

Current State and Future Prospects of Education for Sustainable Development (ESD) in Japan

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The UN Decade of Education for Sustainable Development (ESD) ran from 2005 to 2014. This study concerns the concepts of Sustainable Development (SD) and ESD. The term “sustainable development” was coined by the Brundtland Commission in 1987 as the key word in integrating environment and development. SD achieved international consensus at the 1992 Earth Summit, at which Agenda 21 was formulated to promote ESD. The resolution to implement the Decade of ESD was then adopted at the 2002 Johannesburg Summit. In this study, therefore, we follow historical developments in ESD in Japan in the context of environmental and development education.

Environmental education originated in conservation, pollution, and outdoor education, respectively. After the 1992 Earth Summit, the Japanese government implemented environmental education in public schools, originally in science classes, and limited at first to education on the natural environment. This led to the acceptance of ESD after 2005, including not only its natural but also its economic, social, and cultural aspects.

Meanwhile, development education in Japan commenced in the 1980s, and focused on development issues in the Global South. However, following the Hamburg Declaration on Adult Learning in 1997, the Development Education Association and Resource Center (DEAR) widened its remit to cover such global issues as the environment, human rights, gender, and multi-culturalism. During the Decade of ESD, the DEAR implemented projects on development of an ESD curriculum, training of facilitators for participatory learning, and promotion of ESD networking in the Asia-Pacific region. We analyze two model curricula proposed by the DEAR in 2000 and 2010, which aimed to connect local and global issues through participatory learning. We further analyze the DEAR ESD curriculum in view of environmental education. Finally, we suggest future developments in ESD related to the Global Action Programme on Education for Sustainable Development (GAP) and Sustainable Development Goals (SDGs).

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The UN Decade of Education for Sustainable Development (ESD), which took place from 2005 to 2014, heralded an era of change in environmental and development education in Japan. In this paper, we first discuss Sustainable Development, clarifying the concept of ESD, and then analyze ESD as implemented in Japan in the context of environmental and development education. We further research the model ESD curriculum proposed by the Development Education Association and Research Center (DEAR), which links local and global issues through participatory learning. Finally, we consider the prospects and future developments of ESD after 2015.

1. History of Education for Sustainable Development

In this section, we follow the historical developments of the concepts of Sustainable Development and ESD. ESD commenced with Agenda 21 at the Earth Summit, and was then enhanced by the two declarations of Thessaloniki and Hamburg in 1997. The Decade of ESD (2005-14) was adopted at the Johannesburg Summit in 2002.

1.1. The Origin of Sustainable Development

The concept of “sustainable development” was originally developed in relation to preserving marine resources as a way to ensure the maximum sustainable yield. In 1987, the Brundtland Commission, formally the World Commission on Environment and Development, chaired by former Norwegian Prime Minister Gro Harlem Brundtland, referred to sustainable development in its report, *Our Common Future*, as a concept that covered, for the first time, aspects of both the environment and development. Sustainable development was defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development 1987). This concept differed from the then conventional view that development was incompatible with the environment. Thus, through integrating development and the environment, sustainable development comprised, for the first time, the idea that development could be promoted to the extent sustainable by the earth’s ecosystem. The aim of this concept was to ensure that the present generation would not exhaust resources for future generations (inter-generational equity) and to close the North-South gap in resource use: that is, the gap between rich and poor (intra-generational equity).

At the United Nations Conference on Environment and Development (Earth Summit), held in Rio de Janeiro in 1992, the idea of sustainable development achieved international consensus and Agenda 21 was adopted as a specific action plan for its implementation. At that time, sustainable development became a central theme of UN and other international conferences held in the 1990s. These included the Second World Conference on Human

Rights (Vienna, 1993), the International Conference on Population and Development (Cairo, 1994), the World Summit for Social Development (Copenhagen, 1995), the Fourth World Conference on Women (Beijing, 1995), and the 2nd United Nations Conference on Human Settlements (Istanbul, 1996). Discussion at these conferences helped to gradually clarify the correlations among problems faced by the global community, including population, poverty, environment, gender, housing, and human rights. Moreover, at each conference, international cooperation and the building of participatory civil society were expressed as necessary factors in resolving these problems.

1.2. Development toward ESD after the Earth Summit

The concept of ESD is based on the 1992 Earth Summit, at which “sustainable development” became a key phrase. The action plan for sustainable development, Agenda 21, deals with “Promoting Education, Public Awareness, and Training” in Chapter 36, while in Section 3 it states that “education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues.” The same section also states that education “is also critical for achieving environmental and ethical awareness, values and attitudes, and skills and behaviors consistent with sustainable development.”

In line with Agenda 21, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) held an International Conference on Environment and Society: Education and Public Awareness for Sustainability in Thessaloniki, Greece, in December 1997. Its final document, the Declaration of Thessaloniki, states that environmental education “may also be referred to as education for environment and sustainability” (Paragraph 11). In addition, “the concept of sustainability encompasses not only the environment but also poverty, population, health, food security, democracy, human rights, and peace. Sustainability is, in the final analysis, a moral and ethical imperative in which cultural diversity and traditional knowledge need to be respected” (Paragraph 10). The fact that the Declaration of Thessaloniki recommended developing environmental education as “education for environment and sustainability,” or ESD, greatly affected those involved in environmental education. However, sustainability was cited as a concept that encompassed not only the environment, but also development, democracy, human rights, peace, and cultural diversity: therefore, education for sustainability was expected to comprise a far broader framework than traditional environmental education.

In the same year, UNESCO hosted the Fifth International Conference on Adult Learning in Hamburg, Germany. The declaration adopted at this conference became known as the “Hamburg Declaration on Adult Learning,” and made known the role of adult education and the global issues faced by humanity as follows: “We...reaffirm that only human-centered development and a participatory society based on the full respect of human rights will lead to sustainable and equitable development. The informed and effective participation of men and women in every sphere of life is needed if humanity is to survive and to meet the challenges of the future” (Paragraph 1).

The Hamburg Declaration included global issues such as poverty and eliminating the gap between North and South, resolution of environmental problems, achievement of a peaceful democratic world, and guaranteeing the right of education for those facing discrimination and the underprivileged (women, people with disabilities, native peoples, older persons, etc.). To resolve these issues, the fundamental recognition was established that, as stated at the outset,

human-centered development and a participatory society are required, and adult education itself is absolutely essential.

The Hamburg Declaration proposed almost all the global issues to be covered by ESD: 1) conventional environmental education centered on the ecosystem and environmental conservation, 2) development education dealing with development issues such as overpopulation, poverty, and health, and 3) peace and human rights education focused on peace, human rights, democracy, and coexistence.

The Declarations of Thessaloniki and Hamburg greatly impacted Japanese environmental and development educators, who organized Education for the Future Japan (ef) in December 1997. This was the first networking body for new topics of education such as development, environment, gender, and human rights. Ef published two books, *Shimin ni yoru Shogaigakushu Hakusho* (White Paper on Lifelong Learning by Citizens) and the *NGO/NPO Campaign Handbook* (ef 1999, 2002). Although it had no fixed office or budget and its activities were limited, the relationship between ef leaders and participants would contribute to organizing the ESD networking body called ESD-J in 2003.

1.3. Trends in Promoting ESD

In September 2000, the UN Millennium Summit was held in New York, laying out the eight Millennium Development Goals (MDGs) with a 2015 deadline: (i) eradicate extreme poverty and hunger, (ii) achieve universal primary education, (iii) promote gender equality and empower women, (iv) reduce child mortality, (v) improve maternal health, (vi) combat HIV/AIDS, malaria, and other diseases, (vii) ensure environmental sustainability, and (viii) develop a global partnership for development. In addition, 18 specific targets were set out under these MDGs. Although environmental sustainability is goal seven, the above-mentioned discussions about ESD indicate that all the MDGs are related to ESD.

These developments led to the adoption of a resolution on the Decade of ESD at the Johannesburg Summit in 2002. UNESCO then presented the final draft of the International Implementation Scheme for the Decade of ESD at the 59th session of the UN General Assembly in October 2004, and the Decade of ESD began in 2005. UNESCO explains ESD as follows:

Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes, and values necessary to shape a sustainable future. Education for Sustainable Development means including key sustainable development issues in teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behavior and take action for sustainable development. Education for Sustainable Development consequently promotes competencies such as critical thinking, imagining future scenarios, and making decisions in a collaborative way (UNESCO 2005). (See Table 1, Chronology of Sustainable Development and ESD)

This section has traced the developments in the concept of ESD, demonstrating how the 1997 Declarations of Thessaloniki and Hamburg were important in enhancing the concept of ESD. They also greatly impacted the Japanese environmental and development educators in their preparations for the DESD, which emerged after the Johannesburg Summit.

Table 1 Chronology of Sustainable Development and ESD

1972 UN Conference on the Human Environment (Stockholm)
1975 International Workshop on Environmental Education (Belgrade)
1977 Intergovernmental Conference on Environmental Education (Tbilisi)
1987 Report of the Brundtland Commission, coining the term “Sustainable Development”
1990 World Conference on Education for All (Jomtien)
1992 UN Conference on Environment and Development (Earth Summit) (Rio de Janeiro)
1993 2nd World Conference on Human Rights (Vienna)
1994 International Conference on Population and Development (Cairo)
1995 UN World Summit for Social Development (Copenhagen) 4th World Conference on Women (Beijing)
1996 2nd UN Conference on Human Settlements (Istanbul)
1997 5th International Conference on Adult Education (adopting the Hamburg Declaration)
International Conference on Environment and Society (Thessaloniki)
Education for the Future Japan (ef) founded in Japan
2000 UN Millennium Summit (adopting the UN Millennium Declaration)
2002 World Summit on Sustainable Development (Johannesburg)
UN General Assembly Resolution on the Decade of ESD
Course of Study revised (Period for Integrated Learning introduced)
2003 ESD-J founded in Japan
2004 Law for Promoting Environmental Education enacted in Japan
2005 Decade of ESD begins (until 2014)
UNESCO draws up the International Implementation Scheme for the Decade of ESD
2006 Japanese government draws up an implementation plan to promote ESD
2007 Education for Sustainable Development Research Center established at Rikkyo University
2008 ESD Round Table held by the Japanese government and NGOs
2009 UNESCO World Conference on Education for Sustainable Development (Bonn)
2010 DEAR ESD Curriculum published
2012 Rio + 20 (UN Conference on Sustainable Development, Rio de Janeiro)
2014 Global Action Program on Education for Sustainable Development (UNESCO)
Kominkan CLC International Conference on ESD (Okayama)
International Forum on UNESCO ASPnet Students’ Forum (Okayama)
UNESCO World Conference on Education for Sustainable Development (Aichi-Nagoya)
2015 Sustainable Development Goals (SDGs) adopted at the UN General Assembly

2. Adoption and Promotion of ESD in Japan

In this section, we will examine the historical developments in Japanese environmental and development education, and how they connect with the ESD proposed at the above-mentioned international conferences.

2.1. Environmental Education and ESD

Environmental education in Japan is rooted in three types of education: conservation education, pollution education, and outdoor education (Nitta 2002). The practices of these types of education became widely accepted in the 1960s, during an economic boom time for Japan when the natural environment was suffering from rapid urbanization and serious damage.

Conservation education involves experimenting the beauty and importance of nature and aims to preserve natural resources. This education in Japan was rooted in voluntary conservation activities to protect nature at Lake Ozenuma (Gunma and Fukushima), the Miura Peninsula (Kanagawa), and Mt. Takao (Tokyo). In these areas, several conservation groups were

organized by volunteers and provided *Shizen Kansatsukai* (nature observation meetings) for young people. In 1957, the Nature Conservation Society of Japan proposed the “Petition for Promotion of Conservation Education” to the Ministry of Education (Ogawa et al. 2008).

Pollution education was developed to understand the causes of serious pollution and to prevent such pollution in the future. In 1960s Japan, the lives of many people were damaged by pollution, as in the outbreaks of Minamata disease in Kumamoto and Niigata, Itai-itai disease (cadmium poisoning) in Gifu, and asthma caused by air pollution in Yokkaichi. Anti-pollution movements were organized in these areas, and some teachers addressed the topics of pollution at school. Many practices in pollution education were reported at the Annual Seminars of Education and Research sponsored by the Japan Teachers Union. Following the 1971 revision of the Course of Study by the Ministry of Education, pollution education was formally included in social studies, and every public school taught topics related to pollution.

Outdoor education began in the 1920s when Boy Scouts and the YMCA provided camping as part of their youth work. Thus, by the 1960s, most Japanese children had the opportunity to enjoy camping and outdoor activities. Both the Ministry of Education and local governments established residential youth centers (*Seinen no ie*) and nature study centers for children (*Shonen Shizen no ie*). These facilities were used not only by youth organizations but also by public schools, and provided experimental activities such as camping, observation of nature, crafts, and hiking. Due to the diminishing natural resources in towns and even the countryside, these activities were encouraged in school education.

In the 1980s, conservation education, pollution education, outdoor education, and similar educational activities were integrated into the concept of “environmental education.” This was influenced by the international conferences of environmental education. Environmental education was first proposed at the United Nations Conference on the Human Environment at Stockholm in 1972. An International Workshop on Environmental Education was held in Belgrade, Yugoslavia in 1975. The Belgrade Charter was built upon the Stockholm Declaration and added goals, objectives, and guiding principles for environmental education programs. The world’s first intergovernmental conference on environmental education was convened in Tbilisi, Georgia in 1977, organized by UNESCO and UNEP (United Nations Environment Program). The Tbilisi Declaration categorized the following objectives of environmental education: awareness, knowledge, attitudes, skills, and participation.

The 1992 Earth Summit was the turning point for environmental education in Japan. The Ministry of Education, Science and Culture (MESC) published three books under the title *Environmental Education Teaching Material (Kankyō Kyōiku Sidō Shiryou)*: for secondary school in 1991, elementary school in 1992, and to promote good practices in 1995 (MESC, 1991, 1992, 1995). These books were the first to be presented as a national education policy for environmental education.

The major children’s activities at schools in the 1990s included learning about nature and recycling. The learning methods relied on fostering sensibilities regarding the environment and solidarity among students to resolve the related issues. There was a tendency for such programs to converge with eco-friendly programs. The curriculum of firsthand learning about nature had become both the means and the end itself, and, as a result, the educational content had a tendency to shift away from confronting environmental issues. Recycling activities, such as collecting newspapers or used cans, faced the same issue. Students experienced methods of recycling and came to understand the system; however, they tended to learn that

recycling was the only solution to environmental issues, without applying any critical analysis. Most of the education was presented as part of the subject of natural science. Thus, the environmental education presented in the 1990s tended to be nature-oriented and apolitical. It was not until after the turn of the century that students encountered ESD, which contains not only natural but also political, social, and economic aspects.

2.2. Development Education and ESD

Development education in Japan, which began in the early 1980s, originally addressed the problem of underdevelopment, including poverty and hunger in developing countries. Thus, its aim was to consider what we, as citizens of a *developed* country, should and should not do to resolve these issues. Characteristic of development education at that time was that knowledge and information were primarily provided by international cooperation NGOs, which had begun to work in countries in the South, mostly in south and southeast Asian countries (Tanaka 2008).

In the 1990s, given the discussion of global issues in a series of UN and other international conferences, development education came to recognize a link with global issues, including environment, human rights, peace, and gender. In 1997, when the Hamburg Declaration was adopted, the Development Education Association and Resource Center (DEAR), a national center for development education in Japan, revised the definition of development education it had been using since 1982.

The DEAR explains its role in development education thus: “We seek to understand various problems surrounding development, consider desirable forms of development, and participate in the creation of a just, global society that allows for peaceful coexistence” (DEAR 2004). Moreover, the DEAR pursues the following five specific education goals: (i) to understand human dignity and the diversity of culture, (ii) to understand the reality and causes of poverty and the North-South gap, (iii) to understand the link between developmental issues and global problems, (iv) to recognize a connection between the personal world and various problems, and (v) to develop capabilities and attitudes to help resolve the problems.

The DEAR has since engaged in creating a curriculum for participatory learning, in line with the introduction of “integrated studies” into Japanese formal education, producing coursework for developmental issues, and publishing handbooks through study groups that focus on linking schools, NGOs, local communities, etc.

In line with this policy, the DEAR conducted the following three activities during the Decade of ESD: (i) development of ESD curriculum guidelines in view of development education; (ii) training of facilitators for participatory learning, addressing not only global but also local issues; and (iii) active promotion of ESD networking in the Asia-Pacific region. In the next section, we will propose developments for the ESD curriculum.

2.3. Promotion of ESD in Japan

Before discussing ESD curricula in Japan, we will consider the development of ESD policies by the Japanese government. In December 2005, the Japanese government established a liaison council of ministries and agencies related to the Decade of ESD within the Cabinet Office; in 2006, the government drew up an implementation plan to promote the Decade of ESD. Japan’s Action Plan for the UNDESD states that “the objectives of ESD are to bring about a transformation of behavior that enables the realization of a sustainable fu-

ture, in environmental, economic, and social terms, in which all people can enjoy the benefits of high-quality education and in which the principles, values, and behavior required for sustainable development are incorporated into all education and learning situations, resulting in a transformation into a sustainable society.”¹

The private sector organized the Japan Council on the UN Decade of Education for Sustainable Development (ESD-J) in June 2003, mainly comprised of NPOs that had collaborated in the adoption of the Decade of ESD. The membership of ESD-J included 96 organizations and 107 individuals (March, 2006).

The ESD projects spanned more than 10 governmental offices, among which MEXT (Ministry of Education, Culture, Sports, Science and Technology) and the Ministry of Environment were the leading agencies. The perspective of the construction of a sustainable society was included in the Courses of Study for elementary schools and junior high schools in March 2008. This perspective was also reflected in revisions to the Courses of Study for senior high schools in March 2009. UNESCO Associated Schools were expected to implement ESD in the school curriculum. As a result, the number of UNESCO Associated Schools increased from 20 in 2006 to 705 as of August 2014. The Ministry of the Environment asked municipalities to apply for “projects for promoting the Decade of ESD” and selected 10 areas, including Tobetsu (Hokkaido) and Toyonaka (Osaka). Okayama promoted ESD based on citizens’ halls, and succeeded in engaging the participation of the citizens in each area.

In the final year of the UNDESD, the Government of Japan and UNESCO jointly held conferences in Nagoya and Okayama to better promote ESD beyond 2014. The total policies and projects of the Japanese central and local governments and private sectors are as described in the *Japan Report: United Nations Decade of Education for Sustainable Development (2005-2014)* (Interministerial Meeting on the UNDESD 2015). (See also Table 1, Chronology of Sustainable Development and ESD).

This section has investigated the separate origins of environmental education and development education. Both educational movements were shaped in the 1980s, and the Japanese government supported them after the Earth Summit. The curriculum reform after 2002 promoted these types of education and ESD in schools.

3. The ESD Curriculum in View of Development and Environmental Education

ESD was widely practiced in the field of environmental and development education during the DESD. In this section, we research the two model ESD curricula proposed by DEAR. In the history of development education in Japan, we find three curricula: 1983, 2000 and 2010 (DEAR 2010a). Among these, the DEAR curricula of 2000 and 2010 are related to ESD concepts. These curricula aim to link local issues with global issues through participatory learning.

3.1. The DEAR Curriculum (2000)

What are the characteristics of ESD learning? It is not easy to understand complex global issues or the causes and structure of globalization, or to connect these issues with the daily problems of learners. As we see in the UNESCO’s definition of ESD in 2005, three characteristics of the learning process of global issues are contained in ESD (UNESCO 2005). First, it entails problem-solving learning; second, it must be future-oriented; and third,

Table 2 DEAR Curriculum (2000)

1. Children: Let's make friends worldwide
2. Culture: Feel other cultures at hand
3. Food: Our food from around the world
4. Environment: Water protecting our lives
5. Trade: Let's see the world from the perspective of the flow of goods
6. Poverty: Let's break the vicious circle of poverty
7. Literacy: Thinking about literacy and illiteracy
8. Refugees: Children in our time
9. International Cooperation: Thinking about ideal cooperation
10. Gender: Towards a gender-free society
11. Foreigners in Japan: Let's find the issues involved in living together
12. Community Development: Let's design the ideal community

it requires not only knowledge acquisition, but also a change of attitude. Thus, when teaching global issues, it is necessary for learners to engage in active learning in order to foster self-transformation. One type of such active learning is called “participatory learning.”

Participatory learning is useful when studying global issues that have multiple solutions, and the learning process itself is important. The practices of participatory learning stem from development education and global studies in Britain, and from the literacy education and problem-posing education developed by Paulo Freire of Brazil. They are also rooted in the child-centered education developed by John Dewey a century ago. The key words of these participatory approaches are child (learner)-centered, experience, dialogue, and participation.

In 1998, the MEXT Curriculum Council announced a drastic curriculum change for the new Course of Study to be implemented in 2002. They proposed two to three hours per week of “integrated studies” in elementary and secondary schools. This integrated curriculum had two benefits in the implementation of development education in public schools. The first benefit related to content. Although schools and teachers have autonomy with regard to activities, the integrated curriculum recommends contents based on international understanding, environment, information technology, health, and human welfare. This curriculum also allowed ESD learning activities to be fully developed. The second benefit related to method. Child-centered participatory learning was strongly recommended, included experiments, observations, natural studies, presentations, and discussion.

The DEAR published *Feeling the World by Participatory Learning: Handbook for Practicing Development Education* in 1990, which contained 12 thematic curricula: food, culture, environment, trade, literacy, refugees, international cooperation, foreign people in Japan, etc. (See Table 2). This handbook introduced 11 methods of participatory learning, such as photo language, roleplay, and ranking.

Teaching materials and workshops for development education spread rapidly to schools nationwide around 2002 when an integrated study program was introduced into the school curriculum. Workshops, including the “New Trading Game” and “If the World were a Village of 100 People,” have now been adopted at many schools (DEAR 2003b, 2006).

Although called participatory learning, most of these activities only involve in-class “participation”; they do not often lead to cultivating the skills and attitudes required for social participation, which is the aim of development education. Participatory learning for development education should aim to enable children to develop the skills and attitudes neces-

sary to take an interest in and participate in community activities based on their own lives or experiences. Moreover, the skills and attitudes required to recognize the reality of the world, take an interest in global issues, and participate in problem solving should also be cultivated. A major challenge for the future is how far participatory learning to ensure children's social participation can be situated within school education by cooperating with local communities.

3.2. The DEAR ESD Curriculum (2010)

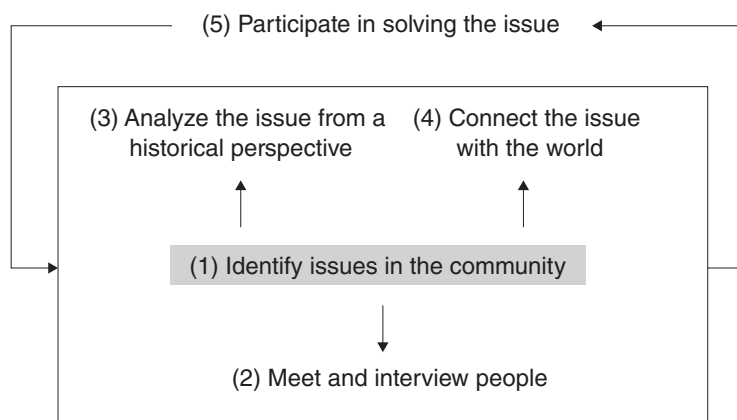
In reflecting on the DEAR Curriculum 2000, a new ESD curriculum was proposed in 2010 (DEAR 2010a). The characteristics of the DEAR ESD Curriculum are its focus on local issues and their relationship to global issues. The curriculum is influenced by the Roger Hart's research into participatory action (Hart 1997).

The process of the curriculum is shown in Figure 1. First, students walk around the community, and identify its issues. (1) It is important to identify both the problems that need to be solved and also the positive aspects of the community. Next, students "meet the people," and communicate with and interview them to investigate community issues. (2) This curriculum is unique with regard to its historical perspective. (3) Students analyze the causes of a given issue by reviewing past incidents or reasons therefor. This is not the type of history that is learnt in textbooks; it comes from older people or those who understand the historical development of a given issue.

Connecting a particular issue with the real world is an invaluable process of development education. (4) In the global age, almost all community issues relate to the global background. Due to the rapid globalization since the 1990s, goods, money, people, and information have been exchanged worldwide within a short time period. Participation in solving the problem is the final process in this curriculum. (5) By proposing solutions to the issue, students communicate with the people concerned. In this process, they may feel "useful" within the community. A positive attitude towards local and global issues is anticipated to result from this curriculum.

The DEAR ESD curriculum begins with local issues and develops toward global issues. The vector of the ESD curriculum (2010) is thus local to global, compared with the 2000 curriculum that moved from global to local. Thus, both curriculums are useful, depending on the given learning situation.

Figure 1 The DEAR ESD Curriculum (2010)



3.3. Environmental Education and the DEAR Curriculum

Does the DEAR ESD curriculum cover all themes of ESD? The topics of ESD include global issues, such as peace, human rights, multi-culturalism, and gender, as well as development and the environment. Almost all of these topics are anthropocentric or human-centered issues. In other words, ESD-related education, apart from environmental education, rests on the concept of humanism. Only environmental education contains non-anthropocentric elements, such as animals and eco-systems.

Abe Osamu classifies environmental education into three categories: nature-oriented, lifestyle-oriented, and globally oriented (Abe 2002). Among these, development education and other types of global education are classified in the category of globally-oriented environment education. Examples of lifestyle-oriented education are consumer education, recycling education, and energy education. Nature-oriented environmental education is the original type, which covers animals, conservation, or landscapes. Lifestyle- and globally-oriented environmental education are based on anthropocentrism, or humanism. The DEAR ESD curriculum is applicable to these two types of education; however, the main purpose of nature-oriented environmental education is to investigate the “relationship between human beings and nature,” which contains non-anthropocentric elements. This is the unique aspect of environmental education, compared to other types of ESD education.

Regarding the ESD curriculum, there are two necessary factors in terms of environmental education. The first factor is sensitivity towards nature. In her book *The Sense of Wonder*, Rachel Carson wrote, “A child’s world is fresh and new and beautiful, full of wonder and excitement. It is our misfortune that for most of us that clear-eyed vision, that true instinct for what is beautiful and awe-inspiring, is dimmed and even lost before we reach adulthood” (Carson 1965). Recognizing that human beings are a part of nature as a whole is the starting point of environmental education. Other types of ESD education also value the importance of sensitivity. The sense of empathy with “weak” or disadvantaged people is stressed; refugees in peace education, poor people in development education, minorities in multi-cultural education, etc.

The second factor that environmental education insists on is the concept of ecology. When we consider pollution or global warming, we must understand modernization after the 18th-century Industrial Revolution. Industrialization and urbanization have damaged the cyclicity of goods, and caused the environment to deteriorate. Nature has been damaged on a global scale and seed diversity has been lost. The principal themes of such study are to understand cyclicity and diversity. Development education, in comparison, does not focus on cyclicity, and recognizes diversity in terms of culture, language, and ethnicity.

When we consider the need to provide a comprehensive ESD curriculum, these two factors of environment education are important.

In this section, we have analyzed the two DEAR curricula. The DEAR curriculum of 2000 was theme-oriented and aimed to understand global issues by means of participatory learning. The vector of learning was thus “global to local.” In contrast, the DEAR ESD curriculum of 2010 began with local issues, and followed a vector from “local to global.” While these curricula were complementary in terms of the ESD curriculum, they were inadequate from the perspective of environmental education as they lacked an understanding of “ecology.”

4. ESD after 2015

When the UN Decade of ESD ended in 2014, UNESCO announced the Global Action Program on Education for Sustainable Development (GAP) to promote ESD after 2015. The GAP has five Priority Action Areas: 1) mainstreaming ESD into education and implementing sustainable development policies to create an enabling environment for ESD and bring about systemic change; 2) integrating sustainability principles in education and training settings; 3) increasing the capacities of educators and trainers for effective delivery of ESD; 4) generating action among youths; and 5) encouraging local communities and municipal authorities to develop community-based ESD programs.

Regarding the contents and method of ESD, GAP proposed the following principles.

(a) ESD allows every human to acquire the knowledge, skills, values, and attitudes that empower them to contribute to sustainable development, make informed decisions, and take responsible actions for environmental integrity, economic viability, and a just society for present and future generations.

(b) ESD entails incorporating key sustainable development issues into teaching and learning, and requires innovative, participatory teaching and learning methods that empower and motivate learners to take action for sustainable development. ESD promotes skills such as critical thinking, understanding complex systems, imagining future scenarios, and making decisions in a participatory and collaborative way.

(c) ESD is grounded in a rights-based approach to education. It is concerned with the provision of quality education and learning that is relevant today.

The principles of GAP stress participatory learning and empowerment for action. We find some suggestions for future ESD practices in the goals and targets of the Sustainable Development Goals (SDGs). The SDGs, officially known as *Transforming our World: The 2030 Agenda for Sustainable Development*, are an intergovernmental set of 17 aspiration goals with 169 targets. The SDGs are successors to the MDGs and Rio+20. They also contain both development goals and environmental goals. SDG Goal 4.7 states the following:

4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

The themes of SDGs include both developmental and environmental issues. Resolving both issues simultaneously will be critical for the survival of human beings in the 21st century. Thus, integration of development and environmental education will be the focal point for ESD practice from 2015 on (Tanaka 2014a).

This paper discusses the historical development of ESD in relation to environmental education and development education. It focuses solely on the ESD curricula of DEAR, and does not introduce further ESD practices and curricula. The practices and projects of development education and ESD were reviewed by DEAR (DEAR 2010b). The theory and practices of environmental education and ESD can be found in a publication of the Japanese Society of Environmental Education (JSEE 2014). The Japan Society for the Study of Adult and Community Education also reports on many ESD practices and theories (JSSACE 2015).

These documents and reports serve as references for information on the many ESD practices and theories developed in Japan during the DESD. This paper has not fully analyzed the integration of development education and environmental education for future practices, a theme addressed by *Environmental Education and Development Education: Prospects for Integration of Practices for Post-2015 ESD*(Suzuki et al. 2014).^{2,3}

Notes

1. Japan's Action Plan for the UNDESD, decided at the Interministerial Meeting of March 30, 2006 and revised on June 3, 2011.
2. This paper is based on four papers by Tanaka Haruhiko (Tanaka 2006, 2009, 2014a, 2014b).
3. We would like to thank Editage (www.editage.jp) for English language editing.

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