of Education Materials for Elementary, Middle and High Schools (1988 – 1990)', 'U.K. & Korea Environmental Education Seminar (1991)', 'An Investigation on Environmental Awareness of Students and Teachers (1991)', 'Research for the 6th National Curriculum Development (1991)', etc.

KOSEE is the specialized environmental education organization, which was established by key members in primary, middle and high schools, NGOs, environment-related agencies and research institutes that participated in Germany & Korea Environmental Education Seminars sponsored by

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<sup>1</sup> The summary of environmental education history is based on the contents of Nam (1995), Choi (2000).

<sup>2</sup> Environmental Administration at that time

<sup>3</sup> For the detailed contents of the 4<sup>th</sup> – 5<sup>th</sup> national curriculum in Korea, please refer to the other paper 'ESD through EE' presented by the same presenter.

KEDI in September 1989. This seminar later created a momentum that connected school teachers and educational administrators for the discussion of environmental education through international seminars and annual academic seminars. In 1991, KOSEE submitted "A Recommendation on School Environmental Education Improvement" to the Ministry of Education.

### Stabilizing Period (1992)

Various activities were carried out in social environmental education and school environmental education during this period, which was the continuum of research, development and implementation of the developing period. The government announced the national declaration for environmental conservation to celebrate the 20<sup>th</sup> World Environment Day in June 1992. The environmental education was institutionalized within the school educational system, thereby causing active researches and developments by the Ministry of Education and other researchers. 'Environmental education series for elementary schools' and 'guidebooks for teachers (1992-1993)' coupled with 'the research & development for middle school environmental textbooks & guidebooks (1993-1994)' were developed or conducted. Also the research on teaching & learning middle school environmental textbooks and the evaluation methods was carried out in 1994.

The most important progress in this period is the establishment of 'environment' subjects in school curriculum. "Environment" in middle schools and "Environmental science" in high schools were introduced as an independent selective course to expand the opportunities for students' systematic environmental education. This continues today, even with the 7<sup>th</sup> national curriculum is being implemented. Also for primary school students, environmental education can be implemented in discretionary activities since the 6<sup>th</sup> national curriculum<sup>1</sup>.

The activities of KOSEE are more specialized and active in environmental education research. Each year, the annual conferences are provided and journals published (Table 1). Based on these professional activities in environmental education research, the theoretical researches in the beginning which emphasize the need or importance of environmental education evolved into various research areas such as awareness survey, development & evaluation of educational materials, teacher education, and research on learners.

## Issues of Environmental Education Research in Korea

### What is environmental education?

Before discussing environmental education research, defining environmental education is needed, which is not easy. Environmental education is composed of various lower areas based on various traditions because each environmental education emphasizes various interpretations and traditions (Kim, 2002).

When the term, "environmental education" was first used in the beginning of the 1970s, the concept was closely connected to natural environment and nature protection. Also it followed the tradition of ecology and field trip (Goodson, 1993). Such influence still remains and many people think that the knowledge and understanding of the principles and concept of natural environment are important in environmental education. However many recent researches on environmental education expand its area. As a result, problem solving, decision making, the development of skill and attitude, moral and ethics are being emphasized. This coincides with education for sustainable development, which emphasizes critical thinking and decision making ability in various local contexts.

In Korea, many researchers in the past put an emphasis on responsible environmental behavior

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<sup>1</sup> Also for the detailed explanation regarding 'Environment' subject in the 6<sup>th</sup> - 7<sup>th</sup> national curriculum, please see the other paper 'ESD through EE' presented by the same presenter.

Table 1. Professional Activities of Korean Society for Environmental Education

Year	Annual Conference	Theme	EE Journal	No. of Paper
1990	1 <sup>st</sup>	Strategies and Practices of EE in Korea	Vol. 1	18
1991	2 <sup>nd</sup>	Implementing EE	Vol. 2	9
1992	3 <sup>rd</sup>	EE in Korea and North-East Asia : EE in Schools	Vol. 3	18
1993	4 <sup>th</sup>	Awareness and Action in EE	Vol. 4, 5	22
1994	5 <sup>th</sup>	EE in Schools, Private Sectors and Local Community	Vol. 6, 7	22
1995	6 <sup>th</sup>	Strengthening EE in Schools for 21C	Vol. 8	9
1996	7 <sup>th</sup>	Information and Globalization of EE for 21C	Vol. 9	6
1997	8 <sup>th</sup>	Development of EE in Schools and Society	Vol. 10(1,2)	31
1998	9 <sup>th</sup> 10 <sup>th</sup>	Education for Recycling and Renewing Exploring EE for Youth	Vol. 11(1,2)	37
1999	1 <sup>st</sup> 2 <sup>nd</sup>	Strengthening EE for the 7 <sup>th</sup> National Curriculum 10years with KOSEE and Development of EE in Korea	Vol. 12(1, 2)	42
2000	1 <sup>st</sup> 2 <sup>nd</sup>	Leadership for EE Innovation Development of EE materials	Vol. 13(1, 2)	23
2001	1 <sup>st</sup> 2 <sup>nd</sup>	Informal EE and experiential EE Improvement of EE materials	Vol. 14(1, 2)	24
2002	1 <sup>st</sup> 2 <sup>nd</sup>	Affective Domain in EE Sustainable Development and EE	Vol. 15(1, 2)	17
2003	1 <sup>st</sup> 2 <sup>nd</sup>	Status and Vision of EE in Other Countries Partnership in formal EE and informal EE	Vol. 16(1, 2)	13
2004	1 <sup>st</sup> 2 <sup>nd</sup>	Leadership for EE Past, Present and Future of EE in Korea	Vol. 17(1, 2)	24
2005	1 <sup>st</sup> 2 <sup>nd</sup>	Sustainable Development and EE Earth Crisis and EE	Vol. 18(1, 2, 3)	27

based on the understanding of the principles & concept of natural environment rather than critical thinking or problem solving ability. It was also used in judging the effect of environmental education programs. However, recently researchers who object to the environmental education that tries to induce the desirable environmental behavior (Lee, 2002) or show interest in decision making or problem solving (Yun & Lee, 2005) emerged.

#### How can research help environmental education?

If the environment is the bridge that connects the present with the future, the supporting power is environmental education. In other words, it helps support the bridge effectively. It includes developing and evaluating various resources for instruction, relevant teaching and research (Fortner, 2001). Research is very important in all of these. People who lead the education world should develop the curriculum and reflect the most recent research results in the process of teaching teachers. Without a need assessment, a new program can't be developed. When a new program is applied, the evaluation should be followed to get the best results. We have to check the changes that the program was intended, and it's very important that the results should be informed to other people for future use. It's also important in understanding learners & the course of learning, integrating the environmental issues in curriculum, and developing systematic curriculum.

#### *The issue of research methodology: Quantitative research and Qualitative research*

Unlike the U.S and other countries which are equipped with a 30-year history of environmental education, Korea has a short history of environmental education research and the results are not much. The most frequently pointed out issue in analyzing and criticizing the trend of environmental

education research is the research methodology (Mrazek, 1990; Robottom & Hart, 1993; Palmer, 1998; Hart & Nolan, 1999). Namely they say that environmental education research should pursue qualitative research that focuses on how the participation in the specific education program or experiences in one's life are being understood and interpreted, and how the learner or a participant understands the environment, rather than pursue quantitative research that tries to measure changes men's behavior through education to achieve the objective of "cultivating citizens equipped with responsible environmental behavior."

Since 2000, the interpretive inquiry method such as case study, participatory observation, semi-structured interview, discourse analysis to answer research questions have been being tried in Korea (Kim, 2002; Kim et al., 2005; Joo, 2005). These kinds of efforts are being increased as time goes by. As Kim (2002) pointed out, it's very desirable considering the features of environmental education which values affective domain such as attitudes or beliefs, deals with environmental issues, emphasizes critical thinking and interaction between knowledge and participation, and focuses on the changes of learners' inside.

#### ***The issue of research contents: Understanding learners***

Learner's knowledge, learner's attitude & behavior, and learner's learning outcomes related to participations in the specific education programs are handled frequently in environmental education research (Rickinson, 2003), which is closely related to the instrumental characteristics of environmental education. However, the concept on 'learners as active constructors' is being emphasized, so researches on learner's perception on nature and learning experience are emerging. Also, they focus on the process of learning rather than the outcome.

Recently a group of young researchers in Korea are focusing on researches that understand the changes in the learning process of teachers and learners, who are the subjects of participating environmental education, or changes in perceptions and values, due to the influence of significant life experiences (SLE) researches (Chawla, 1980; Palmer, 1993; Chawla, 1998a/1998b, Parmler et al., 1998). This is expected to help the qualitative improvement of environmental education researches free from nominal implementation of environmental education.

#### ***Relevance to local community: Coupled with consideration of context***

Relevance to the local community in environmental education is another issue. Because environmental issue is closely related to complex social, cultural, economic and political aspect, the actual environmental issue is mostly based on the regional context. However, most of environmental education researches in Korea have been carried out to help the learning in schools than in societies or local communities, and various analysis and trials were conducted to promote it. Even in those researches in schools, people tend to examine effects of specific programs rather than consider the learners' contexts. Therefore although learners participated in different programs with different contexts and subjects, there were tendencies to check the general attitude or knowledge to verify the effects. Also, there were many programs that were not related to local communities or sense of place. In Korea, still, the research on school environmental education and general effect verification is the majority. But, also there are some researches connecting formal environmental education and informal environmental education, bringing up the leaders of social environmental education and understanding the context (Kang & Cho, 2004; Kim & Kim, 2004; Hwang & Kim, 2003; Ji & Kim, 2003).

#### ***Participatory action research for sustainability***

The foundation of education for sustainable development and environmental education is action. In the past researches, the aspect of action was not emphasized, and action and research were considered as separate matters. Also, practical knowledge was ignored or undervalued. In reality, many environmental education researches have been carried out in universities and research

institutes like other education research areas, which mean that many programs based on foreign educational theory were developed and applied in schools and the effect was evaluated. The efforts to understand the subjects who try to carry out actions related to the environment or environmental education to improve the quality of them were very few. However it's never enough to emphasize the importance of participatory action research which carries out particular actions and reflects on actions or in actions in terms of environmental education towards sustainability. Therefore the interest in this area should be stimulated among Korean environmental education researchers.

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