In transition towards sustainability: Bridging the business and education sectors of RCE Greater Sendai using ESD-based social learning

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• Developing human capacity within the education and business sectors in the context of Education for Sustainable Development (ESD) is vital in the transition towards sustainability

• The Decade of ESD (DESD) is drawing towards the last third of its phase and evaluation of the progress of ESD, of how learning and education has contributed to sustainability has become important

• Although exemplars have been provided, further identification of other capacity building measures, in addition to putting in place effective and relevant monitoring and evaluation mechanism(s) is key
Introduction

• Though emphasis is currently on M&E promotion, identification of more ESD initiatives/practices at the local level is important for a sustainable transition

• The Regional Centre of Expertise (RCE) was set up to advance the ESD agenda at the local and regional levels by enabling a stage for multi-stakeholder engagement

• One aspect of RCE Greater Sendai (RCEGS) that has been the least examined is its potential for stakeholder engagement, hence capacity building through collaboration and partnership between the business and education sectors using ESD-based social learning
Objectives

• Explore how to bridge business and education sectors and improve the capacity of the youth (and the company workers) in the region by especially improving the learning collaboration using existing structures in both sectors.

• Examine how the adaptive capacity of the general public through public participation of multi-stakeholders and actors in the RCEGS could be enhanced by

• Developing a conceptual framework for the overall learning interactions and interrelationships among the actors and multi-stakeholders aimed at enabling the creation of a sustainable society in the region.
Methods

- Study was conducted within RCE Greater Sendai (RCEGS) in Miyagi Prefecture of the Tohoku region of Japan using survey questionnaires.

- Students and teachers sampled from schools 15 (and business workers) in towns and cities in within RCEGS.
Results

• Significant engagement in sustainability practices in the school environs, engagement with nature and the use of computers to access ES information

• Visit by students to companies to learn about its entire operations was low

• Receiving short-term on-the-job training in environmental sustainability related to the company was much lower, suggesting little sectoral engagement and as a result, the need to enhance this education-business relationship
Table 1. Activities students participated in for environmental sustainability-related education or ESD (%)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Students</th>
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<tbody>
<tr>
<td>a) Visiting nature conservation museums</td>
<td>32.0</td>
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<tr>
<td>b) Preservation of local natural areas</td>
<td>37.7</td>
</tr>
<tr>
<td>c) Classroom-based school activity related to environmental sustainability</td>
<td>27.5</td>
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<tr>
<td>d) Participation in environmental club or other voluntary activities</td>
<td>14.2</td>
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<tr>
<td>e) Visit to a company to learn about its entire operations</td>
<td>14.9</td>
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<tr>
<td>f) Receiving short-term on-the-job training in environmental sustainability related to the company</td>
<td>3.5</td>
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<tr>
<td>g) Use of computers and the internet to learn and share environmental sustainability information</td>
<td>32.0</td>
</tr>
<tr>
<td>h) Engaging in sustainable practices in your school (e.g. separating garbage for recycling, water &amp; energy reduction, cleaning the school and its environs)</td>
<td>62.0</td>
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<tr>
<td>i) Use of drama, documentaries, movies etc. to develop sustainability awareness and knowledge</td>
<td>19.6</td>
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</tbody>
</table>
Results

• Students’ and teachers’ preferences for the suggested ESD approaches were different

• Though company visits by students and on-the-job training or internship (locally known as “shokuba taiken”) approach was the least preferred for both groups, students were more eager to engage in this collaboration than their teachers
Sustainability awareness creation by the use of the media & voluntary in-school activities

Reoriented field-based & classroom-based sustainability within the current curriculum

Company visits & on-the-job training/internship

Sustainability practices in the school premises and environs

Figure 1. Respondents’ preferences for the suggested ESD approaches.

<table>
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<tr>
<th>Approach</th>
<th>Students</th>
<th>Teachers</th>
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<tr>
<td>Sustainability practices in the school premises and environs</td>
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<td>Reoriented field-based &amp; classroom-based sustainability within the current curriculum</td>
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<tr>
<td>Company visits &amp; on-the-job training/internship</td>
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<tr>
<td>Sustainability awareness creation by the use of the media &amp; voluntary in-school activities</td>
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</table>
Results

• The need for engagement between the business and education sectors is further evidenced by the result on students’ preferences for jobs they would like to do in the future (Fig. 2)

• For all school levels, the order of preference for the top three jobs was generally similar: service, information technology and manufacturing (also biosciences for elementary schools)
Figure 2. Business sectors in which students wish to work in future
(Senior high school, n=126; Junior high school, n= 144; Elementary school, n= 78)

- Manufacturing (auto, electronics, etc)
- Mining (minerals) and drilling (oil)
- Utilities (electric power, gas and water supply)
- Service (banking, food and retail, hospitality)
- Information technology
- Biosciences
- Tourism and transport
- Not yet decided

%
Results

• Regarding the most appropriate stage for learning ESD, high school and university stages were considered too late. An opportunity to enhance ESD capacity building especially at the lower secondary school level and even further down the educational ladder exists.
Figure 3. Respondents view on the most appropriate learning stage for ESD in schools.
The conceptual framework (Fig. 4) for the multi-stakeholder collaboration comprises the context of sustainable transition to be enabled by the Steering Committee, the sustainability learning structures and contexts in the sectors,

- the learning processes ‘activated’ through interactions and cooperative learning interrelationships (stakeholder participation, partnerships, collaboration, co-production and sharing of knowledge, etc.) among the sectoral multi-stakeholders & actors and the learning outcome(s).

- The learning outcome(s) might be sustainability-literate (competent) individuals/groups with pro-sustainability skills, values and behavior, ‘sustainable organization(s)’or a ‘sustainable society’
Figure 4. A conceptual framework for ESD-based social learning involving the education and business sectors and other stakeholders/actors in RCE Greater Sendai. [It comprises the context of sustainable transition to be enabled by the governing body, the sustainability learning structures and contexts in the sectors, the learning processes ‘activated’ through interactions and cooperative learning interrelationships (stakeholder participation, partnerships, collaboration, co-
• Identifiable learning processes during the multi-stakeholder collaboration between the business and education sectors and also during PP include awareness creation, knowledge production involving iterative interaction, i.e., exchanges involving collaborative deconstruction, reconstruction and co-construction of knowledge along with experiential and cognitive learning, adaptive learning and co-management
Recommendations

- In spite of the considerably strong presentation in the economy and other aspects in the locality, the business community is visibly not represented on the Steering Committee (Figure 4).

- Teachers in the primary and secondary schools are also not “independently” represented either by say, the teacher union/association.

- And students are not represented as well even though there are student councils from elementary to high schools. This issue of representation should be addressed.
Recommendations

• The interest of teachers regarding visits to companies and internship is key for the success of the collaboration and hence ought to be enhanced.

• The present support by the media for RCEGS to attain its DESD goals needs significant strengthening.

• The level of awareness of RCEGS in the region is also only satisfactory and RCEGS should do more to communicate its existence and activities to the general public.
Recommendations

• The education–business sector ESD collaboration could be streamlined and probably brought to the mainstream by strengthening it at the national [policy] level.

ESD-related agencies from the national level (like ESD-J, a consortium of NGOs in Japan) to the local level could ‘lobby’ the relevant authorities for priority and more time to be given to the ESD-related activities in PIS

• This company-school partnership could also be considered in the government’s public-private partnership (PPP) programs, i.e. collaboration between public bodies, such as local authorities or institutions, and private companies
Recommendations

• The Steering Committee should take local ownership of the ESD concept and its implementation in consultation with the local/municipal authorities.

• It should try and do away with invisible competition/struggle between the education and the environmental ministries and also the environmental bureaus of cities and towns and the corresponding boards of education when it comes to ESD implementation especially in schools.

• Influence of bureaucratic systems, and poor public access to information which can impede social learning should be drastically reduced.
Conclusion

• The sustainability concept is fraught with challenges, however, grassroots capacity building using education in an RCE is important.

• The RCE, with most of the subcomponents of its core elements capable of serving as levers for capacity building, can act as an umbrella facilitating capacity development through partnerships between the formal and non-formal education sectors, particularly the business and education sectors and provide research, learning and other opportunities for all existing components of society.

• Companies and schools worldwide while underpinned by different philosophies are inherently linked by the human factor. That is, peoples’ attitude towards capacity-building through continuous learning and application of the acquired knowledge will eventually determine the sustainability of a company, a school and ultimately the society.
THANK YOU FOR YOUR GENEROUS ATTENTION

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