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Challenges of UNESCO ASPnet: a Comparative View between the Baltic Sea Project and Japanese ASPnet

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I. Introduction

The United Nations Decade of Education for Sustainable Development (UNDESD, 2005-2014) provides many opportunities both for innovative and traditional educational approaches. UNESCO aims to promote peace in the world by international cooperation in education, science, culture, and communication. One of the specific school movements is the UNESCO Associated School Project network (ASPnet) which was set in 1953. The Japanese government promotes UNDESD and ASPnet today.

The Baltic Sea Project (BSP) started as an international initiative across countries in the Baltic Sea region in 1989. It becomes a part of ASPnet now and its activities last for about 30 years. The most unique points in the BSP were that young science teachers themselves started the project toward severe environmental pollution of the Baltic Sea in the age of ideological Cold War [1], their students can directly participate in the project, its coordinators and teachers always overcame many difficulties by devoted commitments to the international BSP activities, and it integrated environment education and intercultural learning and influenced many school projects around the world [2].

The ASPnet Action Strategy and Plan (2004-2009) shows four pillars of learning in 21st century [3] and EFA should improve the quality education and teachers and children in ASPnet schools could cooperate to create innovative educational approach and learning materials globally and locally. One of the largest advantages of the ASPnet is networking which brings many learning opportunities at local, national, international and regional level.

This article introduces the ASPnet in Japan and BSP, illustrates some

comparative points between ASPnet and BSP, based on the results of our surveys, and summarizes discussion points and implications for the future of the school network.

What is ASPnet?

The UNESCO Associated Schools Project Network (ASPnet) works in support of peace and international cooperation to achieve the ideals set forth in the UNESCO Charter. More than 9,000 educational institutions in 180 member states are participating in the ASPnet in the world.

ASPnet in Japan

The information about UNESCO ASPnet in Japan is shown in its official web site[4]. MEXT (Ministry of Education, Culture, Sports, Science and Technology) and JNCU (the Japanese National Commission for UNESCO) regard the ASPnet as the central front for the promotion of ESD (Education for Sustainable Development). Its objectives are:

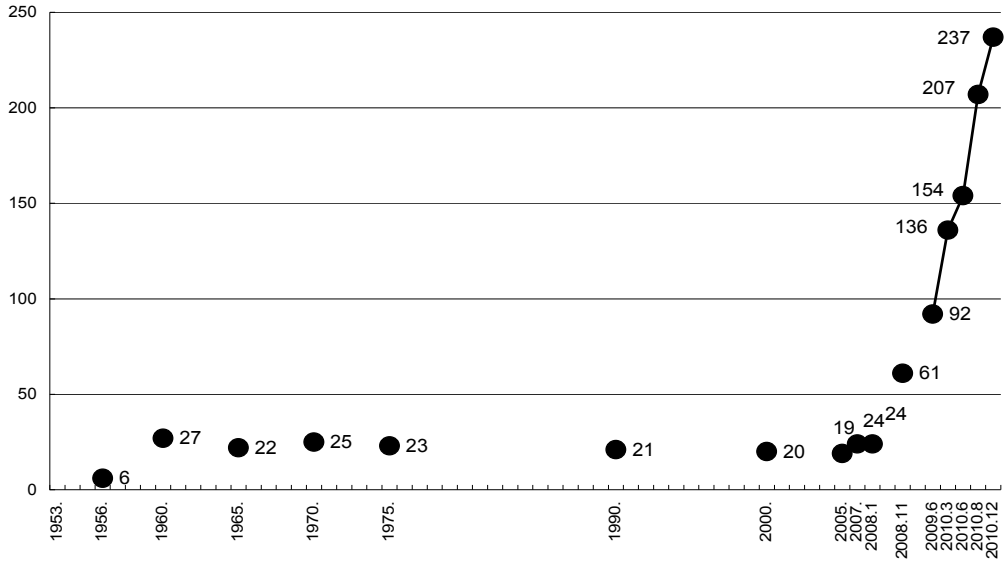
- To share information and experiences with students and teachers of other schools around the world, and
- To develop and refine educational materials and methods to cultivate young people to deal with various global issues.

There are 369 member institutions/schools from preschool, primary, secondary and higher education schools[5] across Japan as of February 2012. Many of member schools are practicing ESD through the education of Culture, Disaster Prevention, Energy, Environment, Food, Human Rights, International Understanding and so forth. And they are developing unique learning activities with roots in the local culture and society. There are 4 universities are participating in ASPnet in Japan. Additionally 13 universities are affiliated with the ASPUnivNet (Interuniversity Network Supporting the UNESCO Associated School Project Network). In 2008 the ASPUnivNet was established to support members of ASPnet with their efforts to promote ESD. The ASPUnivNet consists of both undergraduate and graduate schools to provide excellent ESD instructional materials and resources. It is expected that closer collaboration between universities and schools will translate into even better curricula at domestic ASPnet. Japanese corporations, for example P&G Japan, NIPPON EXPRESS and SOMPO JAPAN are actively supporting the ASPnet. The Bank of Tokyo-Mitsubishi UFJ, Ltd., has just begun providing financial

assistance.

Within the formal school framework, leading schools are identified as UNESCO Associated School Network (ASPnet) by MEXT in Japan. Their learning activities focus more on ESD than others, so MEXT is willing to enhance the network. The number of ASPnet schools has been rapidly growing (Fig. 1), especially after 2008, because that was the year that MEXT set ASPnet schools to generate ESD[6]. The Japanese National Commission for UNESCO located in MEXT expects the number of ASPnet schools to increase to 500 to become the local centers for ESD school practice in 47 prefectures in Japan before the end of the UNDESD which the Japanese National Government promoted from the beginning, in 2014. The number is still increasing and becomes 369 in February 2012[7].

Fig. 1. Number of ASPnet Schools in Japan[8]



What is the BSP?

According to its web site[9], the Baltic Sea Project characterizes the followings:

- The Baltic Sea Project is an international network among schools for a better environment in the Baltic catchment area.
- The countries bordering on the Baltic share many environmental problems, one of which is the pollution of the Baltic Sea.
- These problems can only be solved by cooperation among those countries, which have different languages, cultures, habits, traditions and technical standards.
- In attempting to solve the environmental problems, education is one of the key

factors.

- The Baltic Sea Project (BSP) has therefore initiated cooperation among schools in all the countries around the Baltic.
- Today, some 200 schools are active in the BSP. Most are secondary schools situated on the Baltic coast, but the number of inland schools from the entire catchment area is increasing.

In many schools, the BSP has been organized as a joint effort including many subjects. The objectives of the BSP are:

- To increase the awareness of the students about the environmental problems in the Baltic Sea area and to give them an understanding of the scientific, social and cultural aspects of the interdependence between man and nature.
- To develop the ability of the students to study changes in the environment.
- To encourage students to participate in developing a sustainable future.

The BSP sets up a network of schools and other educational institutions, creates and develops educational approaches and joint programmes for environmental and international education, organizes joint activities and events and publishes the BSP newsletter and other relevant information, including Learners' Guides which provide thematic educational approach to the participating schools and teachers. As educational approach, BSP achieves a balance between a holistic view and individual subject studies, changes the role of the student from passive recipient to active constructor, changes the role of the teacher from supervisor to guide in a learning process, uses networks to provide participants with opportunities to learn and pass along new ideas, and uses international cooperation as an inherent element of school work. Schools in different countries have contacts through correspondence, exchanging exhibits and videos, by visits etc. During these visits the students usually study a local environmental problem together.

II. Results: Profiles of the BSP and Japanese ASPnet

The 30 out of total 40 registered BSP participants[10] cooperated to respond the questionnaire once within the teacher's training program of learner's guide "Urban Ecology" held in Denmark between 27 and 30 October 2010. Some parts of this questionnaire were the same as the Japanese ones. In Japan, the 48 out of about 200

(As of April 2010) ASPnet schools participated in this one-year programs[11]. The schools answered the questionnaires twice: before each school's project started as the application form and after it was completed as the project report. This section introduces the profile to compare the participants in the BSP and Japanese ASP.

Fig. B-1 and J-1 show the participants' profile. More women took part into this BSP course and more men in the Japanese program. The age group in BSP seemed more balanced than the Japanese ASPnet in this survey (see also Fig. B-2 & J-2).

Fig. B-1: BSP Participants (n=30)

Sex	
Male	9
Female	21
Total	30

Age	
20s	5
30s	7
40s	4
50s	9
60s	5
Total	30

Country	
Denmark	10
Lithuania	7
Poland	4
Estonia	4
Latvia	2
Russia	1
Finland	1
Germany	1
Total	30

Fig. J-1: Japanese ASP Participants (n=48)

Sex	
Male	36
Female	12
Total	48

Age	
20s	1
30s	11
40s	16
50s	17
NA	3
Total	48

Responses to the question about teaching experience are shown by Fig. B-2 and J-2. The number of BSP teachers was 12 who had experiences less than 10 years (34%), eight teachers from 10 to 19 years (27%), six from 20 to 29 years (23%), three less than 40 (13%) and one with 40 years or more (3%). This was well balanced because rich experienced teachers could transfer their knowledge and lessons to the younger teachers. However, meantime, their discussions would have been less deepened between the two because of different experience levels.

Fig. J-2 shows the experience of Japanese teachers in this survey. The six teachers had experience up to 9 years (13%), 10 teachers with 10 to 19 years (21%), 22 with 20 to 29 years (45%), and six with 30 years or more (13%). The Japanese school environment encourages new teachers to obtain general skills of teaching in classroom before innovative methods or approaches. There are official teacher training course for those who is new and have taught for 10 years. It is understandable that the experienced teachers were committed with this ASPnet program because ESD is likely interpreted as a new approach by official side and school heads.

Fig. B-2: Age and Teaching Experience of BSP Teachers (n=30)

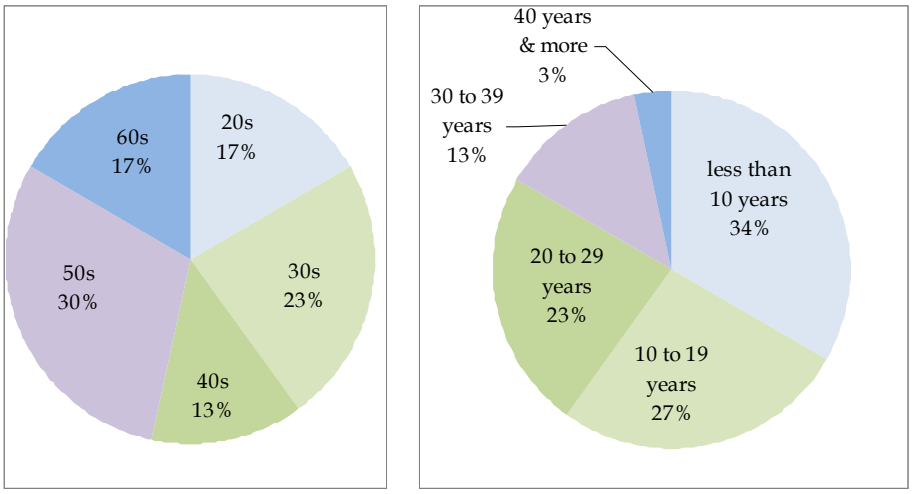
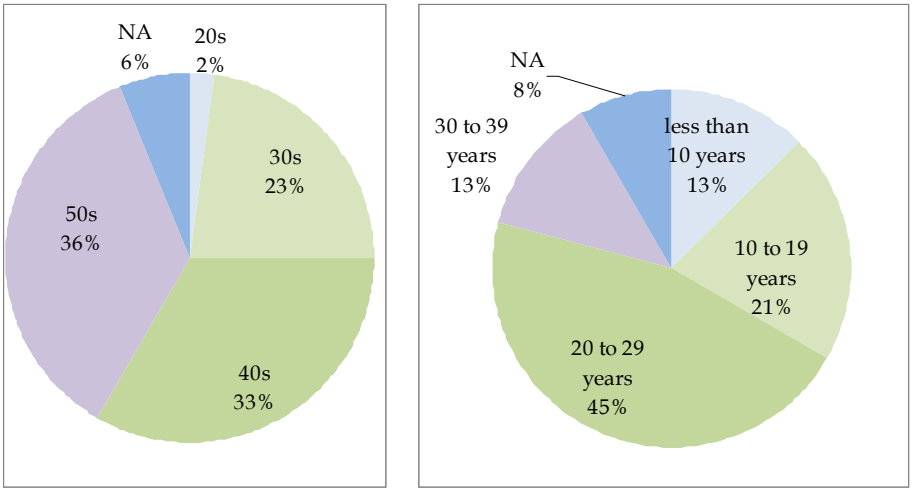


Fig. J-2: Age and Teaching Experience of J-ASP Participants (n=48)



Teaching subjects of the teachers are shown in Fig. B-3 and J-3. This multiple-choice

question was a good contrast between the BSP and the Japanese ASPnet. The BSP teachers teach science and related subjects in addition to English (Fig. B-3). On the other hand, English and Social Study were common among the Japanese teachers in this program (Fig. J-3). The period of Integrated Study has been introduced since 2002 across the country as a new subject which deals with various and cross-cutting topics. Extra activity includes school trip and exploratory activities over the national curriculum in Japan. We can say that the Japanese teachers try to perform the ESD activities and lessons in all the subjects.

Fig. B-3: Teaching Subject, BSP (n=30)

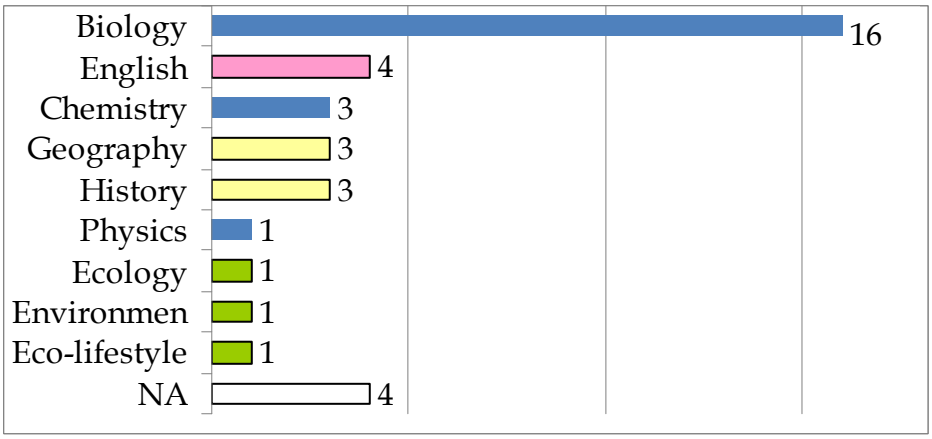
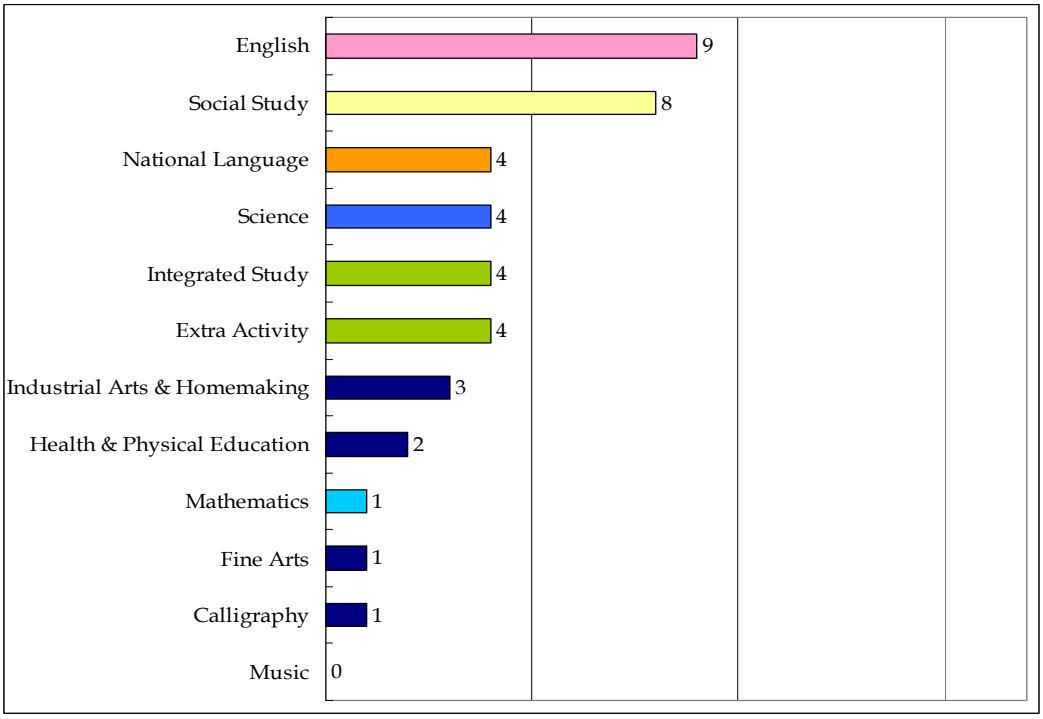
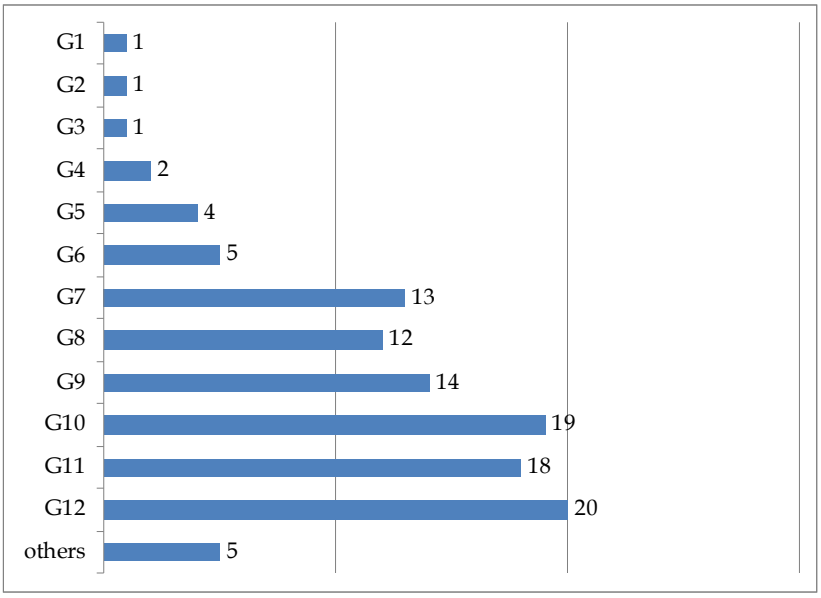


Fig. J-3: Teaching Subject, ASP (n=28)[1 2]



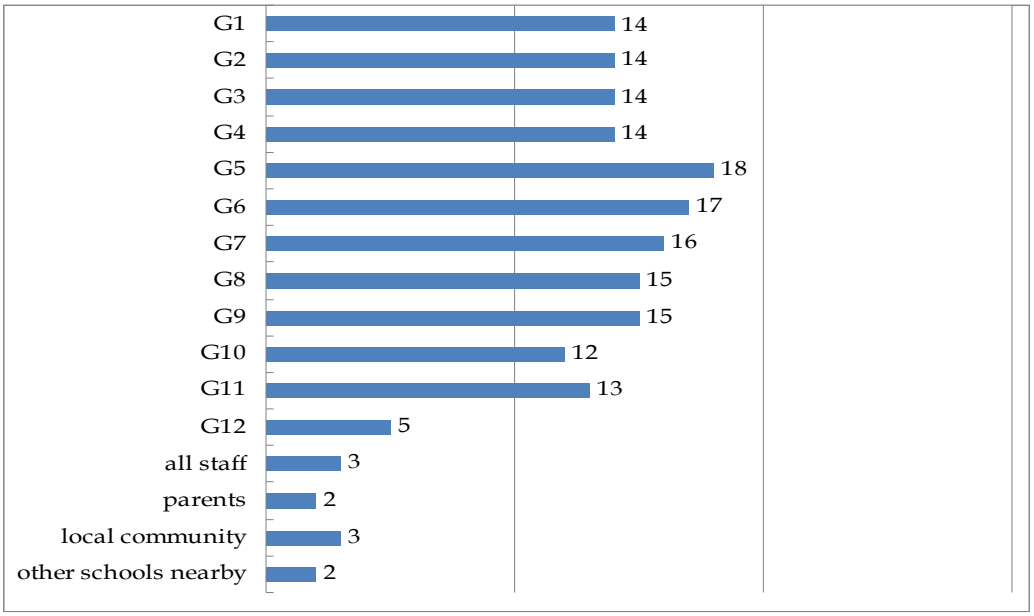
Teaching grades also shows the contrast between BSP (Fig. B-4) and ASP (Fig. J-4). Because the BSP teachers and students need to communicate in an international language or English, upper secondary schools seemed to be the main participating school level.

Fig. B-4: Teaching Grades, BSP (n=30)



And meanwhile, 20 out of 48 participating Japanese schools in this program were primary level, and the rest were secondary level. This Japanese question asked, however, about the target grades and groups in their projects, and thus, total figure for a certain grade was not always the same number of the school.

Fig. J-4: Target Grades/Groups, ASP (n=48)



III. Results in the BSP

The results from the BSP course are firstly reviewed in this section before the Japanese ASPnet in the next one. Fig. B-5 shows the past participation to the Learner's Guide teacher training course. The six teachers out of 30 had never participated in the BSP course before. The highest portion was those who came in the course five times and more. The main purpose of participation was asked by multiple choices and shown in Fig. B-6. Many wanted to obtain inspiration and to communicate with other teachers. Nine teachers wanted to develop their teaching profession.

Fig. B-5: Past Participation

Past participation	
Never	6
once	2
2 to 4	9
5 or more	13
Total	30

Fig. B-6: Purpose of Participation

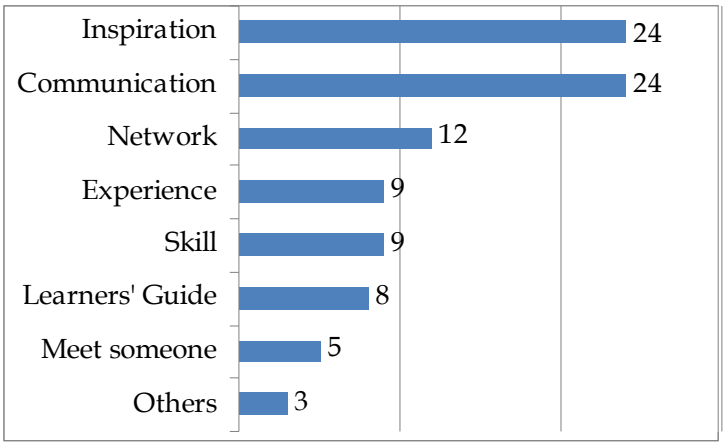
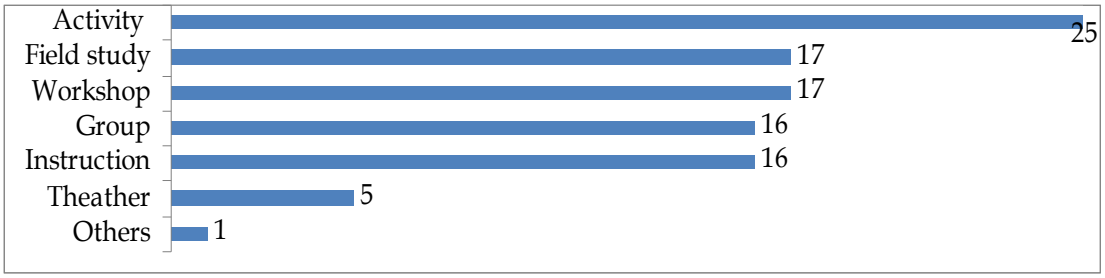


Fig. B-7: shows the important teaching methods/approaches. The most common was student's activity, followed by field work and workshop style. Group activity and instruction style were the same rate.

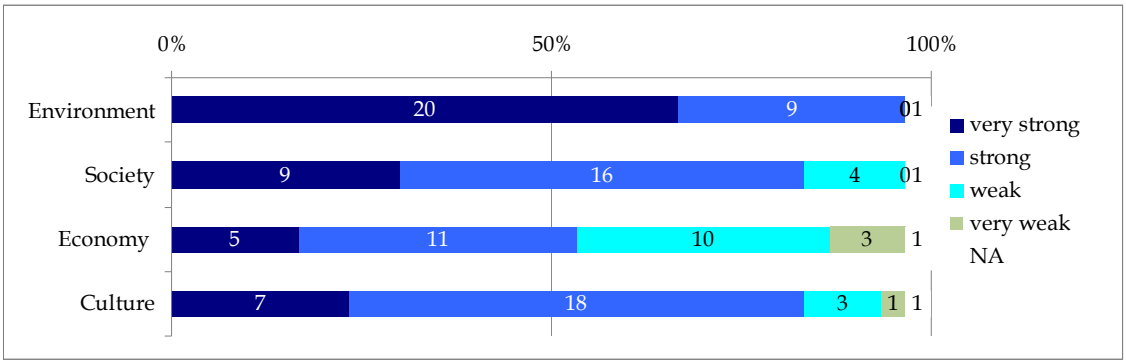
Fig. B-7: Important Methods of Teaching



The questionnaire asked how strong teachers are conscious about multi-dimension

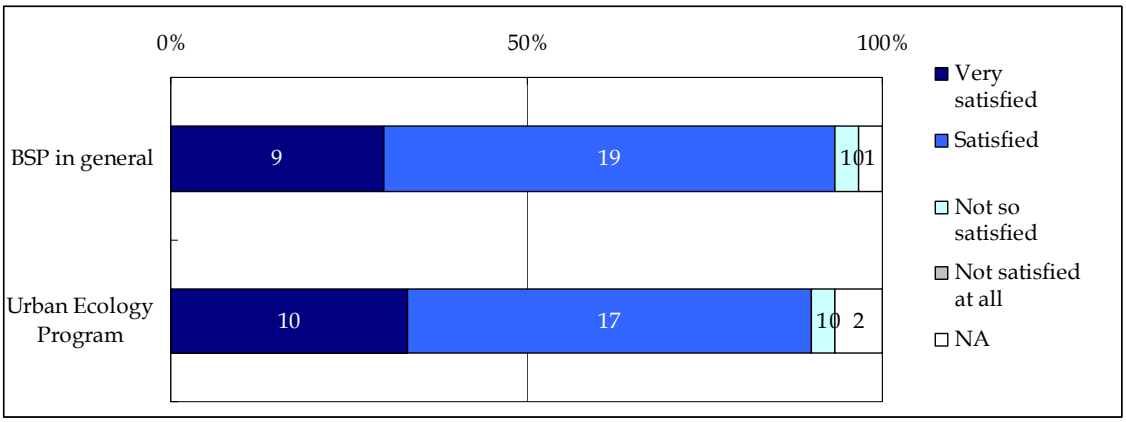
perspectives in their education in addition to environmental aspect. Although the BSP is regarded as an environment education, it also deals with social contexts[13]. Fig. B-8 shows that important aspects other than environment are priority in the BSP.

Fig. B-8: Important Aspect in BSP Activities (n=30)



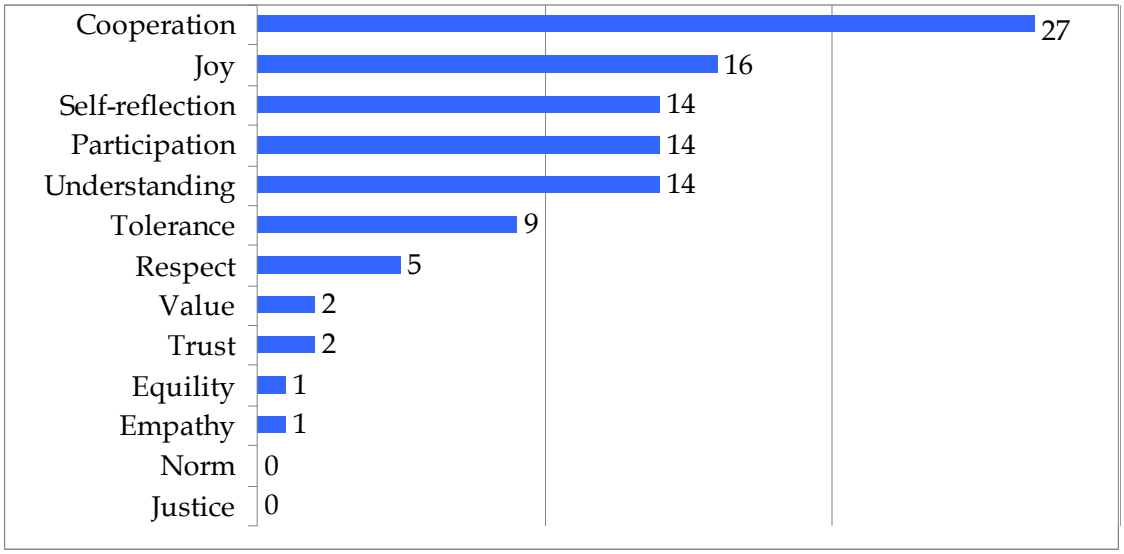
How much were the BSP teachers satisfied with the BSP itself and Learner's Guide 8 "Urban Ecology"? Most of them seemed to be satisfied with the programs. We should pay more attention to the situation in which this question was asked at the BSP teacher training course and the participants could hardly deny the program. One participant, however, answered being not so satisfied because he/she just started the BSP program and expected more inspiration from it. Another point was that he/she explained his/her school was located in a small city/town and could rarely use the various technologies introduced in the LG8. There was no answer of "Not satisfied at all."

Fig. B-9: Satisfaction in the BSP and LG8 (n=30)



What are the most important perspectives/dispositions in the BSP? We asked the teachers to answer four keywords. All of them responded cooperation was important. Joy of learning was also important among 16 teachers, followed by 14 teachers with self-reflection, participation and mutual understanding. No response went with norm and justice which are generally controversial values among different cultures and contexts (Fig. B-10). This tendency was observed in the previous surveys[14]. Fig. J-8 shows the results of the Japanese responses to the same question. The Japanese teachers gave the most important keyword as mutual understanding before the activity but cooperation became the top value after the activity (Fig. J-8).

Fig. B-10: Important Keywords in BSP Activities (n=27)



What are necessary supports for the BSP teachers in the future? Fig. B-11 to 13 shows their needs and experienced difficulties. The 13 teachers wanted more support for their space to decide. Financial assistance was also a wanted support because the teachers always have to find fund to participate in the international BSP activities such as summer camp and the coordinator's meetings. More staff was wanted to follow the activities, too.

The half of the teachers answered they had difficulty in the past or present time. Those who had involved into the BSP surely experienced many difficulties for many reasons. For open-ended question asked them to write backgrounds, little support from colleagues was top reason, answered by 8 teachers out of 17 (47.1%). This is quite universal for schools across the countries. There is always a key teacher who takes initiative for something new in lessons or activities, but the rest of

teachers in the same school rarely support him/her at the initial stage. But as the initiative continues for a while, some teachers start to get interested in the new activities. It is luck for some countries to obtain support from the colleagues and school head.

Finance is again a big problem for the BSP activities, although the teachers surely tried hard to raise fund from public subsidies. This is again the common challenge among countries, but some countries provide more financial supports than others. Language is also a challenge for the teachers in the BSP, because Russian is a common language for some schools beside English. The BSP teachers make every effort to learn English for themselves personally.

Fig. B-11: Wished Assist. (n=30)

Supports expecte	
Freedom	13
Money	9
Staff	5
NA	3
Total	30

Fig. B-12: Experienced Difficulty? (n=30)

Difficulty	
Yes	14
No	13
NA	3
Total	30

Fig. B-13: Reason in Difficulty (n=17)

Main reason	
Little support from colleague	8
Financce	6
Language	5
Busy	3
Coordination	3
Little space in curriculum	3
Natural environment	1
Lack of equipment	1
Total	30

IV. Results in the Japanese UNESCO ASPnet

The 48 ASPnet schools participated in the program and answered the questionnaires twice: before each school's project started as the application form and after it was completed as the project report. The questionnaires were composed of six parts: i) organizations, ii) relationships with local community, iii) influences to children and adults, iv) key words in the project, v) goals and achievements of the activities in the project, and vi) open-ended description about the project. The contents of questions were applied from the UNESCO's report[15]

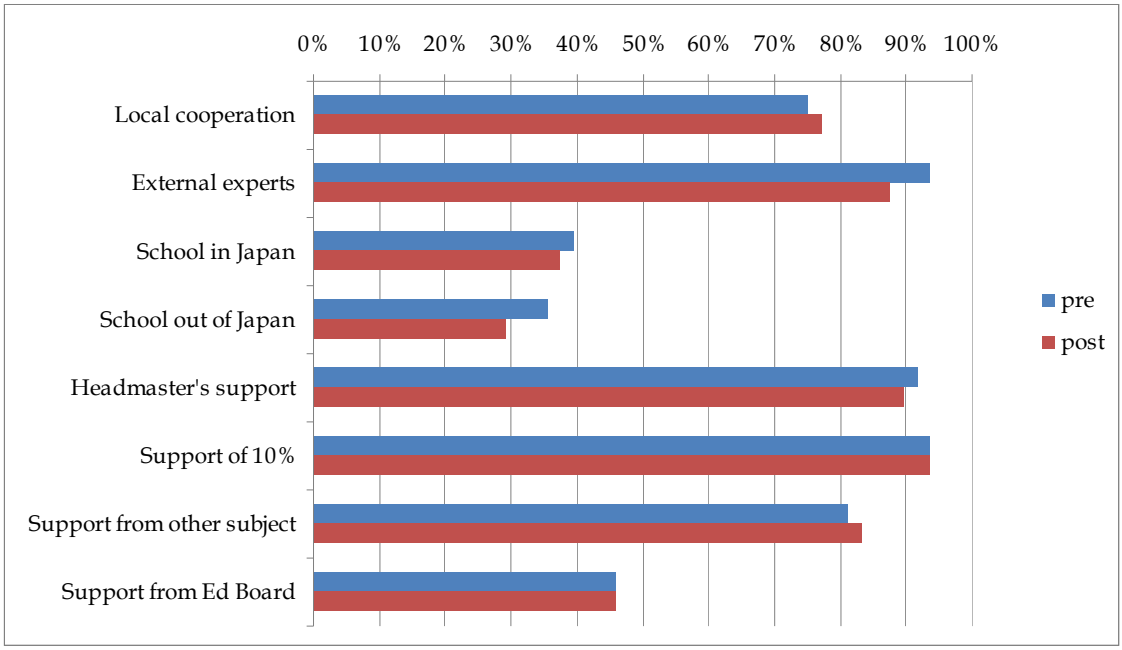
1. What Conditions Did Japanese ASPnet School Have?

There were already some good conditions before each school's project started. Almost all the conditions remained the same after the half-year project. In

the figures, "pre" refers to before the project, and "post" means when the teachers answered after the project.

Local cooperation from the community in which school is located was available for more than 70% of schools. There were external experts such as university nearby with high rate. 30 to 40% of the schools had a vision that they could cooperate with other school in and out of Japan. 90% of school heads and at least one out ten colleagues were supportive to the project, which was important according to the author's interview at the BSP. Other subject teachers were also supportive. More than 40% of schools had good relationship with local education boards, over which have jurisdiction over local schools.

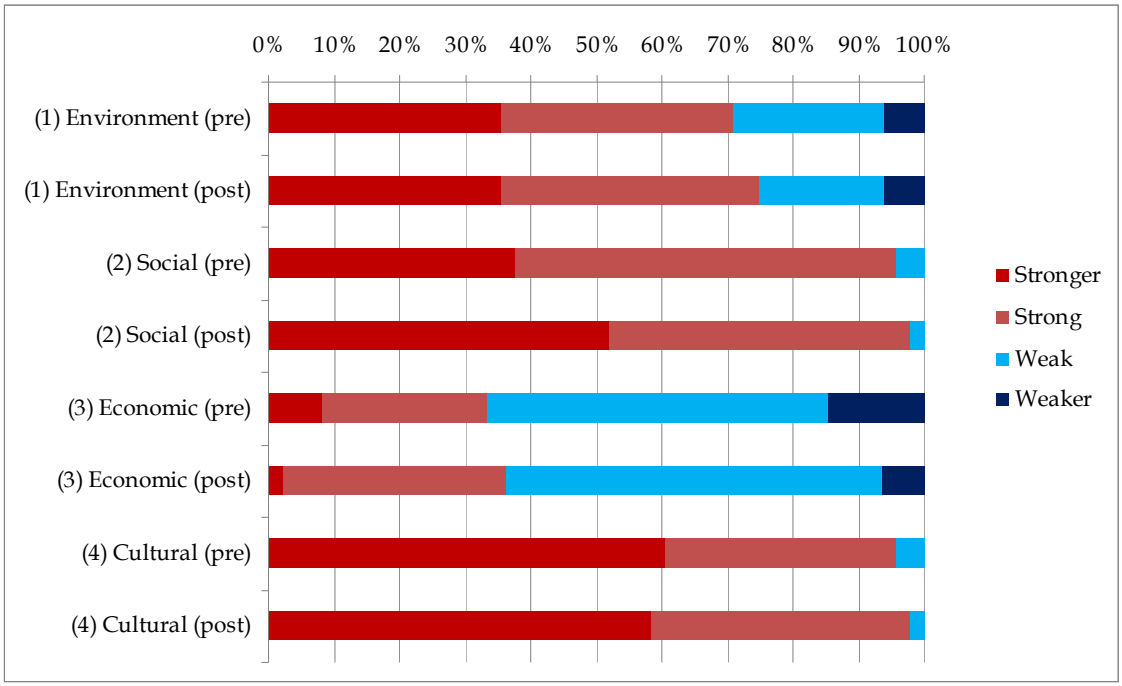
Fig. J-5: Conditions for the Program



2. Relationships with Local Community

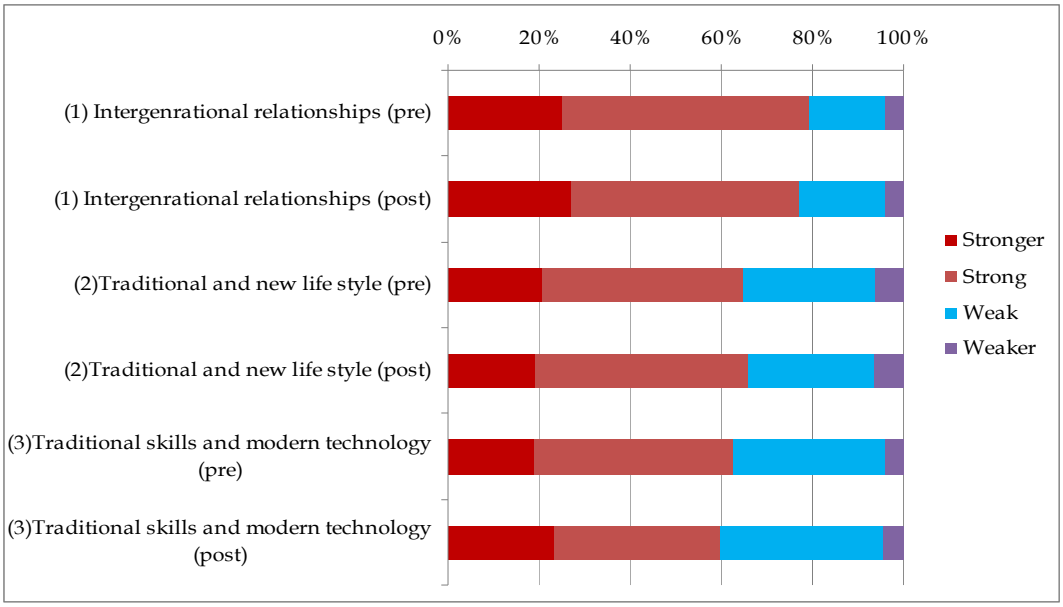
The same BSP question was used to ask how strong teachers were conscious about multi-dimension perspectives in their education in addition to environmental aspect. Comparing the BSP (Fig. B-8), economy was less priority but culture was more important for the Japanese teachers. Within the Japanese teachers, "Stronger" economic aspect became smaller and "Strong" became larger than those before the project. No different seemed on culture between before and after.

Fig. J-6: Important Aspect in ASP Activities (n=48)



Japan has faced a rapid change in the society. Its economy gets weak and population is ageing and shrinking. For sustainable society, we should consider a longer-time-conscious perspective. This was why we asked them how strong they would take intergenerational relationships, lifestyle and technology into account. Fig. J-7 shows "pre" and "post" responses to those perspectives. There was little difference between the two, but more than 60% paid attention to the time conscious perspectives.

Fig. J-7: Time Conscious Perspectives



3. Influence to Children and Adults

ESD has stronger view than other education activities that people change themselves in order to create sustainable society. We asked how strong each school project would influence children (Fig. J-7a) and adults (Fig. J-7b) from the three points, namely, their lifestyle, their action and their values. These points were mentioned as important factors at the opening of the Johannesburg Summit which set up sustainable development[16]. We can see all the points were recognized importantly in the project. Tendency for both children and adults were the same, but education project targeted children more than adults. Changing values for children was the highest priority but fell after the project. The short term project could hardly make a change. However, it seemed that the expectation was almost achieved after the project.

Fig. J-7a: Change expected and achieved in Project (Children)

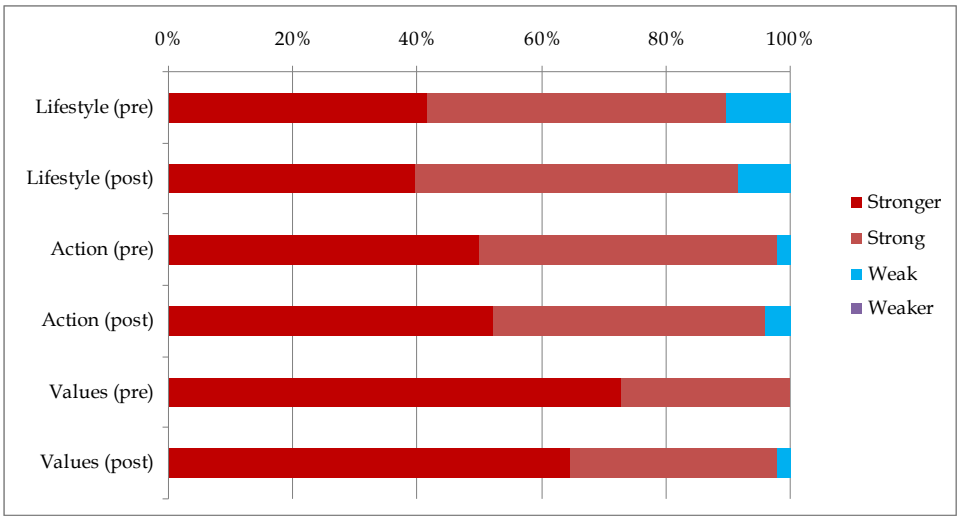
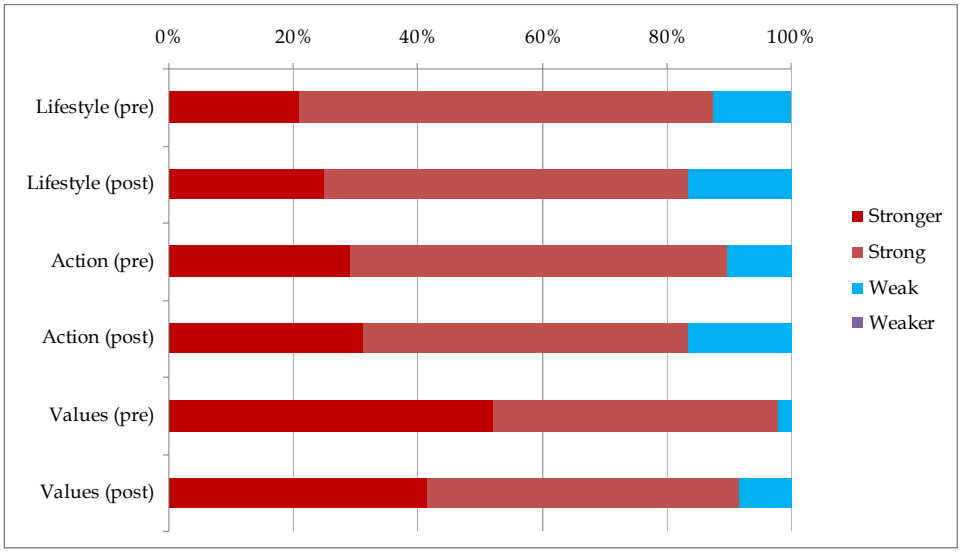


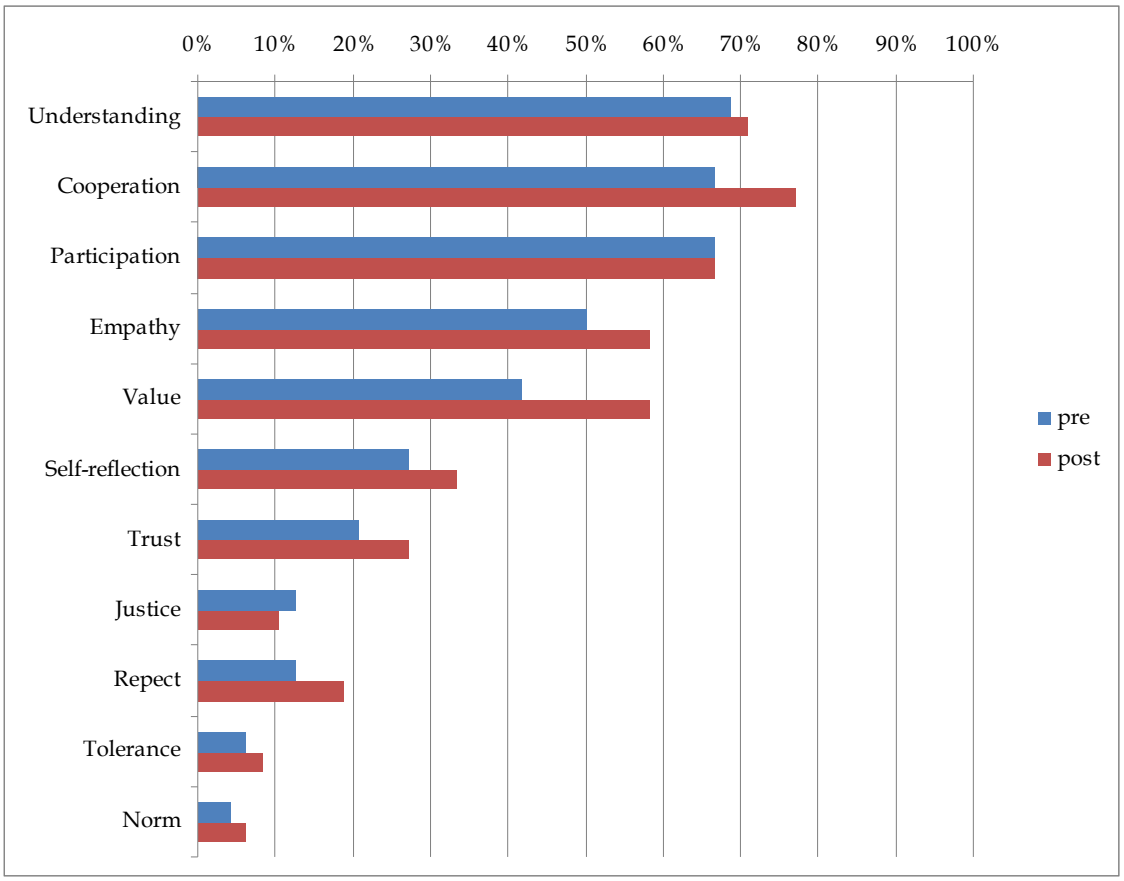
Fig. J-7a: Change expected and achieved in Project (Adults)



4. Keywords in Project

The same question was used for the Japanese ASPnet teachers for the most important perspectives/dispositions in the project. Cooperation became the highest after the project, as the BSP teachers gave their importance. The largest increase was "value." The Japanese school seemed to recognize ESD promoted value change more than other items.

Fig. J-8: Important Keywords in ASP Activities (n=48)



5. Goals and Outcomes of Project Activity

Finally, we asked their goals to achieve (pre) and outcomes they achieved (post). All the options were shown in Fig. J-9, indicating five different concepts in colors: Systemic Thinking & Interdependency (orange), Cooperation/Collaboration (light blue), Critical Thinking & Problem-Solving (pink), Future orientedness & Behavior Change (blue) and Learning Method (yellow). The deep blue is "post" outcomes after the project.

Generally, around 70% of the schools took holistic approach in the project

for students to understand the complicated situation, and 60% or more assumed the activities would include communication and collaboration, in addition to behavior change. Little over the half of them designed the activities would promote students' will to change the society. For learning method, only two items were asked but both were included at the half of the school projects.

Fig. J-9: Goal/Outcomes Items and Concepts

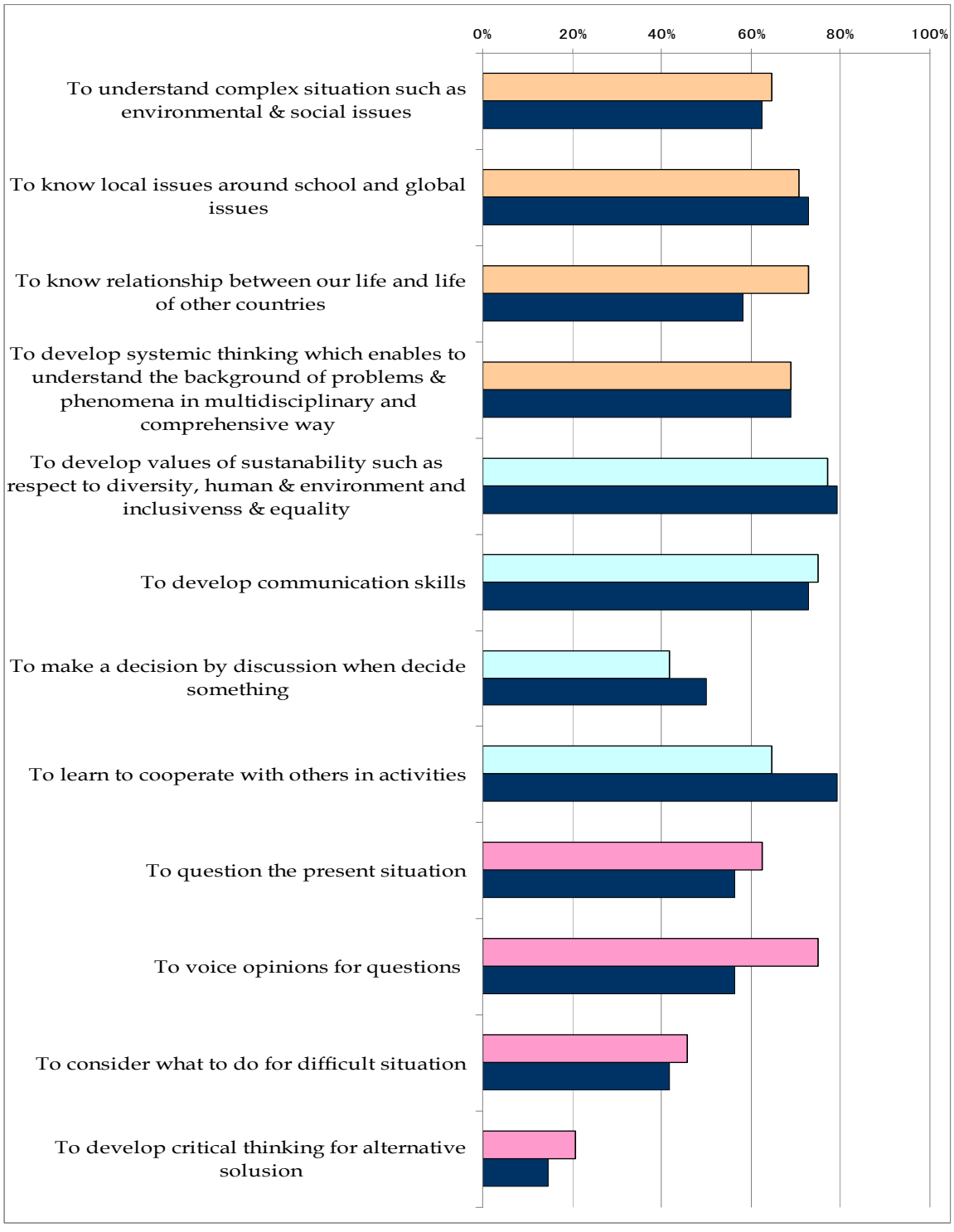
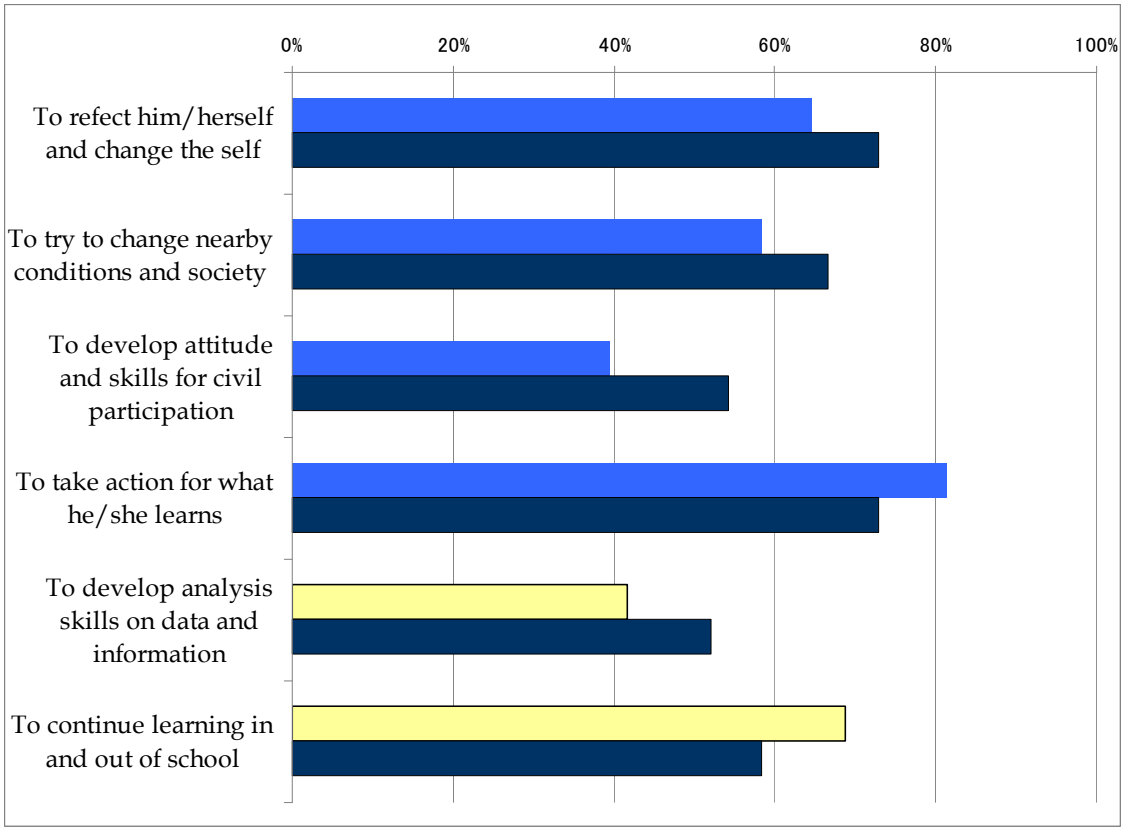


Fig. J-9: Goal/Outcomes Items and Concepts (cont.)



**Note: Deep blue refers to outcome after the project.*

The averaged ratios of responses to the five concepts changed as shown in Fig. J-10. Cooperation and Collaboration increased most between pre and post. It means that ESD activities in each project required cooperation among students. On the other hand, Critical Thinking & Problem-Solving decreased significantly. It may be interpreted that several months were not enough to appear and evaluate such a change because of limited contexts in the project. Moreover, this decrease could be understood that teachers and students found larger issues as they deepened their learning and responding teachers figured out the limitations of achievement within the school term. In addition, it is rather hard to combine critical thinking and problem solving into one concept as a survey limit. Other changes were not significant.

Fig. J-10: Difference of Response Rate to Goals (pre) and Outcomes (post)

Concept	Pre (%)	Post (%)	Color
Systemic Thinking & Interdependency	69.3	65.6	
Cooperation/Collaboration	64.6	**70.3***	
Critical Thinking & Problem-Solving	51.0	**42.2***	
Future-orientedness & Behavior Change	65.4	67.5	
Learning Method	55.2	55.2	

*

P<0.05

6. Challenge for Japanese ASPnet

Several achievements in the program can be identified. The first is cooperation between and within schools. Many schools reported in the description section of the questionnaire that many teachers and all the students got involved into the project together ever than before. Collaboration between school and community was also reported in many cases. In particular, school promoted communication with much help and cooperation from local community which is losing the population. Parent's commitment was also reported.

Collaboration among subject lessons was also reported in secondary schools. Especially, it was remarkable that several teachers of different subjects joined the project and cooperated for the activities at upper secondary or high school. This is because secondary schools let students prepare for entrance examinations and subject teachers tend to concentrate on knowledge transfer than activities. It is the Japanese dilemma that primary and secondary school want to nurture children's creativity and competence over the examination score but higher education institutes require subject examinations which have remained the same for a very long time. The authors, however, confirmed several cases at the different survey and observation at the ASPnet activities that graduated students performed much better than average students both academic and their personal life in university. ESD is still one of the influential movements for some schools.

The ASPnet has advantages in networking. As "Each school has different culture[17]," schools have different approaches even in the same community. It is therefore the network can bring stimulus to schools each other no matter where the connected partner school is located. One of the findings by OECD-PISA shows flat and equal network has more advantages[18]. A Japanese technical and vocational school participated in the program and reported it learned many things from another general school as a benefit of the network. Connecting to schools out of

Japan was also good for domestic schools.

Teachers found out they learned for themselves from the program. Some reported that ESD was not a special but an essential perspective and brought good opportunity for student's activities. "The perspective live even within subject lessons," reported a teacher, and such a reflective illustrations appeared in the reports. Another reported, "Sustainability is rapidly recognized among students and parents but not enough among teachers." School education needs to open up more to the "new" approach. Teacher education has been regarded as an important component since the beginning of the UNDESD[19], and the Japanese teacher's license updating system is just installed so that the contents of teacher training is expected to use the concept of ESD. The BSP teacher training, which gives importance to informal communication, could bring some implementations for the Japanese system.

Finally, we can point out that the Japanese program should give more time to school project. This program provided only half-year and small subsidy. Education takes much time to look back at what students obtain. Many reports explained that school set a goal of behavior change in the project but saw little change among students within the term. Fig. J-9 and J-10 could explain more about that students became more cooperative but did not reach up to problem-solving level because the project at least identified world problems only. There were, however, some cases that children started to take action for the neighborhood environment.

V. Concluding Remarks

It is impossible to compare the longstanding BSP and one short-term program for the Japanese ASPnet. The common finding is, however, that all the teachers passionately consider what to do and how to do for their students and local environment. Plus, teachers reflect and find their own development sustainably as they choose to learn something new.

Conditions for continuous learning are different from country to country. Some public institutional supports such as subsidy and authorization are stronger and more practical than others. Informal relationships among teachers in European countries could create more opportunities to learn each other in teacher training courses than the Japanese teachers who follow strict rules in school and polite manners in communication. The Japanese ESD project could have raised more students' involvement if it had bottom-up design as the BSP students enjoy and the

term of the program was much longer.

Schools connected a flat network via internet and direct communication can receive more inspiration, although some teachers feel it is additional burden to daily routine. If we take school teachers for high-skilled knowledge worker[20] and teachers shift to new conditions without nostalgia[21], there are always learning opportunities to create something new and collaborate with other different people.

The problem, and maybe the hardest one in our ageing society, is how the present teachers/performers can pass their explicit and tacit knowledge and skills from their experience and learning to the following younger teachers. Learning opportunities should be ensured with any assistance such as information technology and effective, not efficient, human network. Today's technology makes communication cost much lower than before but tends to speed up all the processes. Rapid communication is surely efficient, but nobody feels human touch from robotic communication. Deep wisdom can be sometimes transferred only when people open their mind in time-taking but effective communication.

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[1] Liisa Jääskeläinen, senior advisor to Finnish National Education Board, made efforts to create the network then by persuading the Finnish National Commission for UNESCO, because national officials took little action for the pollution in the Sea.

[2] Swedish National Commission for UNESCO. (2005). *Baltic Sea Project 15 Years*. p.14.

[3] Delors, J. et. al. (1996). *Learning: the Treasure Within [Report to UNESCO of the International Commission on Education for the Twenty-first Century]*, UNESCO Pub.

[4] http://www.unesco-school.jp/

[5] They are limited only for those which have teacher development course.

[6] Japanese National Commission for UNESCO (2009). *About UNESCO School and ESD*.

[7] Retrieved from http://www.unesco-school.jp/?page_id=34 (2012/2/24).

[8] Maruyama, H. (2011). Education for Sustainable Development (ESD) in Japan, Education in Japan, NIER. (http://www.nier.go.jp/English/EducationInJapan/Education_in_Japan/Education_in_Japan_files/201103ESD.pdf); the Japanese National Commission for UNESCO (2008–2010).

[9] http://www.b-s-p.org/

[10] Some participants from Denmark went home at night when time to answer the questionnaire was available, while other international participants stayed in the same hostel.

[11] Practically, almost all the project had only half year to conduct due to the subsidy.

[12] The 20 primary school teachers teach all the subjects so that they were not available to this question.

[13] See Swedish National Commission for UNESCO (2005) *Baltic Sea Project 15 Years*.

[14] The surveys were conducted at the BSP Coordinator Meeting (16-17 November 2008) and International BSP Camp (17 to 19 September 2009).

[15] UNESCO (2009).*Review of Contexts and Structures for Education for Sustainable Development*.

[16] UNESCO (2004). *Educating for a Sustainable Future*. p.29.

[17] A teacher at another ASPnet activity in Osaka on 29 January 2011.

[18] Andreas Schleicher, Special Advisor on Education Policy to the OECD's

Secretary-General and Head of the Indicators and Analysis Division (Directorate for Education), introduced PISA's results at the Japanese Ministry of Education on 28 February 2011.

[19] UNESCO (2005). *Guidelines and Recommendations for Reorienting Teacher Education to Address Sustainability*.(http://unesdoc.unesco.org/images/0014/001433/143370e.pdf)

[20] Levy, F. & Murnane, R.J. (2004). *The New Division of Labor: How computers are creating the next job market*. Princeton Univ. Pr.

[21] Hargreaves, Andy (2007) Sustainable Leadership and Development in Education: creating the future, conserving the past. *European Journal of Education*. 42(2). pp.223-233.