Education for Sustainable Development: 
The Role of Higher Education Institutions

Fumi Kitagawa
PhD, Dept. for Higher Education, National Institute for Educational Policy Research (NIER)

Introduction

There is increasing awareness that education is extremely important for achieving “sustainable development.” Following the Rio Summit, UNESCO has taken the central role in promoting discussion of the role of education in sustainable development in the international arena through the UN Commission for Sustainable Development (CSD). As the result of a series of agreements and plans such as Agenda 21, the UN Millennium Development Goals and the Johannesburg Plan of Implementation, there is now international consensus that partnerships between the public and private sector in every nation and region are imperative, and that it is important to promote activities for sustainable development among citizens by linking such areas as basic education, higher education, teacher education and environmental education. As an outgrowth of these incremental developments, the UN declared 2005-2014 the Decade for Education for Sustainable Development (DESD).

This paper focuses on the role of higher education institutions (HEIs) in ESD—a commitment that is still in its early days. In this paper, we will present an overview of some of the research and teaching activities of Japanese universities in relation to sustainable development. We will then highlight the ESD activities of Iwate University, which is developing a new education program based on the philosophy of Kenji Miyazawa, a well-known local novelist and thinker of the late 19th to early 20th century. As a good case study from another country, we will look at the University of Plymouth in the U.K., which has been very active in forming partnerships with local actors through its research and educational programs. I would also like to touch upon methods of obtaining public support for ESD through education policy, several international networks of ESD activities that have recently been developing, and notable activities of non-governmental organizations (NGOs).

Universities and Sustainable Development

Higher Education Institutions (HEIs) work with the society in various ways. Universities work with the society, for example, through educating students, disseminating results of their research activities to the wider society, and contributing to the development of civil society by being socially engaged. In the context of “sustainable development” (SD) and “education for sustainable development” (ESD), the most significant role played by universities is educating young people who understand the concept of sustainable development, and who are able to implement this concept in society through working at private businesses, governmental and educational institutions, and other places after graduation. Another important role of universities in practicing “sustainable development” is providing a forum for the contributions of experts from various specialties. Universities themselves are able to contribute the SD activities through the state-of-the-art research their faculty members conduct, and by training future researchers who can provide society with knowledge and expertise for the next generation. These activities should not be closed within university communities consisting of students, faculty members and researchers, but must be open to the wider society, including citizens and diverse associations and groups through a variety of opportunities for interaction.

Universities can further foster international networks of researchers and students to develop ESD activities, permitting the sharing of experiences and philosophies from different
social and cultural backgrounds. For example, one of the interesting areas for ESD is education programs involving international students. For Japanese universities, developing links with Asian nations and regions by educating students from these areas and training them in the concept of ESD would be a challenging, and also very important, new area of activity.

What Has Been Done So Far in Japan

Activities of Japanese universities in relation to ESD have begun only recently, and experiences are rather limited. There are, however, several notable and distinctive exceptions. One of them is the University of Tokyo, which, along with international partner institutions, launched an international consortium, the Alliance for Global Sustainability (AGS), in 1996.\(^1\) The alliance encompasses international partners such as the Massachusetts Institute of Technology (MIT) from the U.S., the Swiss Federal Institute of Technology (ETH), and Chalmers University of Technology in Sweden. The philosophy of the AGS program is to overcome disciplinary boundaries between the natural sciences, social sciences and other fields, and to enable researchers from a wide variety of specialties to gather and discuss issues concerning sustainable development.

Another example is Hokkaido University, which has approached sustainable development at an institutional level,\(^2\) establishing the Hokkaido University Initiative for Sustainable Development (HUISD) in 2005. The university aims to create a new academic field of “Sustainability Studies” by establishing core areas such as the study of the climate and environmental system surrounding the Sea of Okhotsk and the study of infectious diseases of humans and animals, as well as by creating a Hokkaido University Plan on Sustainability Governance. Leaders of the initiative believe that in order to achieve sustainable development it is important to increase the citizens’ literacy in environmental science nationally and internationally. The university therefore plans to enhance partnerships between the university and civil society by collaborating with citizen associations throughout and beyond Japan.

There are some noteworthy environmental initiatives among Japan’s private universities as well, including the case of Hosei University.\(^3\) In March 1999, Hosei University established its “Environmental Charter.” The University declared “Working towards a Green University,” as a motto, and is aiming to contribute to the building of a sustainable society as a university through teaching, research and all other activities. The university has set up the Graduate School of Environmental Management which aims to develop highly specialized professionals in environmental issues. The university as whole was accredited for ISO14001 for its Environmental Management System.

Iwate University--Linking the Philosophy of Kenji Miyazawa and ESD

The case of Iwate University is unique and worth mentioning, as it has been active in developing liberal arts education based on the concept of ESD. Iwate University is one of the 87 incorporated national universities, and is based in Morioka City in Iwate Prefecture. Its

---

\(^1\) The Alliance is active in teaching. Since 2000, AGS has organized a summer school in Switzerland known as YES. Every year, ten students (including postgraduate and undergraduate students) from each university attend the program, learning together with students from developing countries who are invited to participate. The program is structured around environmental themes and supervised by faculty members of partner universities. In 2001, the World Student Community for Sustainable Development (WSC-SD) was set up by graduate students involved in the AGS program, and these students have been highly active. See [http://www.esc.u-tokyo.ac.jp/ags/index-j.html](http://www.esc.u-tokyo.ac.jp/ags/index-j.html)

\(^2\) [http://www.hokudai.ac.jp/huisd/zentai.html](http://www.hokudai.ac.jp/huisd/zentai.html)

\(^3\) [http://www.hosei.ac.jp/kankyoukenshou/green_university/index.html](http://www.hosei.ac.jp/kankyoukenshou/green_university/index.html)
predecessor, Morioka Agricultural High School, had a very prominent graduate, Kenji Miyazawa, and the university has established the philosophical roots of its ESD program in the works of Miyazawa.

Kenji Miyazawa, who was born August 27, 1896 in Iwate, is known as an author of children’s literature, but he was also a prominent scientist, poet, philosopher, religious scholar, artist and educator. The essence of Miyazawa’s thought is “to become and feel connected” and to search for “happiness both as an individual and for the world as a whole.” In his literary works, human beings, animals, and plants: the wind, clouds and light; and stars and the sun—all things in nature—talk and interact with one another. Miyazawa was trained as a geologist, and observed minerals, plants, stars, rainbows, clouds and the wind while recording the thoughts that came to him as he walked in nature. His unique activities are a representation of his philosophy of connectivity—that the world exists because all phenomena are connected to one another, and that the present exists as a result of the past and the future because of the present. All are part of the whole.

The spiritual message of Miyazawa is encapsulated in the quotation below, which appears in the university’s brochure for the ESD program:

One cannot be happy until all other people in the world are happy.
In order to live properly and vigorously, each and every person shall follow the dictates of his own individual consciousness of our galaxy.

(“Prospectus for an Introduction to Agrarian Art”)

Iwate University’s “Galaxy of Learning” project has been conceptualized based on the inheritance of this kind of philosophy from local thinker Miyazawa. The project aims to educate citizens for the 21st century through an emphasis on synthesis and practical orientation that combines development of the philosophy of Miyazawa, exchange with local people, and integration of liberal arts and specialized education. It comprises not only environmental education, but also integrates the social, economic and cultural dimensions of a sustainable society, and encourages students to translate what they learn into practice.

According to a published program outline:

The program educates “citizens for the 21st century” who can contribute to society not only through specialized knowledge, but who are will be conscious of complex issues for humanity such as those concerning the environment throughout their lives. They will be able to addresses these issues in a variety of contexts such as society, locality, and family, beginning with concrete solutions in their own surroundings.

This education program was selected for funding in FY 2006 by Japan’s Ministry of Education, Culture, Science, Sports, and Technology under the “Program for Supporting Contemporary Education Needs” aimed at higher education institutions within the category “Promoting Environmental Education for a Sustainable Society.”

The selection committee

4 http://www.mext.go.jp/a_menu/koutou/kaikaku/gp/004.htm
The number of applications was 76, including 60 projects from universities, 2 projects from junior colleges, 12 projects from applied specialist colleges, and 2 collaborative projects. 14 projects were selected for the program. Awardees included 11 universities, 1 applied specialist college, and two collaborative projects.
noted the uniqueness of Iwate University’s project, in which the whole university committed to develop ESD curriculum and teaching methods.

Iwate University had prior experience with environmental education, and has made courses in that area as part of its core curriculum. Now the university will add an ESD dimension to all of its liberal arts subjects at the undergraduate level, reconstructing the liberal arts program as new educational program for training citizens for the 21st century. Under this new educational model, the university will provide upper-level students in the third and fourth years with advanced liberal arts classes, including locally relevant topics such as local security, regeneration of the environment, and partnership formation in river-based communities. These courses will equip students with comprehensive, interdisciplinary perspectives with socially relevant knowledge and skills. The university also proposes to establish new sub-major degree in ESD, and is now working on new curricula. Such a program would develop professionals with knowledge and practical skills in ESD. The university is also planning to form partnerships with universities in other Asian countries such as South Korea and Thailand and to develop links with local primary and secondary schools to promote environmental education.

These activities, of course, will take long time to implement. The success of the program thus far has rested in large part on the individual efforts of university faculty members who have worked with local non-governmental organizations (NGOs) and a variety of bodies concerned with the environment over the course of many years. The university does have forestry courses as part of Department of Agriculture, and has had long-standing involvement with local forests. Recently, the University has been working with local communities to enhance eco-business, trying to support the regeneration of local communities. Nonetheless, the ESD initiatives and activities are not yet sufficiently recognized at the local level. Further challenges within the university will be to share the objectives of ESD activities among a broad group of academic faculty members across disciplines, to raise the commitment level of students, and to develop human resources who can further develop these activities.

According to a senior faculty member at Iwate University managing the program, the main catalyst for change at the university was the legal reform of national universities in April 2004, in which national universities were granted corporate status. In search of a new identity and new mission as a university with close links with its locality and region, Iwate University centered its new program around the philosophy of Miyazawa. Miyazawa has become a symbol for the university, bringing together its history, local roots, and contemporary global issues. The local thinker whose ideas embody a universal philosophy and natural connectedness has played a significant role for the university’s development of education for sustainable development.

Building Networks Between Universities and Local Communities

In order to carry out ESD activities, it is important to have both global perspectives on environmental issues and locally relevant educational activities on the ground. ESD does not exist without local institutional networks and individual commitment and capability—which encompasses local schools, universities, research institutes, NGOs, citizens’ groups, etc. In order to develop ESD activities, coordinators and facilitators are essential, and universities play an important role in developing such human resources through teacher education and other educational activities. Universities can also provide opportunities for

---

citizens’ groups to form collaborative partnerships to promote ESD activities. Ideally, as open communities, universities would engage students with external actors such as citizens’ groups and the business community. Furthermore, universities participate in a number of international networks of students and researchers through which their efforts, experiences, and philosophies concerning ESD can be shared.

Another important aspect of the relationship between universities and local communities is the two-way process by which universities can provide expert knowledge needed by the community while, on the other hand, communities can offer universities local knowledge embedded in the daily context of the neighborhood. Universities can play an important role by conducting projects for the benefit of the local community. However, if this is done through a one-way process, a significant opportunity for mutual understanding is be lost. By establishing mutually beneficial relationships between university and local communities, synergistic effects between the two communities of practice can be created. To implement such processes, universities would need to reconsider and reconstruct their research and teaching methods. For example, to obtain local knowledge, some action-oriented research methods would be useful. Universities would also have to be reflective about their power relations with other stakeholders. It is also important to change the attitudes of academic researchers through ESD activities so that they can work in truly collaborative partnerships with local actors.

To promote ESD activities further within Japan, thought might be given to developing existing networks of ESD programs so that they can share basic infrastructure and resources. (See Box below for some examples in the U.K.) In Japan, there are some notable networks such as ESD-J. Iwate University and Hokkaido University are both members of this network, and we can probably expect the development of various ESD-related partnerships including universities in the future. There are also some international networks among universities that aim at promoting ESD. These include the Association of University Leaders for a Sustainable Future (ULSF) and the Global Higher Education for Sustainability Partnership (GHESP). These networks are active in disseminating models and strategies for higher education’s engagement with sustainable development. Another example is the Yokohama-based Regional Centre for Expertise on ESD organized by the United Nations University Institute for Advanced Studies, working closely with local partners.

Conclusion: Towards New Directions for ESD

We have looked at some of the new initiatives undertaken by universities to promote sustainable development and to develop activities related to ESD. Each program has followed a unique developmental path based on the institutional strengths, research areas, and partnerships of the sponsoring universities. The case of Iwate University was particularly interesting. We learned that the university is redefining its relationship with its local community, creating a new institutional identity through new local interactions among its students and a number of external actors. ESD activities are at the core of these new relationships, and the idea of ESD has also challenged the way the university conducts its research, teaching, and interactions with the society.

For example, one of the Regional Centres of Excellence in northern Japan region is based at Miyagi University of Education. They have a Centre for Environmental Education Practice and play an active role in teacher education.
ESD encompasses a wide range of activities which call into question customary relationships between society and science, and the past, present and future. Scientific research is generally carried out in areas of narrow and specialized expertise. However, ESD hints at the need for a new area of science that incorporates dynamic interrelationships between science and society and historical interactions between science and society. Universities have a large pool of human resources and knowledge to pursue scientific development. The way these resources are used would need to be redefined in constructing a new relationship with society in the context of ESD.

For universities, it is important to have a philosophy which links ESD activities to the local community and also enables the activities to be internationally attractive. This philosophy is the key for the sustainability of the ESD activities themselves. Universities face a number of challenges: connecting with the history and culture of their communities and integrating these with the philosophy of ESD; creating an environment where students, academic staff and administrative staff work together for ESD; and building collaborative mechanisms through which different fields such as culture, technology, economy, society, and science are in dialogue with one another. Responding to these challenges through practice is the way to start.
ESD in the U.K.

The University of Plymouth in the U.K. is well recognized for its ESD activities. The Centre for Sustainable Futures (CSF) plays a key role in this, as it synthesizes a number of activities related to ESD across the university and develops a model of ESD activities for further dissemination. The activities of CSF include the following:
--To provide specialized knowledge on sustainable development and support the construction of courses and curriculum surrounding the concept of SD;
--To develop educational materials and teaching methods for ESD;
--To encourage students to take up jobs related to ESD activities; and
--To support ESD activities in relation to local associations, schools, private businesses, and NGOs--and to further develop networks and support local needs.

CSF has been selected as Centre for Excellence in Teaching and Learning (CETL) in Education for Sustainable Development (ESD), and is expected to play a critical role in promoting ESD as part of the U.K. higher education sector.

The support of the higher education sector as a whole in the U.K. is worth mentioning. In the U.K., sustainability is seen a key area of development for the higher education sector, and it is considered important to ascertain how best to embed it into learning and teaching strategies and curricula. Two organizations are key players in this area:

1) **The Higher Education Academy** was established in 2004 to help higher education institutions, discipline groups, and all staff to provide the best possible learning experience for their students. The Academy works with a number of partners to ensure that sustainability is integrated as part of the curriculum.

2) **Forum for the Future** is the U.K.'s leading sustainable development charity. The Forum aims to show that a sustainable future is both possible and desirable by working in partnership with the private sector, local governments, and universities. The organization runs a Masters in Leadership for Sustainable Development program to train leaders for the future.

**URLs**

University of Plymouth, Centre for Sustainable Futures: CSF: http://csf.plymouth.ac.uk/csf
Higher Education Academy, sustainability page: http://www.heacademy.ac.uk/sustainability.htm