For the future of education and children

Linkage

Education for Sustainable Development (ESD)

2009
Message from the President

On the occasion of the publication of Linkage

Kosuke Takahashi, President of MUE

Our environmental education activities started in 2002 have expanded their range to each area in Miyagi prefecture through a cooperation pact with Miyagi Board of Education, Sendai/Kesennuma/Iwanuma/Kurhara Board of Education, Tome City, and Sendai City (Yagiyama Animal Park), developing into the education for sustainable development (ESD), and cooperation with/support for the local community.

The Greater Sendai Area Project organized by the four regions of Sendai, Osaki/Tajiri, Kesennuma, Shiroishi/Shichikashuku and our university was acknowledged as one of the first seven locations in the world (Initial Seven) to become an RCE (regional center for promoting ESD) by United Nations University, and is being actively undertaken. This was highly evaluated in the section of “Cooperation with Society, Promotion of International Exchange, etc.” in the education and research evaluation in 2008 conducted by the National Institution for Academic Degrees and University Evaluation. These efforts have been introduced not only in Japan, but also overseas as Japanese good practices. We are very happy about this because we play a part in these efforts.

In the World Conference on Education for Sustainable Development held in Bonn, Germany at the end of March this year, which is the middle year of the “United Nations Decade of Education for Sustainable Development (DESD)” established by the United Nations, a booklet “Mobius for Sustainability” prepared by Kesennuma Board of Education, Miyagi University of Education, and the Japanese National Commission for UNESCO, MEXT was published.

We are making efforts to fulfill our mission of teacher training as a member university of the UNESCO Associated Schools Project Network and also as a member of ProSPER.Net. In February this year, we held the “ESD International Symposium,” and invited Mr. Tetsuo Tamura, Chairman of the Japanese National Commission for UNESCO as a keynote speaker. In his speech, he indicated the importance of the role to be played by UNESCO Associated Schools for the promotion of ESD. We have inserted all the contents of his speech in this booklet “Linkage” with his permission. We hope that they will be helpful for the spread and activities of UNESCO Associated Schools.

We would like to continue to serve as a university for teacher training to develop human resources and respond to the demands from the local community for the second half of DESD with the support from relevant organizations and people in each region.
ESD of Miyagi University of Education
–Aim of Publication of Linkage–

Kazuyuki Mikami, Vice President of MUE in Charge of General Affairs

The "Decade of Education for Sustainable Development (DESD)" promoted by the United Nations started in 2005, and the first half of the decade is soon about to pass. However, the word ESD (Education for Sustainable Development) has just begun to be known even in our university. Even on the educational front, there is generally little known about both the word ESD and its original meaning "Education for Sustainable Development". Looking back at the past five years, it seems that for the first few years, we spent a lot of energy on the discussion of "What is ESD?" and it is only recently that the contents of ESD activities have finally come to be discussed.

During this period, Miyagi University of Education has worked on ESD ahead of the world. As the "Environmental Education Center" was established in our university in 1997, and full-scale efforts have been made for environmental education since then, the efforts for ESD were also started early. In 2002, the World Summit on Sustainable Development, or the so-called Johannesburg Summit was held in Johannesburg by the United Nations. This summit was an international conference on global environment issues. Then Prime Minister Junichiro Koizumi attended the summit from Japan, emphasizing the importance of developing human resources for sustainable development.

After that, DESD was decided in the United Nations General Assembly in December 2002. **[Development from environmental education to ESD]**

The year 2002 is a memorable year also for Miyagi University of Education. In that year, we held the "International Symposium on Environmental Education 2002" which was our first international conference on environmental education, and also the 13th meeting of the Japanese Society of Environmental Education, where we started developing our activities broadly to the world while securing domestic footholds. Based on the result from these activities, the university staff visited educational facilities for advanced environmental education in Thailand, Australia, and the United States, etc. in 2003. This accomplishment is used for the basic concept of "Eiffel" which is the environmental library for education opened in 2006.

In 2004, Miyagi University of Education held the UNESCO/Japan and Asia-Pacific Environmental Education Seminar in Kesennuma City with the title of "Environmental Education for Sustainable Society." There, Hans van Ginkel, Rector of United Nations University gave the keynote speech, introducing the basic concept of RCE (Regional Centers of Expertise on ESD) promoted by United Nations University. Since then, the cooperation between Kesennuma City and Miyagi University of Education from 2002 has further strengthened, leading to the publication of "Mobius" which is the ESD/environmental education report. **[Past five years]**

What footprints has Miyagi University of Education left since DESD started?

In 2005, the Greater Sendai Area ESD Project was acknowledged as the first RCE in the world together with six other regions including foreign countries by United Nations University. The Greater Sendai Area consists of Miyagi University of Education as a higher education facility, and Sendai, Kesennuma, and Tajiri, Osaki City as regions. The certification as one of the first seven RCEs in the world encouraged us largely in our later ESD activities. In 2005, the "United Nations University RCE Promotion Committee" was established as an ESD promotion organization inside campus, developing into the "ESD/RCE Promotion Committee" in 2007 as an organization to promote ESD in general. Children who have learned about their regions will be able to interact with confidence even with people in foreign regions. The global thinking will be established through the exchange with foreign schools. One of the devices for this international exchange is the UNESCO Associated Schools Project Network (ASPNet). Using this, we aim to hold exchanges among students and teachers in the world and share information and experiences with them for the development and the progress of new contents and methods of education to cope with various global issues. Because the research subject corresponds to the contents of ESD, many new UNESCO Associated Schools in Japan have put efforts into ESD. Currently, about 7,900 schools in 176 countries are members of ASPNet. In Japan, 61 kindergartens, elementary schools, junior high schools, high schools, and teacher training schools are members of ASPNet as of the end of November 2008. In 2007, our affiliated elementary school was acknowledged as the first UNESCO Associated School in the prefecture by ASPNet, and in 2008, the university itself was acknowledged as the second ASP university member in Japan. With 26 member schools, Miyagi Prefecture has become the area where the number of member schools increased most rapidly in Japan. In 2008, 170 works and 170 work materials were selected for the world conference. In 2009, the publication of "Mobius" was selected for the world conference.

**[Five years in the future]**

The concept of "Education for Sustainable Development (ESD)" has been incorporated in the revised Governmental Guidelines for Teaching and in the Basic Plan for the Promotion of Education in 2008. By introducing ESD into schools, we will be able to understand the contents of the conventional environmental education by one-step expansion. Under the concept of sustainability, we are able to think about practical programs by developing the contents for energy education, multicultural coexistence education, food culture education, etc., and tackling learning tasks from different viewpoints. As seen in the word "mottainai," Japanese people have treated all things in nature with affection and a feeling of gratitude since ancient times. It is the local ESD and the local educational skill through the exchange among different generations that remind us of the forgotten word "mottainai."

Miyagi University of Education is expected to continue the contribution to the following: [1] Development and delivery of guidance planning, [2] Attitude of sharing and solving problems with teachers on the educational front, [3] Creation of databases of "answers" to questions and tasks, [4] Cross-disciplinary cooperation among staff, [5] Support for developing the curriculum designing skill and the coordinator skill of teachers, and [6] Raising funds for activities. It is also expected for the next five years that the university will create a global linkage to connect regions through ASPNet and RCE networks while creating its own global network. The publication of "Linkage" is to look back at the past five years and start the next five years on the occasion of the middle year of DESD. Linkage means "connection" or "chain." For the promotion of ESD, the connection among people will enable ESD to develop globally. Miyagi University of Education is a small university taking root in the Tohoku region. However, because of this, we can play an active role by grasping the essence of ESD correctly. We are convinced that by helping to promote linkage formation through mutual exchange among regions and schools in the world, we can cultivate rich human skills including a global vision, critical thinking, expansive judgment, cooperative skill, etc. in our teacher training mission.
Footsteps

2002
- May: The 13th meeting of the Japanese Society of Environmental Education was held.
- December: The International Symposium on Environmental Education "Support for School Education for Environmental Learning" was held.

2003
- March: Visit to facilities of environmental education (Overseas) Thailand and Australia
- June: Presentation of case examples in the seminar commemorating the start of the "Regional Center System" by MEXT

2004
- February: The UNESCO/Japan and Asia-Pacific Environmental Education Research Seminar was held.
- October: The mailing list "Tohoku Consortium for Environmental Education" was launched.
- November: The operation of a school support teleconference system was started.
- November: The Greater Sendai Area ESD/RCE Committee was established.

2005
- June: The United Nations University RCE Promotion Committee was established inside campus.
- November: The Greater Sendai Area ESD Project was acknowledged as an RCE (Initial Seven) by United Nations University.

2006
- May: The UNESCO/Japan and Asia-Pacific Environmental Education Research Seminar was held.
- September: The UNESCO/Japan and Asia-Pacific Environmental Education Research Seminar was held.
- November: Environmental education for sustainable future: Environmental education practical program for teachers

2007
- March: The support of Miyagi University of Education with elementary schools, junior high schools, and high schools in Kesennuma was commended by the Texas state legislature.
- July: The Education for International Understanding Forum 2007 Summer was held.
- December: The Education for International Understanding Symposium in Miyagi was held.

2008
- January: The International Education Cooperation Initiative Seminar was held.
- June: Application of experienced JOCV teaching staff
- August: Acknowledged as a UNESCO Associated School
- September: The 7th Tohoku Session of the United Nations University Global Seminar was held.
- November: The Gathering of UNESCO Associated Schools was held.
- December: Co-hosted the ESD International Forum 2008.

2009
- January: The International Cooperation Initiative Seminar II was held.
- February: The ESD International Symposium was held. ESD and teacher training
- April: The Kesenumma/Miyagi University of Education Collaboration Center was established.
- July: The cooperation pact with Sendai Astronomical Observatory was signed.
- November: The cooperation pact with Kahoku Shimpo Newspaper was signed.
- November: The cooperation pact with Wesley College in the U.S. was signed.
4 Introduction of Centers

With collaboration of all centers

Four educational research centers

Miyagi University of Education has four educational research centers to deal with modern educational tasks in local communities and schools. They are the "Environmental Education Center" characterized by education of the natural environment to help solve environmental problems, the "Center for Clinic in Education" to create high-quality classes and cultivate practical teaching skill through practical research of classes, the "Special Needs Education Research Center" to provide proper educational support to infants, children, and students who require special education and consideration for adaptation, and the "Research Center for Education in International Understanding" to respond to the internationalization, multicultural coexistence, and various demands from schools and local communities.

Interactive dialogue system to support teachers

We are currently operating the interactive dialogue system for supporting the training of teachers. Mainly in the four centers, it provides the information on teaching materials and education accumulated in each center, support for information exchange among teachers, and offers bulletin boards, teleconference room, etc. for information exchange between teachers and center staff.

Liaison Meeting for Directors of Centers

These four research centers must always work in close cooperation as four wheels of a vehicle of the university in this complicated modern society. The organization for that purpose is the Liaison Meeting for Directors of Centers. This liaison meeting is formed by six affiliated centers of the university; four research centers plus the Healthcare Center and the Information Processing Center. Miyagi University of Education has been promoting ESD that is one of the tasks in collaboration with the six centers through the liaison meeting.

For improvement of the quality of education

One of the goals of ESD is that the principles, values, and actions required for sustainable development are incorporated in every place of education and learning as described in the MEXT document (Japanese National Commission for UNESCO) "Education for Sustainable Development" (http://www.mext.go.jp/unesco/004/004.htm). For this goal, Miyagi University of Education is making comprehensive efforts to cultivate the sense of value about sustainability, the systematic thinking to seek the truth, the skill to collect and analyze information, and the communication skill, etc. by connecting various fields with various methods through the collaboration of all centers.
Environmental Education Center

Toshio Kawamura, Director

The Environmental Education Center was newly established when affiliated science education research facilities were eliminated in 1997 for the promotion of the research concerning the theory and the practice of environmental education in the school education, the support for teacher training in the field of environmental education, understanding of the current situation and the movement of global engagement with environmental education, and the spread of environmental education in the local community. The Center currently provides training of environmental educators for school teachers and citizens in cooperation with administrative organs to respond to the social demand for environmental education.

Establishment and reinforcement of cooperation with affiliated organizations

In cooperation with Sendai City, Sendai Board of Education, Kesennuma Board of Education, Iwanuma Board of Education, Tomi City, and Sendai Office of River and National Highway, MIT, the Center has been developing and maintaining fields for the training of local environmental educators and practices of environmental education.

Training of environmental educators

In faculties, we are in charge of the education of basic theory and practical application of environmental education to improve the quality of environmental education in Japan. We also hold environmental educator training seminars, etc. for school teachers and citizens to promote reeducation of the current teachers and environmental educators.

Development of environmental education materials

The Center has been developing and maintaining various environmental education materials starting with the Environmental Library for Education “Elfe.” Some of them are used for showing examples to schools and supporting practices. Because Aobayama neighboring the university is a suitable place for a field museum, the Center has been researching flora, butterflies, mammals, avian species, etc. in Aobayama, making the research achievements available to the public as databases, has been accumulating materials by investigating soil animals, and has been maintaining the “Butterfly Garden” for environmental learning by experience.

Promotion of digital information on environmental education, its public opening and maintenance

The Center has been creating databases of the environmental education materials accumulated so far and has been delivering them to the interested parties via the Internet. The database of environmental education materials, the database of environmental education practices, the human resource agency for integrated coastal learning, and the interactive dialogue system for teachers, etc. are available to the current teachers. In addition, the database of JOCV activities has been developed and maintained for the JOCV staff in the operation of cooperation activities in developing countries, and has been delivered to the world through JICA.

Activities for international cooperation

Being in charge of the formation of international cooperation initiative education cooperative centers of MEXT, the Center has been supporting the international cooperation activities of Japanese people focusing on teaching practices and the supply of educational materials in the field of environmental education. It held international cooperation initiative seminars for the education for international understanding in schools of teachers with experience in overseas education as one of the supports for schools in collaboration with Boards of Education. In addition, the Center has invited teachers in higher education teacher training courses of Cambodia, Laos, Thailand, Belize, the Samoan Islands, and Nepal to the university to promote the efforts for environmental education from the global viewpoint responding to the social demand. Group training for improvement of teacher training courses in their countries, the environmental education support activity by inviting the party assigned to the Tsimbazaza Zoo in Madagascar (JICA grass-roots technical cooperation activity "Environmental Education Practice Program Training for Maintenance of Natural Environment"), the promotion of information exchange with domestic and overseas RCE organizations in the field of environmental education, etc.

Purpose

To research the theory and the practice of environmental education, and develop environmental education materials

Contents of research in each field

Basic environmental education

Established in 1997

1. Research on the development and the application of environmental education materials
2. Research on the property and the dynamic state of environmental indicator materials
3. Research on the development of international cooperation initiative

Practical environmental education

Established in 1997

1. Practical research on environmental education in nature
2. Practical research on environmental education in local communities
3. Practical comparative research on environmental education
4. Ecological research on wild animals and its application to environmental education

Environmental education system

Established in 1997

1. Design of wide-area information system for environmental education, and construction of information environment
2. Support for the operation of local environmental education network, and development of media
3. Research and development of environmental education related databases

Relation among blog, map, and portable devices

- Support for environmental education on the southern coast of Sendai Bay
- Walk in Butterfly Garden
- Blog-map system
- Map linked with blog
- Take photos
- Add GPS information
- Live portable devices with GPS in the field
- Post on the blog by Sha-mail
- Browses on portable devices
- Originally developed link tool
- Register basic information
- Linkage

Blog-map system

Map linked with blog
Center for Clinic in Education

Akinobu Honma, Director

Creation of sustainable facts - Freshness of 70 years -

The Center for Clinic in Education of Miyagi University of Education has been accumulating an enormous amount of primary documents on educational practices. Records dating back about seventy years from Showa 10s have been collected so far. This accumulated 70 years of records have always maintained a connection with each other. The practice created in Tamamura, Gunma Prefecture from the middle of the Taisho period to the beginning of the Showa period has been incorporated directly into the current Miyagi University of Education through the exchange among many excellent teachers. This is the best part of the Japanese educational practice. The connection has been stored in the Center for Clinic in Education as accumulated facts. The stored records can be viewed and touched directly. We have not just accumulated the documents. We have started reproducing the records to be readable in modern language. We hope that they will be delivered into the hands of many teachers.

Human beings are more than just their thoughts. Education is required to make us always think "what is a human being?" The education supports the continuance and also the possibility of human beings from the root. Especially in the studies on human beings, we cannot assume someone is an "expert" in the first place. The notion of an expert in studies on human beings itself is nonsense. This is because everyone knows something about human beings as far as they are one of them. In the same way, a person will be arrogant if he declares that he has a better knowledge of human beings than others.

Therefore, studies on human beings must take the shape of accumulated facts. The facts here do not simply mean something that happened. They are the facts as an essence of something that really happened, patterns, and types. Regarding this, Pierre Janet, who was a psychiatrist of the same period as Freud (in other words, a person in the same profession), states the following.

---Most parts of medicine, particularly psychiatry still observe individual cases even today. To understand typical diseases sufficiently and describe them is more valuable than arbitrary theories and classifications. In Europe and America, forerunners have analyzed many neurotic disorders, and have determined rightly how an ethical treatment had changed them.

("Psychological Medicine" translated into Japanese by Matsumoto, Misuzu Shobo, 1923 (p.92)

One hundred years have passed since this text was written. However, the essence remains unchanged even today. The description of typical facts is important especially in the case of education. By this, teachers are encouraged and discover the meaning of their work. While theories and classifications become old-fashioned and stale, the description (facts) of the children created there remains fresh. Children, the same as those of today exist before us.

We are currently working on the plan to exhibit some of the documents in the Center as the "Educational Practice Reference Library" in one corner of the library. We will be able to read actual documents of Kihaku Saito, Takeji Hayashi, etc.

Purpose

To conduct practical research of classes to contribute to the creation of high-quality classes and training of teachers with practical teaching skill

Contents of education and research

Contents of education and research

Established in 2007

1. Practical research on classes in collaborative schools
2. Development of teaching materials for high-quality classes
3. Service activity for in-service training
4. Support for teaching practice

Others

1. Counseling on education
2. Support for volunteer activities of students

Video Library
The Special Needs Education Research Center of Miyagi University of Education was established on October 18, 2004. “The purpose of the Special Needs Education Research Center is to conduct basic/practical research on consultation activities, and to develop and research a teaching/supporting method through the accumulation and the public opening of databases while contributing actively to the local community as a base for gathering and delivery of information on special needs education in order to enable the proper educational support for each demand of disabled children (people).” According to this policy of the Center, we have worked on various activities as follows since April 2005 when we started our activities officially.

### Purpose
- Basic/practical research on special needs education
- Basic/practical research on adaptation support education
- Gathering and delivery of information on special needs education/adaptation support education and contribution to local community
- Contribution to local community
- Holding of workshops
- Consultation by E-mail for registered members
- Teacher training GP
- New education system development program
- Case study of interactivity by teleconference system
- Improvement of library and checking instruments
- Construction of databases on effective support
- Organizing the achievements of the Center’s activities
- Holding of open seminars, etc.

When two full-time teachers were assigned to the Center on October 1, 2007, the policy of the Center was revised as follows: “The purpose of the Special Needs Education Research Center is to conduct basic/practical research on consultation activities, and to develop and research a teaching/supporting method through the accumulation and the public opening of databases while contributing actively to the local community as a base for the gathering and delivery of information on special needs education and adaptation support education in order to enable the proper educational support for infants, children, students, etc. who require special education or special consideration for adaptation.” We are currently making various efforts giving top priority to the contribution to the local community with two main fields of “special needs education” and “adaptation support education” depending on the area of specialty of full-time teachers.

### Contents of education/research
#### Special needs education
- Consultation
  1. Consultation for teachers, instructors, nursery staff
  2. Training of special needs education coordinators
  3. School life support patroling consultation activity
  4. Support for social life/school life of handicapped children/people and their parents
- Application of databases
  1. Construction and public opening of databases on special needs education
  2. Research and development of database application method
  3. Development of alternative sense communication system method for disabled children

#### Adaptation support education
- Consultation
  1. Consultation for teachers, instructors, nursery staff
  2. Training of school counseling
  3. School life support patroling consultation activity
- Application of databases
  1. Construction and public opening of databases on adaptation support education
  2. Research and development of database application method

#### Control/research division
- Planning and implementation of special needs education coordinator training seminars
- Planning and implementation of special needs forums, international special needs education symposiums, etc.
- Planning of project research
- Dispatch of instructors to overseas workshops
- Educational activities of the Center
- Organizing the achievements of the Center’s activities
Research Center for Education in International Understanding

Hiroshi Fujita, Director

The Research Center for Education in International Understanding has two main activities: education for international understanding and English activities in elementary schools. Naturally, the two activities are not mutually exclusive because both of them aim at communicating and knowing the other party. They are connected from the point that it is important to learn a relative perspective because our existence depends on that of the other party.

We have not been particularly conscious of ESD while conducting the two activities. However, this has changed into something more concrete since we started the efforts for UNESCO Associated Schools. It is a natural progression considering that the UNESCO Affiliated Schools are positioned as “centers promoting ESD.” We aim at helping elementary schools, junior high schools, and high schools in Miyagi Prefecture apply for affiliation, and serving as a core of the network connecting approved affiliated schools. In March, we held the first “UNESCO Affiliated Schools Workshop in Miyagi Prefecture” with the participation of four elementary schools and junior high schools in the southern part of Miyagi Prefecture. This means we have started the discussion on what we can do specifically as affiliated schools. The workshop was co-hosted with the Environmental Education Center. Before this, we jointly worked on many activities in order to promote ESD. In other words, we have worked on the connection between environment and international understanding which are the two main tasks of ESD.

The core of wide-ranging ESD activities is “touch” instead of “sight.” Among the five senses, sight is the fastest. However, at the same time, or because of this, sight frequently makes errors. On the other hand, touch is the slowest. However, at the same time, or because of this, touch is the most reliable sense. This is because touch includes being touched or “contact with each other.” Contact with nature is dealt with in the Environmental Education Center, contact with disabled children is dealt with in the Special Needs Education Research Center, and contact with the other party through teaching is dealt with in the Center for Clinic in Education. We can see that each center puts contact or ESD at the center of their activities. In this sense, we expect to be able to work in collaboration also with the Special Needs Education Research Center and the Center for Clinic in Education.

Purpose

The purpose of the Research Center for Education in International Understanding is to respond to various demands from schools and local communities to deal with “internationalization” and “multicultural coexistence.” For this purpose, the Center conducts the basic research on education for international understanding by linguistic, cultural, and social approaches. At the same time, the Center actively promotes activities on education for international understanding through mutual exchange among Japanese and foreign school children and university students in schools, local communities, and universities.

Contents of research and activity

1. Contents of research

1. Research and education on international understanding mainly in Japanese language teaching and English teaching in elementary schools
2. Active promotion of mutual exchange for international understanding among Japanese and foreign school children and university students, respectively
3. Continuous support for international understanding activities in elementary schools, junior high schools, and high schools, local communities, and universities

Support for practical education for international understanding

Research and development of education for international understanding

2. Contents of activity

1. Holding of symposiums related to education for international understanding
2. Holding of seminars and workshops of English teaching in elementary schools, education of children with foreign citizenship, etc.
3. Support and advice for English teaching in elementary schools and education for international understanding in elementary schools and junior high schools
4. Promotion of education for international understanding in schools through UNESCO Associated Schools Project Network
5. Promotion of international understanding in university campuses

Support for education for international understanding in schools
Curriculum of Education for Sustainable Development —Modern Task Subject Groups

Miyagi University of Education established modern task subject groups (sub-major) to cultivate skills to tackle the many tasks facing modern society today.

Goal of education and course system

The modern task subjects are established for the purpose of cultivating a secondary specialty (expertise) in addition to the specialty of primary courses/majors by learning the contents that do not fit in the conventional subjects and academic domains while still being demanded in the field of education. They are also aimed at achieving the objective of the subject “General Seminar” specific to the teaching profession. The “General Seminar” is the subject required by law to foster teachers of the 21st century with the following qualifications.

- Being capable of acting from the global perspective
- Goal of education and course system

To achieve these goals, each student chooses one “subject group” created under a particular theme, and studies the subjects in the “subject group” step by step to develop their learning for the subject “General Seminar” specific to the teaching profession in the third year. The subjects in the “subject group” are characterized by several practical factors while being linked organically based on a set theme.

Policy for setting "subject groups"

All “subject groups” of the modern task subjects are set under the policy that they must contain more than one of the following goals.

- To cultivate the understanding for various problems involving the earth, nations, and humans
- To cultivate the skill to deal flexibly with various problems in the rapidly changing modern society
- To cultivate the skill to plan and practice education conscious of the connection with the local community
- To cultivate rich human skill to respect human rights
- To foster internationally-minded people with understanding of different cultures and the idea of coexistence
- To cultivate the skill to find and solve problems by themselves
- To cultivate the communication skill to build rich human relations
- To cultivate the knowledge and the skill required in the age of information technology and internationalization (foreign languages, information processing, etc.)
- To understand the environment for problems facing modern children and schools and the skill to support them properly
- To cultivate the sense of responsibility and self-respect for the teaching profession
- To acquire the knowledge and the skill required for teaching children and students

These goals are set with the expectation of not only acquiring a secondary specialty, but also of widening the range as a human by studying the modern task subjects.

List of "subject groups" of modern task subjects

<table>
<thead>
<tr>
<th>Name of subject group</th>
<th>Keyword</th>
<th>Teachers to be fostered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special needs education</td>
<td>General education, normalization, society of coexistence</td>
<td>Foster teachers who understand the educational needs of children and students requiring special educational support, and are capable of teaching and responding to them properly for the realization of a society of coexistence.</td>
</tr>
<tr>
<td>Adaptation support education</td>
<td>Clinical education, counseling, mental health care, support for stopping bullying, school refusal, and misconduct, and learning support</td>
<td>Foster teachers who are capable of providing instruction and response by clinical approach in a situation where “adaptation” matters such as bullying, school refusal, misconduct, etc.</td>
</tr>
<tr>
<td>Multicultural understanding</td>
<td>International exchange, international cooperation, Japanese language teaching, foreigners in local community, language and culture</td>
<td>Foster teachers who are capable of properly supporting children having their roots in foreign countries and children returning from abroad, and are capable of planning and practicing comprehensive studies, exchange events, etc. for education for international understanding.</td>
</tr>
<tr>
<td>International culture</td>
<td>Western/international culture, art and culture, human rights and law, race and nation</td>
<td>Foster teachers who have the communication skill to deal with internationalization, and are capable of planning and practicing teaching for the understanding of different cultures.</td>
</tr>
<tr>
<td>Modern world</td>
<td>Sustainable development, local community, development and pollution, tradition and modernization</td>
<td>Foster teachers who are capable of looking at the rapidly changing modern world from various viewpoints, and are capable of teaching children and students properly.</td>
</tr>
<tr>
<td>Food/health education</td>
<td>Food education, school lunch, health education</td>
<td>Foster teachers who are prepared for education of food and health that give energy to live, and are capable of teaching children and students properly.</td>
</tr>
<tr>
<td>Environmental education</td>
<td>Local natural environment, field activities/learning, energy, environment of local community, research on social environment</td>
<td>Foster teachers who are capable of planning and practicing environmental education by experience mainly from the viewpoints of natural sciences and social sciences.</td>
</tr>
<tr>
<td>Art expression education</td>
<td>Art activities, expression activities, comprehensive planning and operation</td>
<td>Foster teachers who learn art expression through five senses namely with words, sounds, images, bodies, etc., and are capable of planning and practicing art activities by participation and expressions.</td>
</tr>
<tr>
<td>Media information education</td>
<td>Information society, website, database, network technology</td>
<td>Foster teachers who are capable of using various information processing methods and technologies, and are capable of making use of them for teaching subjects with judgment about their benefits and points to keep in mind.</td>
</tr>
<tr>
<td>Natural science</td>
<td>Modern science from the viewpoint of the history of science/mathematics, advanced science and mathematical science in everyday life</td>
<td>Foster teachers who are capable of looking at the trend of modern natural science from different angles, and are capable of teaching children and students properly also how to gather correct information and how to use it.</td>
</tr>
</tbody>
</table>
6 Idea of Campus Museum

The Aobayama campus of Miyagi University of Education is surrounded by Aobayama mountain overlooking Sendai city. Salamanders’ egg laying and Katakuri flowers herald the arrival of spring in a corner of the campus, and it is not unusual for wild animals such as Japanese antelopes to appear in this place. Greenery grows thick in summer, and the land is covered with snow in winter. Without going against such natural forces, it is hoped to create a campus applying the beauty and the forces of nature. With the campus museum, we work on developing teaching materials applying natural resources inside campus, and use them for our teacher training.

Display of plants as teaching materials

Masaaki Oka, Technical Education Course

In the campus, there is a display of various plants as teaching materials which appear in the textbooks of elementary schools and junior high schools. Flowers and crops are chosen every season from spring to summer and from autumn to spring of next year, and plants cultivated by students themselves from seeds are planted and maintained. Plants are cultivated beside the path from the main gate to the school buildings, so in this space, not only students of the classes related to cultivation but also many other students are able to observe every day the plants growing from small seedlings to flowers and bearing fruit, and to develop an eye for observing plants which will be helpful when they become teachers in the future. For cultivation ideas, there is cultivation in bags, buckets, and plastic bottles for schools with limited cultivation places, a display of plants grown by trellis cultivation, and cultivation for classes applying varieties (12 varieties of sunflower, 10 varieties of rice plant, etc.).

Aquatic life biotope area of MUE for ecosystem service learning

Arimune Munakata, and Naoko Settai, Science Education Course

In the neighborhood of the greenhouse of the biology classroom in the northwest of the campus, we are working on the construction of an area for learning about the waterfront ecosystem and the ecosystem service in Sendai. The biterling pond is a reproduction of a reservoir in Satoyama that was common in Sendai in the past, preserving and proliferating Akahire-taika that is a type of endangered biterling. This place promotes the learning about the ideas and benefits of the ecosystem service. Learning how to correctly preserve the natural environment for biterlings is expected through the observation and water change of the pond. With these activities, we aim at fostering leaders of the preservation activity of the natural environment.

The school biotope is also created at the site of affiliated kindergartens and schools in the Kamisuji campus in addition to the Aobayama campus. Through monitoring these biotope models, we are preparing a manual for maintaining low-maintenance school biotopes. We are also promoting the plan for spreading school biotopes to other schools around Sendai.

We are proposing the idea of a green gallery aiming at the expansion of nature and green lands (water source of rivers) from Aobayama where our university is situated to the center of Sendai by creating school biotopes in school yards in collaboration with elementary schools and junior high schools.

Butterfly Garden

Koji Mizota, Environmental Education Center

The Butterfly Garden is an effort to restore the local nature while creating a relaxing space by introducing beautiful butterflies to the campus. With the surrounding natural environment of Aobayama as its model, the Garden reproduces an environment full of variety such as edible grass for young worms, nectar plants for adult worms, waterfront, tree shade, etc., necessary for butterflies to survive. More than 60 types of butterflies are now visiting the Garden, and we can observe their living through four seasons. The Garden has also created a biotope pond using rainwater, a recycling box made of fallen leaves, and a bee hive for the observation of Japanese honey bees, providing a place where students hoping to become teachers can work on environmental learning every day.
Greater Sendai Area ESD Project

Takaaki Koganezawa, Chairman

Miyagi University of Education is in charge of the Secretariat of the Greater Sendai Area ESD Project which was acknowledged first in the world as one of the regional centers for promoting ESD (RCE) by United Nations University.

Background

In June 2005, the United Nations University RCE Promotion Committee was set up in Miyagi University of Education, and at the same time, the activities of the Greater Sendai Area with Miyagi University of Education as the axis of cooperation were acknowledged first in the world (Initial Seven) as one of the regional centers for promoting ESD (RCE) by United Nations University. The Greater Sendai Area was expanded from three areas and one university to four areas and one university in October 2008. To promote the regional cooperation without eliminating the characteristics of each area, it will be a challenge to develop common awareness of ESD by collaborative activities. The current regional cooperation of the Greater Sendai Area is a peaceful information exchange network where each area has one or two specialties. For the next several years, each area will introduce the know-how of their specialties to other areas, making ESD activities in each area comprehensive while considering the situation of each area.

Outline of activities

In the ESD activities of the Greater Sendai Area, the areas forming the Greater Sendai Area practice the following activities respectively, connecting mutually the efforts for ESD in each area.

1. Sendai City is conducting mainly environmental education/learning, aiming at a recycle-based society.
2. Kesennuma City is promoting the practice of classes of environmental education and education for international understanding in collaboration with elementary schools, junior high schools, and high schools.
3. The Osaki/Tajiri Area is promoting sustainable agriculture and environmental education in the Kabukuri wetlands registered as a wetland designated by the Ramsar Convention.
4. The Shiroishi/Shichikashuku Area is working on the preservation of Satoyama that is a water source area.
5. Miyagi University of Education has cooperated with the Graduate School of Environmental Studies Tohoku University concerning energy and environmental education since 2004. The achievements of advanced research conducted in the Graduate School of Environmental Studies Tohoku University are delivered widely to society through the MUE’s network of elementary schools, junior high schools, high schools, and municipalities, aiming at changing lifestyles for the realization of a sustainable society. The two universities have been working in cooperation for the realization of a locally-rooted ESD through the Interuniversity Network Supporting the UNESCO Associated Schools Project Network and the Greater Sendai Area ESD Project.

Miyagi University of Education serves to connect these four areas, and has also been promoting the research and development of education, teacher training, and the development of human resources to create a new sustainable society.

Main body and system for implementation

The Greater Sendai Area ESD is administered by the Steering Committee consisting of 26 committee members representing four areas and one university, Miyagi Prefecture, Sendai City, the Ministry of the Environment, United Nations University, companies, NPO, etc. Thirteen selected secretaries are in charge of organizing agenda, preparing documents, etc. for the Steering Committee. Each area has respective promotion committees, and in the Steering Committee held several times a year, representatives in each area report their activities.
## Footsteps of the Greater Sendai Area ESD Project

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>May</td>
<td>The collaboration with Kesennuma Board of Education was started focusing on Omose elementary school.</td>
</tr>
<tr>
<td>2003</td>
<td>April</td>
<td>The Sendai Igune Institute held the &quot;Tohoku Global Seminar&quot; with the aid of the Japan Fund for Global Environment.</td>
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<tr>
<td></td>
<td>November</td>
<td>The Omose Elementary School Project Collaboration Promotion Committee was organized.</td>
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<tr>
<td>2004</td>
<td>February</td>
<td>&quot;UNESCO/Japan and Asia-Pacific Environmental Education Research Seminar&quot; was held in Miyagi University of Education.</td>
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<tr>
<td></td>
<td>June</td>
<td>Hans van Ginneken, UNU Rector delivered a special lecture.</td>
</tr>
<tr>
<td></td>
<td>November</td>
<td>The City of Trees (Mori-no-Miyako) Citizens' Environmental Education Learning Promoting Forum (FEEL Sendai) was organized.</td>
</tr>
<tr>
<td></td>
<td>The Greater Sendai ESD/RCE Steering Committee was established.</td>
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<tr>
<td></td>
<td>(Miyagi University of Education was in charge of the secretariat.)</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>June</td>
<td>The United Nations University RCE Promotion Committee was established in Miyagi University of Education.</td>
</tr>
<tr>
<td></td>
<td>October</td>
<td>The Greater Sendai Area ESD Project - one university and three areas - (Miyagi University of Education, Sendai Area, Osaki/Tajiri Area, and Kesennuma Area) was acknowledged as an RCE (Initial Seven) by United Nations University.</td>
</tr>
<tr>
<td></td>
<td>October</td>
<td>Kabukuri wetlands in Tajiri-cho and the surrounding rice fields were registered as a wetland designated by the Ramsar Convention.</td>
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<tr>
<td>2006</td>
<td>March</td>
<td>Miyagi University of Education and Kesennuma Board of Education signed the &quot;Memorandum Concerning the Cooperation.&quot;</td>
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<tr>
<td></td>
<td>April</td>
<td>RCE international conference, optional tour (Greater Sendai Area RCE visit)</td>
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<tr>
<td></td>
<td>June</td>
<td>Selected as a model area of the &quot;UN DESD Promotion Activity&quot; of the Ministry of the Environment.</td>
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<tr>
<td></td>
<td>Co-hosted the Open Forum for Japan's DESD Plan of Asia Cooperation Talks.</td>
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<tr>
<td></td>
<td>December</td>
<td>The Everybody's Environmental Education Symposium was held (co-hosted by the Hitachi Environment Foundation).</td>
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<tr>
<td>2007</td>
<td>February</td>
<td>The Osaki/Tajiri RCE Promotion Committee was established.</td>
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<tr>
<td></td>
<td>March</td>
<td>The Greater Sendai ESD/RCE Steering Committee was held using the teleconference system.</td>
</tr>
<tr>
<td></td>
<td>April</td>
<td>The support of Miyagi University of Education with elementary schools, junior high schools, and high schools in Kesennuma was commended by the Texas state legislature.</td>
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<tr>
<td></td>
<td>October</td>
<td>Selected as a model area of the &quot;UN DESD Promotion Activity&quot; of the Ministry of the Environment.</td>
</tr>
<tr>
<td></td>
<td>October</td>
<td>The fourth meeting of the &quot;Greater Sendai Area ESD/RCE Expansion Mutual Learning Forum in Shichikashuku/Shiroishi&quot; was held.</td>
</tr>
<tr>
<td></td>
<td>November</td>
<td>The &quot;Sustainable Future Project in Sendai&quot; was held.</td>
</tr>
<tr>
<td>2008</td>
<td>January</td>
<td>The &quot;ESD Greater Sendai Area Mutual Learning Seminar in Kurihara&quot; was held.</td>
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<tr>
<td></td>
<td>February</td>
<td>The &quot;Asia ESD/RCE Youth Forum in Sendai&quot; was held.</td>
</tr>
<tr>
<td></td>
<td>October</td>
<td>The &quot;Shiroishi/Shichikashuku Area&quot; was admitted to the Greater Sendai Area by the Greater Sendai ESD/RCE Steering Committee. The Area was expanded to one university and four areas.</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>&quot;Keijima&quot; in Osaki City was registered as a wetland designated by the Ramsar Convention.</td>
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<tr>
<td></td>
<td>December</td>
<td>The Greater Sendai Area Regional Workshop was held.</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>The Environmental Forum Sendai 2008 was held.</td>
</tr>
<tr>
<td>2009</td>
<td>January</td>
<td>The Ramsar Festival 2009 was held.</td>
</tr>
<tr>
<td></td>
<td>February</td>
<td>The second meeting of the &quot;Asia ESD/RCE Youth Forum in Sendai&quot; was held.</td>
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<td></td>
<td>February</td>
<td>The Forum of Persons in Charge of Domestic RCE was held.</td>
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<tr>
<td></td>
<td>February</td>
<td>The &quot;ESD/UNESCO Associated Schools International Forum in Kesennuma 2009&quot; was held.</td>
</tr>
<tr>
<td></td>
<td>March</td>
<td>The ESD Meeting in Tohoku – Creation of Regions and Mutual Learning was held.</td>
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<tr>
<td></td>
<td>July</td>
<td>The first ESD/RCE Seminar was held.</td>
</tr>
<tr>
<td></td>
<td>October</td>
<td>The &quot;Education for Sustainable Development (ESD) and Delivery of Regional Information&quot; was held.</td>
</tr>
</tbody>
</table>
UNESCO Associated Schools Project Network (ASPnet)

Hiroshi Fujita, Tomonori Ichinose, Research Center for Education in International Understanding

The affiliated elementary school of Miyagi University of Education was acknowledged as the first UNESCO Associated School in Miyagi Prefecture in 2007, and the university itself was acknowledged as the second associated university in 2008.

For schools considering exchange with foreign countries

UNESCO (United Nations Educational, Scientific and Cultural Organization) famous for world heritage has a network called the UNESCO Associated Schools Project Network (ASPnet) with about 8,000 associated schools throughout the world. In Miyagi Prefecture, more than 20 elementary schools, junior high schools, and high schools have applied for ASPnet and been acknowledged as its members in the past year. Miyagi University of Education itself and its affiliated elementary school are members of ASPnet.

Miyagi University of Education gives advice for the preparation of application documents, and contents and implementation of exchanges mainly through the Research Center for Education in International Understanding and the Environmental Education Center.

What kind of exchanges will be possible?

In the present day, humans are facing a major challenge on sustainability starting with the environmental problems such as global warming, etc. The Japanese Government made a cabinet decision of the first Basic Promotion Plan for Education on July 1, 2008, indicating comprehensively and systematically the measures to be taken for the next five years. There, the "promotion of efforts for the education for the construction of a sustainable society" was quoted with the following description.

The government will develop widely educational activities on the importance of the education (ESD) for realizing a sustainable society where each one of us can live with a sense of security for the future while recognizing the limit of resources and energy on earth, environmental destruction, problems of poverty, etc. as our own problems. Simultaneously, the government will strengthen the collaboration with relevant ministries to work on the development of human resources for such education, and preparation and delivery of educational programs. Particularly, it will aim at and support the increase of UNESCO Associated Schools in the global school network of UNESCO leading ESD. It will also support the efforts for developing human resources for environmental efforts for the realization of a sustainable society in collaboration with universities, companies, NPOs, etc.

(Quoted from the Basic Promotion Plan for Education)

Under the theme of the "Education for Sustainable Development (ESD)", it is possible to practice "Think Globally" through the activities of the UNESCO Associated Schools Project Network.

Sendai, the first place in the world to start the UNESCO movement

Did you know that Sendai is the first place in the world where the UNESCO movement started? We are proud that the civilian UNESCO movement started in Sendai 61 years ago.

The system of UNESCO Associated Schools was started as ASPnet (Associated Schools Project Network) in 1953 for the implementation of the idea indicated in the UNESCO charter in schools.

Schools for preschool education to universities for teacher training have become members of ASPnet. In order to develop the contents and the methods of new education enabling young people to tackle global issues, they cooperate and exchange with other associated schools concerning their educational activities while making their own efforts in each associated school.

When the network was started, there were 33 associated schools in 15 countries. Now the number has been increased to 8,500 schools in 178 countries. In Japan, 92 kindergartens, elementary schools, junior high schools, high schools, and teacher training schools are members of the network as of September, 2009.

<table>
<thead>
<tr>
<th>Subjects of activities of UNESCO Associated Schools</th>
<th>( \text{ESD tasks in respective schools} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>International understanding, English communication</td>
<td>Submit an application form to the local Board of Education</td>
</tr>
<tr>
<td>Environmental education (local nature, water quality, biological diversity, cultivation, global warming, tree planting)</td>
<td>( \text{Promote the education for the construction of a sustainable society and its related activities} )</td>
</tr>
<tr>
<td>Food education (Organic farming, cultivation, slow food, food problem)</td>
<td>( \text{Increase the motivation for research and education} )</td>
</tr>
<tr>
<td>Disaster prevention education (Tsunami, earthquake, volcano)</td>
<td>( \text{Linkages between the affiliated school, universities, and companies} )</td>
</tr>
<tr>
<td>Special needs, welfare education</td>
<td>( \text{Learning by experience will cultivate children’s energy to live} )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Advantages</th>
<th>( \text{Improvement of academic performance} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning by experience will cultivate children’s energy to live</td>
<td>( \text{ESD} )</td>
</tr>
</tbody>
</table>

*Under the theme of the “Education for Sustainable Development (ESD)”, it is possible to practice “Think Globally” through the activities of the UNESCO Associated Schools Project Network.*
The UNESCO Associated Schools are a global network with 8,500 associated schools in the world.
- Schools from kindergartens to universities can join the network.
- Submit an application form to the local Board of Education for participation.

[Qualification]
Schools for preschool education, elementary schools, junior high schools, high schools, technical schools, vocational schools, and teacher training schools can join the UNESCO Associated Schools, whether public or private.

The regions take initiatives to tackle global tasks.
- Promote the education for sustainable development (ESD).

[Advantages]
Through school exchanges with overseas schools and domestic UNESCO Associated Schools, and discussion about global tasks in the regions:
1. The motivation for research and activities in all schools will be increased.
2. The motivation for learning, thinking skill, judging skill, and expression skill will be acquired.
3. Learning by experience will cultivate children’s energy to live.
4. The “improvement of academic performance” will be achieved through the entire learning process.

ESD tasks in respective schools
The schools in Miyagi Prefecture deal with about nine tasks as indicated in the following.

[Subjects of activities of UNESCO Associated Schools]
1. Environmental education (local nature, water quality, biological diversity, cultivation, global warming, tree planting)
2. International understanding, English communication
3. Disaster prevention education (Tsunami, earthquake, volcano)
4. Inheritance of culture and tradition
5. Special needs, welfare education
6. Food education (Organic farming, cultivation, slow food, food problem)
7. Local industry
8. Learning of human rights, peace, etc.

These activities may be included in the education (ESD) for building a sustainable future.

[What is ESD?]
The “United Nations Decade of Education for Sustainable Development” (decade from 2005 to 2014) is a campaign of the United Nations. It was proposed by the Japanese Government at the Johannesburg Summit (World Summit on Sustainable Development) held in South Africa in 2002. It is called “ESD” from the initial letters of Education for Sustainable Development.

ESD is the education to change the world and local communities that have become unsustainable because of global warming, wealth gap, violation of human rights, culture clash, etc. to sustainable ones, or the education to build the future of children.
ASPUnivNet (Interuniversity Network Supporting the UNESCO Associated Schools Project Network)

Miyagi University of Education has proposed and organized the interuniversity network supporting the UNESCO Associated Schools Project Network to support domestic UNESCO Associated Schools and schools considering application.

What is the Interuniversity Network Supporting the UNESCO Associated Schools Project Network?
The activity of UNESCO Associated Schools has a long history since it was started as ASPnet (Associated Schools Project Network) in 1953 to practice the ideas indicated in the UNESCO charter in schools.
Partly because Sendai is the origin of civilian UNESCO activities in the world, the application for ASPnet in the region increased rapidly mainly in Kesennuma City after the "Education for International Understanding Symposium" was held in Miyagi University of Education in Sendai in 2007. The driving force was the university's support for application in addition to the university's cooperation in school education.
In November 2008, the "Gathering of UNESCO Associated Schools" was held. The people concerned of the universities considering the support for UNESCO Associated Schools gathered together to discuss the construction of the interuniversity network.
From December 2 to 5 of the same year, the "ESD International Forum 2008" (hosted by MEXT, Japanese National Commission for UNESCO, United Nations Educational, Scientific and Cultural Organization (UNESCO), and co-hosted by United Nations University, Asia-Pacific Cultural Centre for UNESCO, Miyagi University of Education) was held in United Nations University in Tokyo, where the start of the Interuniversity Network Supporting the UNESCO Associated Schools Project Network (ASPUnivNet) was announced officially both at home and abroad.

Then eight universities participated in the network, and now eleven universities are the members of the network.

What ASPUnivNet can do?

There are higher education facilities capable of supporting ASPnet beyond the boundaries of faculties and postgraduate schools such as environmental studies, agricultural sciences, engineering, etc. The higher education facilities including universities are capable of providing high-quality educational resources concerning ESD. The network of such universities hoping to provide educational resources to UNESCO Associated Schools is the Interuniversity Network Supporting the UNESCO Associated Schools Project Network (ASPUnivNet).

The activities of ASPUnivNet differ depending on the regions. However, the following activities are possible:

1. Help schools become UNESCO Associated Schools.
2. Provide intellectual resources owned by universities to the activities of UNESCO Associated Schools.
3. Support networking with UNESCO Associated Schools at home and abroad.
4. Promote the collaboration with local educational facilities and UNESCO Associated Schools.
ProSPER.Net

Miyagi University of Education signed the guideline and the agreement in the June meeting of ProSPER.Net held in Hokkaido University on June 21, 2008 to become its official member.

ProSPER.Net is an academic network of the education for sustainable development.

ProSPER.Net (Promotion of Sustainability in Postgraduate Education and Research) is a network of higher education facilities representing the Asia-Pacific region, consisting of universities in the Asia-Pacific region that have promised joint efforts for integrating sustainable development (SD) into lectures and curriculums of graduate schools. The member facilities are focusing on the educational research program in the field of sustainable development and other related fields. The academic research alliance of ProSPER.Net is one of the activities of the ESD program promoting specialized curriculums while deepening understanding of the education for sustainable development (ESD) and SD in graduate schools. The foundation of the network and joint activities are currently supported financially by the Ministry of the Environment.

Qualification for participation

The members of ProSPER.Net must be educational research facilities that have graduate schools in the Asia-Pacific region and conduct research and education concerning the sustainable development (SD) and the education for sustainable development (ESD) in graduate schools.

Purpose

UNU-IAS founded the network in the Asian region for the collaboration with advanced research facilities (graduate schools plus international research facilities) as a measure for promoting the education for sustainable development (ESD). When the collaboration network was started, it was organized by universities promoting ESD in the Asian region and universities acknowledged as RCE or regional centers of ESD. Now it will add other universities hoping to join the network. At the moment, the network proposes the following three program development projects.

1 Development of the human resources development program to promote ESD (for postgraduates and undergraduates)
2 Development of the program of business schools to promote ESD (for adults)
3 Development of the program of governance (administration) to promote ESD

Members

(The underlined universities play an important role also in the regional center of ESD (RCE) acknowledged by United Nations University.)

- RMIT University
- Tongji University
- TERI University
- Universitas Gadjah Mada
- Hokkaido University
- Iwate University
- Miyagi University of Education
- Nagoya University
- Okayama University
- Rikkyo University
- Shinshu University
- The University of Tokyo
- Universiti Sains Malaysia
- University of the Philippines
- Yonsei University
- Chulalongkorn University
- The University of the South Pacific
- Asian Institute of Technology
International Cooperation Initiative in Japan and Educational Support for Overseas Education Cooperators in the Field of Environmental Education

Takashi Muramatsu, Environmental Education Center

Miyagi University of Education started the international cooperation initiative activity in the field of environmental education as an activity commissioned by the MEXT in 2003. This is an activity to strengthen the educational support for Japanese cooperators by using knowledge and experience in the education and research in universities in order to promote the educational cooperation in developing countries. When the activity was commissioned, the environmental education in Japan was still considered as a field with scant experience in overseas cooperation, so there was little effective educational support for developing countries. However, the importance of the field of environmental education was recognized in the "Education for Sustainable Development (ESD)" proposed by Japan, and we organized knowledge and methods of the Japanese environmental education to construct databases of environmental education practices and various teaching materials and deliver them to overseas education cooperators. Since 2006, the support target has been narrowed down to JOCV teachers dispatched overseas, and the activity of the formation of centers cooperating in international cooperation initiative education called "Education Practice Guidance for Overseas Education Cooperators and Maintenance of Educational Materials" has been promoted in order to support the activities of cooperation staff in developing countries.

JOCV teachers dispatched overseas have a variety of different jobs such as elementary school teachers, science and mathematics teachers, preschool education, health services, etc., and various activities such as school education, education of leaders, education for residents, etc. have been developed in each job. Because of its originally cross-curricular characteristics, the environmental education helps basic and advanced educational activities (school education, education outside school, social education, etc.) of many JOCV staff, and the application of the environmental education materials provided by our university has been widening its range gradually in every JOCV job.

The purpose of the international cooperation initiative of Miyagi University of Education is to improve the quality of Japanese cooperators in the field of environmental education (cross-curricular field), and to establish an international cooperation model (support model) for improving practical skills. For this purpose, we are currently discussing the training support for JOCV staff before being dispatched, the support for solving educational tasks for the currently dispatched JOCV staff, the method for applying the overseas educational experience of JOCV staff in Japanese schools after they return home, etc. For example, we have been developing "JOCV Inhibition/Contribution Simulation Teaching Materials" for planning the contribution activity by analyzing inhibition in workshops of teaching materials and cooperation activities in their destination countries, "Picture-Story Show" aiming at educational practices in their destination countries, "Collection of Educational Clip Arts" to support JOCV staff for the development of teaching materials, etc. For the application of their overseas education experience, the "International Cooperation Initiative Seminar" (in 2007 and 2008) was held. This was a meeting co-hosted with the Sendai Board of Education and JICA Tohoku for discussing the application of overseas education experience of JOCV staff, and details were discussed through a model class of JOCV staff with experience, special lectures of the people concerned, panel discussions, etc. The overseas cooperation by Japanese educators has an important role not only in spreading ESD in overseas countries, but also in further deepening and establishing ESD in the Japanese school education by the overseas education experience of teachers. So, the support for teachers with experience of overseas volunteer activities has been increasingly important.

Formation of ESD International Cooperation Model Applying University Intelligence
"ESD International Symposium"

The "Education for Sustainable Development (ESD)" is one of the urgent tasks including environmental problems. Implementing ESD while cultivating a global viewpoint in international cooperation will bring about many effects not only in partner countries, but also in domestic schools. However, even with the "Decade of Education for Sustainable Development (DESDE)" about to pass the first half period, the word ESD has not gained recognition not only in foreign countries but also in domestic schools, and educational practices are insufficient. In the symposium, we reconfirmed the past achievements of Japan such as the fostering of teachers with a viewpoint of ESD, the support for schools, etc., and also learned the current situation of developing countries to discuss what kind of international cooperation is possible for promoting ESD globally including the application of the networks of JICA, UNESCO, United Nations University, etc. In this booklet, the contents of the keynote speech of Tetsuo Tamura, Chairman of the Japanese National Commission for UNESCO are included. We hope that you will read them.

Keynote speech "Ideal Method of Teacher Training and International Cooperation"
Tetsuo Tamura, Chairman of the Japanese National Commission for UNESCO
International Cooperation Initiative II
Construction of ESD Pilot Material Using Zoo in Madagascar

Chiemi Saito, Environmental Education Center

Miyagi University of Education has been tackling the international initiative activity in the field of ESD under commission of the MEXT based on the collaboration with Sendai Yagiyama Zoological Park. In the activity, we have been working on the development of the ESD model in a particular country or Madagascar in Africa.

Background of activity
Miyagi University of Education signed a cooperation pact with Sendai Yagiyama Zoological Park in 2007, and since then, we have been making joint efforts for the research and the educational practices on environmental education and biological diversity education. As a part of the collaboration activities, we have been working on technical training and human resources development since 2008 by holding the "Environmental Education Practice Program concerning Preservation of Natural Environment" that is the JICA grass-roots technical cooperation activity to support zoo education in Madagascar. In this activity, we provide the training for the staff of Tsimbazaza Zoo in Madagascar as educational leaders.

The reason why Miyagi University of Education started the support for Madagascar is as follows: Madagascar, an island in the Indian Ocean on the east side of the African Continent, is one of the countries having the highest biological diversity in the world as well as considerable challenges for social development because of soaring population and continuing forest destruction.

The skill to understand and make use of the value of nature on this island is necessary for children in Madagascar. However, the school education in Madagascar is undergoing reform, and children do not have sufficient opportunities. Sendai Yagiyama Zoological Park contributes to the preservation of wild animals in Madagascar continuously through continued technical exchanges among zoos.

Meanwhile, our university can support the transfer of education methods and the model development by using the past activities mainly of the Environmental Education Center, and the experience and the accumulation of research in Madagascar. Our efforts for the support in the field of ESD by sharing roles and collaborating with Yagiyama Zoological Park have been expanding by a mutual synergy effect.

International cooperation initiative
In the activity of the formation of educational cooperation centers of the "International Cooperation Initiative" in 2009, we started the ESD model development under the title of "Construction of ESD Pilot Material in Madagascar Using Zoo" as an effort for spreading ESD in Madagascar. We have developed the ESD model program through the zoo education, and have repeated practices in Tsimbazaza Zoo. We hope to execute the proposal contributing to the construction of the ESD model in Madagascar while applying its achievements at home.

The team for the activity consists of teachers of our university mainly from the Environmental Education Center, teachers of affiliated elementary schools, students of graduate schools for the teaching profession, and also the staff of Yagiyama Zoological Park. For the development of the program, we have held discussions and workshops with the members of the Environmental Preservation Education Department of Tsimbazaza Zoo in Madagascar while utilizing the experience in Japan.

Cooperation with JICA activities
The model program developed in this way may be utilized in the technical training conducted by the JICA grass-roots technical cooperation activity. Conversely, in the process of the model program development, we make the most of the technical experience of the JICA JOCV staff dispatched in Madagascar.

Application of the education in Japan
Our wish is that our educational support in Madagascar is rewarding also for the teacher training in Japan. We plan not only to release a part of the program to schools in Japan as our achievements, but also to prepare ESD teaching materials applying the achievements of activities and display them in the Visitor Center of Yagiyama Zoological Park (to be opened at the end of 2008).

In the process of the model development, we have invited the staff of Tsimbazaza Zoo, realizing the activity of exchanges with Japanese schools and mutual learning in the education of university faculties and graduate schools.
ESD activity with collaborative organizations

Sendai Board of Education

Miyagi University of Education and Sendai Board of Education signed the "Memorandum concerning the Cooperation" on March 27, 2002 to deal properly with the improvement of qualifications and abilities of teachers and educational tasks. We have cooperated with the Sendai Board of Education in various aspects, out of which the Children Environmental Practice Forum was held jointly on Wednesday, December 4, 2002 as a part of the "International Environmental Education Symposium 2002." Since then, several teachers from our university have cooperated as advisers in the "Children Environmental Practice Workshop" every year.

Miyagi Board of Education

Miyagi University of Education and Miyagi Board of Education signed the "Memorandum concerning the Cooperation" on March 28, 2002 to deal properly with the improvement of qualifications and abilities of teachers and educational tasks. Miyagi University of Education, Sendai Board of Education, and Miyagi Board of Education established the "Cooperation Promotion Committee" on May 16, 2002 for understanding and verification of the cooperation situation, liaison and coordination, and exchange of opinions. Since 1974 (Showa 49), Miyagi University of Education has held the "In-Service Training Seminar," providing an opportunity of voluntary training for local teachers ahead of other universities in Japan, and continuing the activity for over thirty years to date. Furthermore, we held the "School Support Seminar" to improve the abilities of teachers for educational guidance, class management, teaching study, training in school, and English education, etc. as a joint activity with Miyagi Board of Education and Sendai Board of Education also this year.
**Kesennuma Board of Education**

In 2002, Miyagi University of Education started collaboration with the Kesennuma Board of Education centering on the support for the development of the international environmental learning program of Omose elementary school, and since then, it has worked steadily by co-hosting the UNESCO International Seminar, holding the Satellite Training Seminar, etc.

In March 2006, the university signed the “Memorandum concerning the Cooperation” as the first non-board of education to further strengthen the cooperation. Based on this, it has developed pioneering ESD efforts in Kesennuma City and an organized support for improving academic performance focusing on designated schools. Particularly as for ESD, it is highly evaluated in the world by being acknowledged as one of the regional centers of ESD (RCE) by United Nations University in 2005, commended by the Texas state legislature in 2007, and introduced as one of the excellent examples in the ESD World Conference (Germany) in 2009.

In February, 2009, the ESD/UNESCO Associated Schools International Forum in Kesennuma was co-hosted, and in April, Kesennuma City/ Miyagi University of Education Collaboration Center was established as a foothold for collaboration.

**Iwanuma Board of Education**

Miyagi University of Education exchanged the “Memorandum concerning the Cooperation” with Iwanuma Board of Education on May 10, 2006.

Partly because the city mayor and the superintendent of education had both graduated from our university in addition to the building-up of work of the development of teaching materials concerning environmental education and the collaboration concerning special needs education, the Memorandum was exchanged for further strengthening the collaboration and collaborating systematically.

Since 2007, the students of Miyagi University of Education have been dispatched to the U.S. for the “Iwanuma Students Overseas Activity/Junior High School Students Visit to Dover City, Delaware,” supporting the training in the U.S. for junior high school students in Iwanuma City.

Furthermore, the seventh Tohoku Session of the UNU Global Seminar was held in Greenpia Iwanuma in Iwanuma City from September 20 to 23, 2008. On the final day, Iwanuma City projected the Tree Planting Commemorating the Visit to Iwanuma (Theme: See you again under this tree), planting seven walnut trees for seven participant countries.
**Tome City**

Miyagi University of Education signed the "Cooperation Pact concerning the Environmental Education" with Tome City, Miyagi Prefecture on March 27, 2007, and started the "Tome Environmental Educators Workshop" for school staff and citizens. In 2008, this training was developed into the "Tome Environmental Education Step-Up Seminar" (three times in total), promoting the education for modern environmental tasks. Furthermore, as an environmental education support activity for schools, the delivery education focusing on the theme of forests and water in Tome was held for children and students in Yokoyama Elementary School (June), Takarae elementary school (October), Ishikoshi Elementary School (July), and Toyosato elementary and junior high school (October).

With the deepening awareness of environmental preservation of Tome citizens, the "Environmental Education Step-Up Seminar" for education was changed to the "Environmental Education Leaders Training Seminar" for solving tasks by citizens in 2009, realizing the full-year systemic training of leaders. In this way, our university has major achievements in planning the promotion of the local preservation.

**Sendai City (Yagiyama Zoological Park)**

Miyagi University of Education exchanged the memorandum of cooperation concerning the environmental education with Yagiyama Zoological Park on September 4, 2007. Miyagi University of Education is currently making joint efforts on educational practices in Yagiyama Zoological Park and the development of teaching materials. Since 2008, the university has cooperated with the JICA grass-roots technical cooperation activity by Sendai City to foster environmental education leaders in Tsimbazaza Zoo in Madagascar while collaborating with the "environmental education" that is one of the modern task subject groups in the undergraduate education.

**Kurihara Board of Education**

Miyagi University of Education exchanged the memorandum concerning the cooperation with the Kurihara Board of Education on February 4, 2008. The university has exchanged the memorandum with six organizations.

It has dispatched teachers and foreign students to several elementary schools in the Kurihara City/Kurihara region for the "English Education Activity in Elementary Schools" for two years since 2008, supporting international exchange activities.

In the future, we will collaborate mutually in the English activity in elementary schools, the support for improving academic performance, the environmental learning at Izu-numa which is registered as a marsh designated by the Ramsar Convention, "Kurihara School" where students of Miyagi University of Education help elementary and middle school pupils study by themselves, etc. to contribute to the enhancement and the improvement of education in Kurihara City.
Miyagi University of Education exchanged the "Memorandum concerning the cooperation" with Sendai Astronomical Observatory on July 1, 2009. This is the eighth exchange after the exchanges with five boards of education, one city, and one social educational facility including Miyagi Board of Education and Sendai Board of Education since 2002. Miyagi University of Education and Sendai Astronomical Observatory have already enhanced collaborative activities such as volunteering of students, seminars, etc. in the field of science and mathematics education. In the Memorandum, both parties agreed to further strengthen systematic collaboration and strengthen our collaboration in every educational field starting with the field of science and mathematics.

On the day of the exchange of the Memorandum, Kosuke Takahashi, President of Miyagi University of Education visited Sendai Astronomical Observatory, and signed and exchanged the Memorandum with Makoto Tosa, Head of the Astronomical Observatory while staff looked on. In addition to the past activities, the laboratory classroom on the universe titled "Space Laboratory in Sendai Astronomical Observatory" will be held every month from September, and the lobby concert by art teachers will also be held. It is expected not only to prevent students from moving away from science, but also to produce results about the ideal method of local/social contribution by higher education facilities.

Miyagi University of Education exchanged the "Memorandum concerning the Cooperation" with Kahoku Shimpo Newspaper on November 5, 2009. This is the ninth exchange after the exchanges with five boards of education, one city, and two social educational facilities including the Miyagi Board of Education and Sendai Board of Education since 2002. This is intended to contribute to the enhancement and the development of education and local communities in Miyagi Prefecture and the Tohoku region, through research and discussion in mutual collaboration and putting into practice and applying the results to deal with the development of local communities and educational tasks by using functions and resources owned by both parties.

As a concrete measure, we will study jointly about the practice of classes using newspapers in kindergartens, elementary schools, junior high schools, and schools (kindergartens) for special needs education, and the development of teaching materials and classes based on the new guidelines for teaching.

On that day, Kosuke Takahashi, President of Miyagi University of Education and Masahiko Ichiriki, President of Kahoku Shimpo Newspaper signed and exchanged the Memorandum while staff looked on. In commemoration of this event, the workshop "Making Newspapers" and the seminar "Making Class Newsletters and How to Use Newspapers" will be held in the festival of Miyagi University of Education as the first collaborative project from November 14 and 15.