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Movement and Challenges of Education for Sustainable Development in Japan

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"Education for Sustainable Development (ESD)" means educational activities that intend to empower each citizen to take part as a sovereign to proactively participate in building a sustainable society. The idea of ESD first clearly appeared in the Thessaloniki Declaration of 1997. At the "World Summit on Sustainable Development", Johannesburg in 2002, the Japanese Government and NGOs proposed 10 years from 2005 as the "Decade of Education for Sustainable Development" (DESD) and DESD was adopted at the United Nations General Assembly 57th meeting in the same year, passed by unanimity. Since then, the numbers of studies and practical reports on ESD have increased. Also in Japan, unique and diverse ESD efforts have been made. The Japanese government has been promoting ESD by arranging several laws and systems concerned with ESD. Furthermore, educators and practitioners have also endeavored to implement ESD in many fields, such as school education, higher education, social education, and local communities. However, ESD has not yet obtained recognition in the Japanese society. The broad range of the ESD concept is one of factors making ESD difficult to understand. On this point, it is necessary to make ESD easy to understand, to "visualize" by establishing media strategies, and share good practices. In order to make progress in ESD, "All Japan" collaboration among all stakeholders such as government, NGOs and the business sector is essential, and the government of Japan is expected to organize the national ESD promotion structure.

Key words: Environmental Education, ESD (Education for Sustainable Education), Japan

Introduction

Education for Sustainable Development (ESD) is a process of holistic understanding and mutual learning on various issues related to sustainability such as environment, society and culture, in relation with people, local community, other regions and the world.

At the "World Summit on Sustainable Development", Johannesburg in 2002, the Japanese Government and NGOs proposed 10 years from 2005 as the "Decade of Education for Sustainable Development" (hereinafter, DESD) and DESD was adopted at the United Nations General Assembly 57th meeting in the same year, passed by unanimity. According to Japan's Action Plan for the UNDESD, ESD is defined as education that makes each one of us "realize that we are living in close association with the people of the world, future generations, and the environment, and must change our activities". In other words, ESD means educational activities that intend to empower each citizen to take part as a sovereign to proactively participate in building a sustainable society. Introduction of ESD has enabled the stakeholders and efforts that were not related or collaborated before, to be "linked" together through sharing the same perspectives to realize a sustainable society.

"Sustainable Development" was raised the first time in The Brundtland Commission in 1987 (World Commission on Environment and Development, 1987) and was welcomed as a principle for building a sustainable society. As the theme in the Earth Summit in Rio de Janeiro in 1992; "Sustainable Development" has become a slogan of international organizations, government agencies and NGOs since

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then. The concept of sustainable development is not only intended for environmental issues, but also includes other challenges such as development, poverty, peace, human rights, gender and health. Previously, environmental education, developmental education or peace education was taught individually to find solutions for global issues. However, it has been recognized that these issues are closely related to one another since the global environmental issues became obvious in the 1980's. Therefore, the need for comprehensive solutions has been addressed and called global education or world studies. In this sense, ESD is the integration of educations on global issues that have been conducted from the past. Moreover, these educations have the same objective, raison d'être, and common characteristics that can be called the essence of ESD. These characteristics are the value of "human beings are unique, and are the part of nature", the competence of "respecting diverse values and communication", and the learning approach of "participatory method or process of continuous learning". All of these can be regarded as the essence of any education, and are very important.

1. From Environmental Education to ESD

Responding to the adoption of "Agenda 21" (Nicholas, 1993) from the Earth Summit, UN agencies, such as UNESCO that have promoted environmental education, started activities to mainstream "sustainable development" as the core concept of education. In this process, the traditional environmental education had made substantial progress to ESD, and developed worldwide. Furthermore, the movement had been spurred by the proposal of DESD at the Johannesburg Summit. The proposal from Japan was remarkable, because Japan did not have much of a presence at the international level, and drew the attention as an international contribution. Japan proposed to establish the Brundtland Commission at the Nairobi Meeting in 1982. Therefore, it is significant that Japan, who brought about the idea of "sustainable development", proposed DESD to mainstream ESD. UNESCO was designated as the leading agency for the decade, the International Implementation Scheme for the DESD was formulated in 2005 and Japan's Action Plan for UNDESD was formulated in 2006. After the declaration of DESD, every title with "education that aims to build a sustainable society" has been converged into ESD until the present. The interim meeting was held in Bonn, 2009, by UNESCO and the German government, to share the progress of DESD. More than 900 people from 150 countries participated in the meeting. At that time, it was decided that the final meeting will be held in Japan in 2014.

In Japan, environmental education has been implemented actively for a long time (Table 1). At present, comprehensive environmental education, which includes various themes such as welfare (sustainability in social dimension), promotion of local industry (sustainability in economics dimension), has been promoted through integrated studies

Table 1. History of Environmental Education in Japan from 1960's to the present (Abe, 2009)

1960's	Dawn of Environmental Education: Pollution education, Nature Conservation Education
1970's	Initiation of Environmental Education: Environmental Science Education, Environmental Studies
1980's	Stabilization of Environmental Education: Japan Environmental Education Forum, Japanese Society of Environmental Education, Nature Schools, Forest for Nature Observation
1990's	Development of Environmental Education: Guideline materials on Environmental Education, Life Environment Studies, Eco-school, Hands-on learning experience at waterfront or rice field, The Junior Eco-Club (Kodomo-eko-kurabu)
2000's	Broadly-defined Environmental Education (ESD): Comprehensive Education, ESD (Education for Sustainable Development, Environmental Education Promotion Law, CSR, Sustainable Community-building

and food and agricultural education in schools or through activities for building environmental autonomy and a sustainable society. This can be called "ESD" indeed. Environmental education in Japan that used to focus on nature and environmental problems in the past has changed to a broader range. That is "comprehensive environmental education" as the reform of three relationships "between human beings and nature", "among human beings", and "between human beings and society". Previously, environmental education in Japan was divided into three large systems; namely, nature, life, and global systems. However, understanding of the interrelatedness of these three systems has gradually risen since the occurrence of global environmental problems in 1990's (Fig. 1).

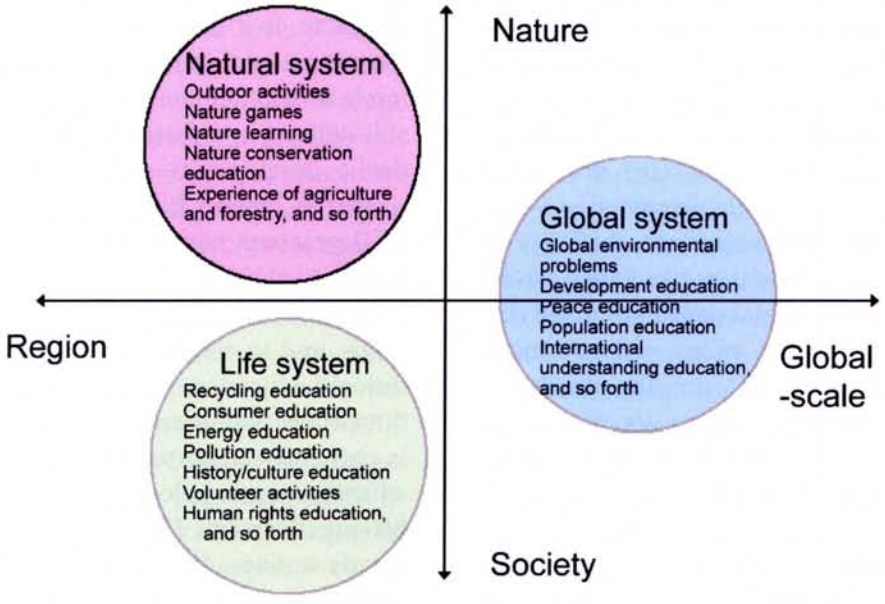

Fig. 1. Scope of Environmental Education in Japan (before 1990's).

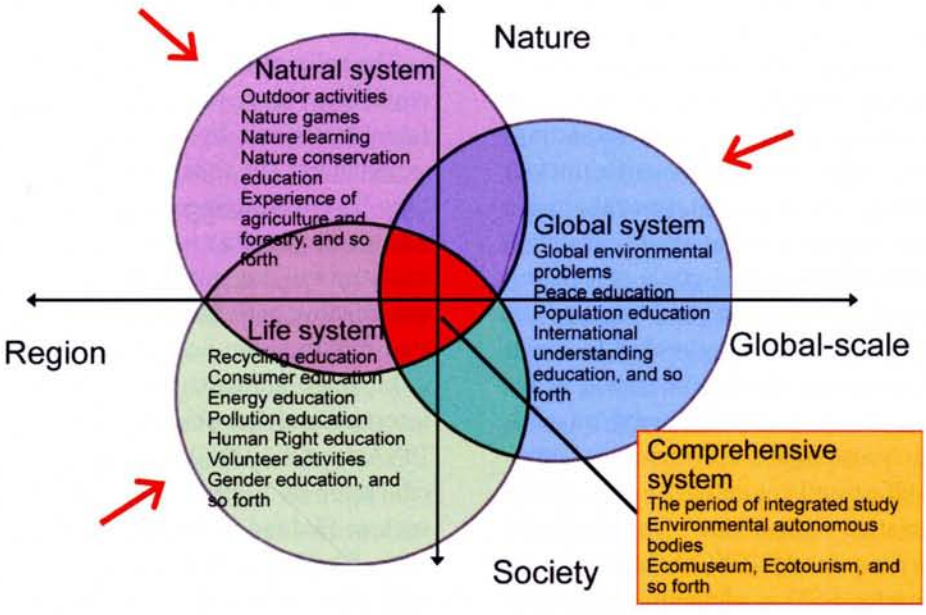

Fig. 2. Scope of Environmental Education in Japan (after 1990's). Transition of educational content related to sustainability.

The three systems were taken together, and the efforts can be called a "comprehensive system" has developed as integrated studies in schools, sustainable community development, CSR in business sectors (Fig. 2). The appearance of a "comprehensive system of environmental education" shows the qualitative development of ESD from environmental education (Abe, 2005).

2. Possibilities for ESD in Formal Education

According to Chapter 36 of Agenda 21 (Nicholas, 1993), which is a basis of ESD, the thrusts in order to support a sustainable future identify; (i) reorienting education towards sustainable education, (ii) increasing public awareness, (iii) promoting training, and (iv) means of implementation. The first objective is the most important challenge in Japan. That is to say, countries like Japan where mass production, circulation, consumption and disposal become an everyday affair, and enormous ecological footprints are left are the developed countries where education systems are well established. These countries have focused on education for the development of human resources to support the growth of the market economy. However, it is clear that this concept of education cannot lead to sustainability. It is important to reorient education programs towards sustainability and necessary to integrate ESD into the curriculum as well as teacher training programs from kindergarten to higher education.

In Japan, issue based education related to ESD, such as environmental education, human rights education, education for international understanding, and food education, have been implemented in formal education. However, at present, since there are no direct subjects teaching these issues, teachers must focus on the objectives and goals of existing subjects. Because of this situation, teachers are not able to take interdisciplinary approaches to teach these issues. On the other hand, "the period of integrated studies", which is carried based on children's participation and hands-on learning of environment, social welfare and community issues, shares certain characteristics with ESD. The Japanese National Commission for UNESCO, belonging to the MEXT, promotes ESD in elementary, secondary and high schools through UNESCO school networks.

However, "the period of integrated studies" that could be a good practice for ESD, has become different from what was originally envisioned. In the official curriculum guideline (the national curriculum) revised in 2008-2009, teaching time for "the period of integrated studies" was substantially reduced. It is important for not only educators but also all Japanese people to recognize the role of education in building a sustainable society, and to reflect on a lifestyle for global sustainability. Furthermore, it is important to fundamentally reform the educational system from elementary to higher levels under the concept of ESD. However, it is still difficult in a system that emphasizes only academic development under the current education system in Japan. It is urgently needed to evaluate ESD practices comprehensively not only from the learning achievement viewpoint but also the zest of living and sustainability at both local and global levels, and to clarify the priority of ESD over traditional education. As ESD is composed of three dimensions, environment, economics and society, it is extremely important to tie-up with non-formal education such as local community education and lifelong education. Japan's Action Plan for UNDESD clearly notifies, "it will become important for students to study ESD in curriculums or in the period of integrated study through the entire school educational system from primary schools to junior high and high schools." It is necessary to put this into practice.

The roles of ESD at all levels of formal education could be: (i) to cultivate basic literacy for a sustainable society by integration of knowledge and experiences; (ii) to learn about participatory democracy by encouraging participation in the society as a subject; and (iii) to nurture the capacity to envision and build a sustainable society through practical learning activities with various stakeholders, so that children can be positive about their future.

Japanese students receive low assessment in the international learning achievement test (especially PISA by OECD), so Japan must pay attention to education in other countries that obtain high scores such as Finland in Northern Europe. Finland, Norway, Sweden and Denmark are advanced in not only education, but also in activities related to the environment, social welfare and gender, and these should concepts should be learned as good practices

from an ESD perspective. Especially, under the Sweden 2021 Project (Linell, 2004), which aims to be a sustainable country by the year 2021, Sweden has sought sustainability not only from environmental perspectives but also from social welfare, educational and healthcare perspectives. "Sustainability" is positioned in the Swedish educational guidelines. On the other hand, in England, "citizenship education" was introduced as a subject in secondary education (junior and high schools in Japan) in the educational reform in 2002. Citizenship education does not directly relate to DESD, but it intends to promote civic cultivation through participatory learning to respond to problems at both local (poverty, crime and environment) and global levels (global environment, peace, and human right). Considering its background, this is exactly the embodiment of ESD.

Promotion of ESD in higher education is directly related to development of human resources that can build a sustainable society, so this is also very important. There is a program supported by MEXT (Good Practice: GP) which focuses on encouragement to improve curriculum regarding ESD at universities. GP started in 2003 with the theme of "Distinctive University Education Support Program (*Tokusyoku* (Distinctive)-GP)", and "Support Program for Contemporary Education Needs (*Gendai* (Contemporary)-GP)" in 2004. From 2003 until 2009, environmental education programs from 42 universities were adopted. In 2006, based on the Japan's Action Plan on ESD, "promotion of new environmental education that responds to the sustainable society" became the theme of GP, and many of themes related to environmental education concerned with ESD were accepted. For example, Iwate University restructured and reorganized the common curriculum based on the concept of ESD through *Gendai*-GP, so that this system provided all students opportunities to learn about ESD.

Since 2005, the United Nations University has acknowledged ESD model areas based on higher education, as a Regional Centre of Expertise (RCE), where ESD is promoted and practiced through collaboration between higher educational institutions and local communities. The RCE network expands worldwide. In Japan, six areas, including Okayama and Greater Sendai, were acknowledged where many community-based ESD programs through collaboration between universities and communities have been implemented (The United Nations University-Institute of Advanced Studies, 2010).

Many universities have placed ESD in the curriculum by setting up faculties, graduate schools, or courses concerned with environmental education under DESD. These universities met and set up a network for ESD in higher education (HESD Forum) in 2007 to share information and experiences. Accordingly, the promotion of ESD in higher education, such as revision of curriculum or expansion of collaboration with the community, is a university social responsibility (USR) towards a sustainable society. This becomes added-value for higher educational institutions and it is important for ESD programs in higher education to conduct participatory and experience-based education by integrating training, fieldwork and internships. This is the main concept of the "Environmental Consortium for Leadership Development" supported by the Ministry of the Environment since 2009 (Nomura and Abe, 2010; Nomura *et al.*, 2010).

3. ESD in Community Development

After the launch of DESD, ESD activities have been promoted, as a part of sustainable community development, through the efforts of NGOs such as the Japan Council on the UN Decade of Education for Sustainable Development (ESD-J), and the designation of ESD model areas under the Ministry of Environment ESD Promotion Project (2006–2008). Among these, there are activities that have been rearranged from the standpoint of ESD (actually they have been conducted before the concept of ESD identified as DESD), and activities that have been newly launched after the launch of DESD. ESD-J was founded in June 2003 and incorporated as an NPO in December 2004. It is a unique interdisciplinary and diverse network organization in that member organizations engage in various global issues in addition to environmental issues such as peace, welfare, etc.

The representative example of the former is the community rebuilding activity based on learning in Minamata City. Minamata City was the place where Minamata disease was first discovered. As a victim of devastating pollution, the city declared to rebuild the community to become a recycling-based environmental model city that gives priority to the en-

vironment, good health and social welfare in 1992. After that, the city revaluated all community activities based on *Jimoto-gaku* (neighborhood study), then, the city did many activities to return pride to the community people and promoted sustainable community development based on a broad sense of environmental education targeting all people in the city. For example, they introduced environmental education and human rights education by creating an environmental ISO school edition in all elementary and secondary schools; promoted self-declaration environmental ISO into various types of businesses; built Lifestyle Museum Villages, promoted the environmental meister system, and courted environment-friendly industries through both formal and informal education. This system comprehensively embraces the environment, economics (promotion of tourism and primary industry), and social dimensions (welfare, healthcare, and human rights). The case of sustainable community development based on learning in both the school and the community in Minamata City can be highlighted as ESD good practice in local community development.

Jimoto-gaku, which is the basis of community development in Minamata City, means "intellectually creative activities in which the local people become the main actors to learn about their community along with getting advice or viewpoints from outsiders, and build an unique local lifestyle (culture) in everyday life through realizing the distinctive features of their own community" (Yoshimoto, 2009). ESD is diverse, and it has to be based on what already exists in the circumstances of the local community (environment, economics, society, culture and etc). In this sense, *Jimoto-gaku,* in which local people realize the local resources and become the main actors in the community, is distinctly a good approach to ESD.

Other than *Jimoto-gaku,* the "eco-museum" in which the entire community becomes a museum, is also known nationwide as an example of ESD. Eco-museum aims to contribute to conserve and utilize local resources and bring sustainable development to a local community through citizen participation in learning not only nature, history and culture but also industry. At present, there are many eco-museums in Japan such as Asahi Town (Yamagata Prefecture), Towa Town (Iwate Prefecture) and Toyooka City (Hyogo Prefecture). Most of these communities have been implemented community development mainly through citizens learning environmental, economic and social perspectives. In Toyooka City, there is a project for reintroduction of the oriental white stork. The Toyooka case shows that learning like *Jimoto-gaku* has been promoted as the keyword for the "oriental white stork", through nurturing and strong emotional attachment to the oriental white stork in the local people. "Asaza Project" in Kasumigaura (Ibaraki Prefecture) originally started to resurrect Kasumigaura Lake has become a dynamic environmental education project linked to local community revitalization, and ESD through environmental conservation, revitalization of the local economy, urban-rural exchange, and respect for local wisdom has been developed. Moreover, as good practice after the launch of DESD, ESD activity as the community learning center activities in a school area of Okayama City is also well-known (Abe, 2009).

The last case that I would like to introduce is ESD based on endogenous development theory. Miyamoto (1989) analyzed innovative successful cases in rural communities suffering from depopulation and developed the "endogenous development theory". The theory emphasizes the citizens as the main actors, local industry promotion, and a bottom-up approach. This is concerned with community revitalization related to not only the economy, but also environment, culture, education, healthcare and social welfare.

At present, many rural areas of Japan are facing unsustainable issues, such as depopulation, aging society, deindustrialization and natural environmental devastation, and ESD based on the comprehensive viewpoint of environment, economy and society is urgently needed there. Moreover, it is impossible to achieve sustainable community development without citizens' proactive and creative participation. In this sense, ESD plays a big role in sustainable community development now and in the future.

Conclusion

Under DESD promoted by Japan, unique and diverse ESD efforts have been made in Japan. However, unfortunately, ESD has not yet obtained

well recognition in the Japanese society. The broad range of the ESD concept is one of the factors making ESD difficult to understand. On this point, it is necessary to make ESD easy to understand, to "visualize" by establishing media strategy, and to share good practices. Development of training programs for ESD coordinators, who play a role in designing learning activities related to sustainability, is one of the future challenges. Furthermore, ESD in schools and strengthening of ESD efforts in the business sector are also challenges.

At the Conference of the Parties to the Convention on Biodiversity in Nagoya 2010, the Japanese government proposed "United Nations Decade of Biodiversity (2011-2020)" and this proposal was adopted on 2nd of November (UN, 2010). This includes promotion of programs for work on communication, education and public awareness (CEPA). CEPA plays an important role in further progress of ESD. Furthermore, collaboration between DESD and DB should be highly encouraged in order to promote ESD.

Fortunately, the final meeting of DESD sponsored by UN in 2014 will be hosted by the Japanese government. The final meeting will provide a great opportunity to disseminate the idea of ESD and to place Japan as a top runner as sustainable society. To do so, "All Japan" collaboration among all the stakeholders such as government, NGO and the business sector is essential, and the government of Japan is expected to organize the national ESD promotional structure. Now is the time for the Japanese government to respond to the international expectations on Japan as a country that proposed the Brundtland Commission and made the concept of sustainable development common, and as the country that proposed DESD.

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