Perceptions of the concept of sustainable development among Russian and Swedish students

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Abstract

The ambition for Education for Sustainable Development (ESD), to integrate the principles, values, and practices of sustainable development into all aspects of education and learning is a huge undertaking. The aim of this study is to compare how this concept is being implemented and interpreted in Russian and Swedish schools. The study has been carried out using a combination of questionnaires, interviews and literature analysis. The results show that relatively few of the Russian students (29%) had heard about the concept of sustainable development while a majority of the Swedish students (75%) claimed to have heard about the concept. The general understanding of the concept seem to be rather low both in Russia and Sweden. Just a few of the students expressed that they had a feeling of the meaning of the concept sustainable development. The results also show that the Russian and Swedish students share many values and priorities. However there are some areas where priorities differ. Russian students rank economical goals like high economical growth and emphasis on fighting economical inequalities higher than their Swedish counterparts. Both the Russian and Swedish students images of the future and their own capability of influencing the future development tend to be optimistic. The Russian students tend to be more optimistic about the future than the Swedish students. The Swedish students, however, seem to be more confident that they personally can influence what happens with the environment. The conclusion is that if the ambition really is to integrate ESD as a natural part of the educational system clearer mandates and more recourse will be needed. More efforts have also to be put into the inclusion of more actors in the process, both on local and national level.

Key concepts: Environmental education, Education for sustainable development, Russia, Sweden.
Acknowledgements

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Johan Rootzén,
Umeå
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1. Introduction

Rapid economical and technological development has lead to improved living standards for hundreds of millions of people over the last decades. This rapid development has, however, also its downsides. Environmental degradation and overexploitation of natural resources are some examples of consequences of new consumption patterns. As these consequences have become more and more obvious issues related to different environmental concerns have slowly gained ground in the public debate.

Personally I have been interested environmental related issues a long time and most of my studies have been focused on different aspects of environmental science. I am convinced that we have to find new ways to organize the society in order to overcome the threats to the local and global environment. I also believe that it is crucial that we find ways to co-operate internationally and globally around these issues. Russia and Sweden are different in many aspects, size, population etc. but simultaneously the countries are mutually dependent. In the environmental field this mutual dependency is obvious, decreased Russian and/or Swedish discharges to the Baltic Sea will have limited consequences if the rest of the countries bordering the Baltic Sea do not agree to decrees their discharges.

I believe that Environmental Education (EE) and potentially Education for Sustainable Development (ESD) can play an important role in the process of reorganizing the society and strengthening the relationships and understanding between countries.

During the autumn of 2006 I visited Petrozavodsk, located in Karelia in north western Russia. The visit gave the opportunity to discuss education in general and environment education with Russian teachers, students and researchers. The visit also gave the opportunity to get a feeling for the reality that the Russian students and educators face. As I will describe below the educational systems in Russia and Sweden share a lot of challenges but the two countries naturally also have its own unique obstacles to overcome. For example the Russian educational system struggle with a lack of economical resources. On the other hand Russia has a rich pedagogical heritage that Sweden may lack. I believe that it is vital that this kind of different experiences and contexts are surveyed and discussed if the implementation of a concept like ESD is going to become fruitful.

1.1 Background

The theoretical concept of sustainable development (SD) has gained broad acceptance among global political elites as well as in the civil society. The concept was put forward by the United Nations World Commission on Environment and Development in 1987, nearly two decades ago. The commission was chaired by the former Norwegian prime minister Gro Harlem Bruntland and in their report “Our Common Future” they defined Sustainable development as a:

“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Twenty years later some of the issues identified by the Bruntland commission have been settled but many of the challenges still lay ahead of us. The struggle for sustainable development is per definition constantly underway. For the concept to become more than empty words theoretical acceptance is not enough, the concept also have to be a natural part peoples consciousness and actions. This is where education comes in. The educational system could potentially play an important role in the formation of the sustainable society.
In 2003 the General Assembly of the United Nations decided to proclaim the ten-year period beginning on 1 January 2005 the United Nations Decade of Education for Sustainable Development (DESD). Governments have been encouraged to include the Decade in their respective educational systems and strategies. The overall goal of the DESD is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning (UNESCO, 2005). The UNESCO who has been given the principal responsibility has formulated the goal as follows:

"It is important to ensure that all pupils and students acquire appropriate knowledge of SD and are aware of the impact of decisions that do not support sustainable development. An educational institution, as a whole, including pupils and students, teachers, managers and other staff as well as parents, should follow principles of SD."

A lot of different initiatives have also been initiated on regional, national and local level to promote ESD. The countries around the Baltic Sea have together drawn up an Agenda 21\(^1\) for the region – Baltic 21. SD is an overriding political issue in all the BSR countries and ESD is one of the issues that have been given special priority. Today EE/ESD included in most of the countries national documents governing formal education.

Umeå University has in its action plan for the forthcoming years 2007 – 2009 declared that they intend to “Umeå is going to become one of the driving forces for research and education for sustainable development.” (Umeå University, 2006).

Russia and Sweden both border the Baltic Sea and the countries share a lot of history. However, the educational systems in the two countries are mirrors of different social and political historical contexts. As seen in the compilation above lots of efforts are being put in to the promotion of ESD, but if these efforts are going to make any change it is important that the proposed target groups, teachers and students, are included in the discussion. It is also vital that the governments of the nations that have signed on to this undertaking really accept and adopt the idea of ESD. Global and regional co-operation is a must if SD is going to be achieved.

1.2 Environmental Education and Education for Sustainable Development

Most people would probably agree up on the fact that the last two centuries human activities have had a significant impact upon the environment and its resources. As the activities has been increasingly intensified so has the impacts. As a reaction peoples concern about the state of the earth and our relationship with the surrounding environment has risen. Simultaneously the demand for knowledge and information about these issues grew. The early 1980 is by many seen as a turning point for public concern about the environment (Palmer, 1998).

Over the last three decades EE has evolved both as field for research and education. The desire to protect or conserve the natural environment from human threats has often been a core motivator for environmental EE. However, a lot of different conceptions of the meaning and role of environmental education have emerged.

Traditionally the environmental field has been presented as a fixed list of problems - pollution, acid rain, ozone hole, and greenhouse effect – and a corresponding set of methods and values to cope with these issues (Smyth, 2006). The role of the educational system and the educators has been to adapt both methods and content to make sure that the students develop certain sets of values and attitudes thought to be more environmentally sound than others (Sandell et al., 2005). In the recent years there has been a reorientation away from this normative approach towards more pluralistic

\(^1\)Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment.
perspectives. There has been a growing consensus that environmental education should be orientated around the concept of "sustainable development". It is argued that Education for Sustainable Development (ESD) can contribute by broadening the focus as it also takes into account cultural, social and economical aspects. The desirable goal is to help students to develop a critical and proactive cautiousness to prevent problems arising rather than cleaning up afterwards.

The field has evolved rapidly and there is still no general agreement on exactly what sustainability means and what the role of ESD will be. UNESCO who has been given a key role in the implementation of DESC, in accordance with Chapter 36 of *Agenda 21*, has identified four major challenges of ESD:

1. promotion and improvement of basic education,
2. reorient existing education at all levels to address sustainable development,
3. developing public understanding, awareness of Sustainability, and
4. training.

The first priority of ESD is to promote basic education. In many countries of the world, the current level of basic education is too low, severely hindering development and the strive towards a sustainable future. Luckily, education has been given priority in many countries and today enrolment rates in primary education are rising in most regions of the world. ESD also aim at reorientating the existing educational systems. The reorientation, including all levels from basic education up to university level, will be a huge task. This process includes the development of strategies to teach awareness, skills, perspectives and values aiming motivate people to pursue sustainable livelihoods and to participate in a democratic society and are likely to cost a lot of efforts (Hopkins, 2003). The third priority is to spread awareness about SD among all citizens of the society. If SD is going to become reality people need to be aware of the goals of a sustainable society and has to have the knowledge and skills to contribute to those goals. The forth and last priority is to provide training for leaders and workers in all sectors of the society- including business, industry, higher education, governments, nongovernmental organizations (NGOs), and community organization. The world needs a literate and environmentally aware management and work force to help guide nations in implementing their sustainability plans (UNESCO, 2005).

All of this may seem reasonable but the concept of ESD is, however, far from being uncontroversial. Some critiques argue that the one of the incentives for the promotion of ESD and education for sustainability is to provide a "globalised" education by proposing universal truths, universal goals and universal curricula. An unquestioned adoption of the concept of ESD offers the possibility of providing the North with yet another tool to re-define social, economic and political structures in the South, where some voices claim the need to untie environmental education from hegemonic Western models of development. The complexity of social, political, and economic aspects of different countries require the formulation of environmental education initiatives grounded on analyses of particular contexts. Models that work in northern hemisphere countries and contexts are not necessarily applicable, meaningful or useful in the South (Barraza, et al. 2003).

Despite all these controversies, a lot of efforts keep being put in to the implementation ESD.
1.3 ESD in Russia

The Russian Federation stand out as a giant in comparison to Sweden, and most other countries for that matter, covering an area of 17 million square kilometres and with more than 142 million inhabitants. The study was carried out in Petrozavodsk, the largest city in the Republic of Karelia, located approximately 400 km north of St Petersburg and 200 km east the Finnish boarder.

The Russian educational system include nine years of compulsory education divided in two stages; primary school with grades 1 to 4 and lower secondary (basic) school with grades 5 to 9. If the students pass graduation they may continue their education at senior high school to receive secondary general education. Alternatively they can enter an initial vocational school which offers professional education and skilled workers’ training at different levels. Secondary general education on the basis of basic general education continues for two years and ends when students are 17-18. Graduates from a secondary general school may apply for entrance to a higher education institution.

The education system in the Russian Federation is undergoing quite large structural reforms at the moment. All levels of the educational system are involved in this process from pre-school to the higher education system. The reforms will include changes in curricula as well as organisation. The disciplines will be organised in three main groups: a federal component (including obligatory disciplines), a regional component (regulated at the regional level) and elective courses that will be selected by each school (Elias et al., 2004). Traditionally the EE has been integrated as a part of the natural science disciplines. So far the intention to reorientate all levels and disciplines of the educational system to address sustainability has gone relatively slow. The ongoing reforms may, however, provide opportunities for the implementation of ESD at different levels of the educational system. The regional level has so far shown to be most adaptable to ESD. Better coordination, more information and methodological materials, stronger policy support and a number of other factors are needed for the success of ESD in the whole country (Elias et al., 2004).

1.4 ESD in Sweden

Sweden with just over 9 million inhabitants and a total land area of close to 450 000 square kilometres is dwarf compared to the giant neighbour in the east.

The Swedish public educational system consists of two parts, compulsory schools and non-compulsory schools. Education is mandatory for all children aged 7-16. The compulsory school is based on a nine year primary school. Most students then continue to attend an elective three years of upper secondary school, divided in two pathways where you either chose theoretically preparatory education to prepare for higher education or receive practical preparatory education. The preparatory instance allows for specialization in either natural sciences or social sciences. Most primary- and secondary schools are run by the municipality. The educational goals and the evaluation are however provided by the government.

ESD has been given high priority from the authorities recent years and the educational institutions has been has been given a clear mandate to include social, economical and ecological aspects in the education. This task is formulated in national policy documents such as the Education Act, curricula and syllabuses (SOU 2004:14).

Evaluations show that even though ESD has gained some ground in the educational practice the latest decade both EE and ESD still play a rather peripheral role. There seem to be several different reasons for this, lack of time, low availability of relevant material and lack of relevant further education for teacher are some examples of explanations that has been mentioned (Skolverket, 2001). An overall assessment of the educational system shows that a large variety of working
methods for dealing with SD have been developed, but there still are great differences in to what extent this perspective is included in different sectors. Stronger contacts with the local community and more interdisciplinary and international cooperation are some of the suggestions for further development of ESD (SOU 2004:14).

**Figure 1.** Umeå is situated close to the Baltic Sea in the northeast of Sweden. Petrozavodsk is situated on the shore of Lake Onega in the northwest of Russia.

### 1.5 Objectives

The aim of the study is to compare the perceptions of the concept of SD among students in Russia and Sweden. What knowledge, attitudes and priorities do they have regarding these matters? The study include issues like:

- In what way has the concept of sustainable development been incorporated in the educational system of Russia and Sweden?

- What are the different concerned groups (i.e. students, teacher students and teachers) views of the concept of sustainable development in the educational system?

- To what extent do different cultural, economical and social circumstances influence the student’s view of a future sustainable society?

The study will partly focus on experiences from the ongoing exchange program between an upper secondary school in Umeå and an upper secondary school in Petrozavodsk.
3. Methodology

The study has been carried out using a combination of questionnaires, interviews and literature studies. Supervision has been provided through the Faculty of Teacher Education at Umeå University, Sweden, and the Karelian State Pedagogical University, in Petrozavodsk, Russia.

The data was collected in Petrozavodsk and Umeå between September and December 2006. The data used in the study was collected using questionnaires and a number of semi structured interviews. The questionnaires and the interviews where carried out at a upper secondary school and a State Pedagogical University in Petrozavodsk and at a upper secondary school in Umeå. The study mainly focus on the pupils perception of the concept of sustainable development but to broaden the perspective some interviews was also carried out with teachers and researchers within the educational field.

3.1 Sample

The results of this study are based on material collected through questionnaires and interviews. Totally 150 questionnaires where distributed, 105 in Russia and 45 in Sweden. The respond frequency was high, and 140 questionnaires were collected. Since there was limited amount of time for the data collection the sample was made out of convenience (Ary, Jacobs & Razavieh,1996). The educational institutions that where included in the study where chosen because they are involved in an exchange program between Russian and Swedish schools focusing on sustainable development. One part of the sample consists of students that have been taking part in this exchange program and the second part of the sample consists of students that have not been involved in the exchange.

The students were on different levels in their education, some students at a upper secondary school and others university students studying a range of different subjects, foreign languages, geography, physics, mathematics and elementary education. The youngest of the respondents where 14 years old and the oldest 23 but most of the respondents where in the age group between 17 and 20. A little less than half of the respondents where female (45%) and a little more than half where male (55%). The ambition has been to make the sample as diverse as possible despite the limitations.

As a complement to the questionnaires 15 interviews where carried out. Eight Russian and five Swedish students where interviewed as well as the principal of the Russian upper secondary school and a biology teacher from the same school.

3.2 Data collection

The first set of interviews where made in Umeå in the beginning of October when a group of Russian students and teachers visited Sweden. Four Russian and four Swedish students where interviewed at this occasion. These interviews were informally held and functioned as pilots for the forthcoming questionnaires and interviews. The Russian part of the study where made during a visit in Petrozavodsk in October/November. The last part of the data collection was made in Umeå in the end of November.

All of the interviews in Russia where made in English, most with the help of a translator. The interviews where recorded with permission of the respondents. The questionnaires were made in two versions one English and one Swedish. In Petrozavodsk the respondents where asked to answer
in English or Russian depending on which alternative they preferred. The answers in Russian were then translated by a teacher from the State Pedagogical University.

The questionnaire consist of three different parts (Part I – III), the two last parts where added after piloting the questionnaire (the final version of the questionnaire can be found in Appendix 1.). The first part (Part I) of the questionnaire consist of eleven questions. These questions are intentionally formulated in an open manner to encourage the respondents to express their thought. The idea was to try to get a feeling of which concerns and priorities that take up the students minds by formulating questions that encourage the respondents to express what is on their minds. Part II consist of nine different closed questions formulated as statements (A-I) and the respondents are asked to express to what degree they agree with the statement. The respondents answered by making a mark on a scale from 1 (Disagree) to 4 (Agree). Part III consists of seven questions formulated as possible goals for a human society (I-VII). The respondents are asked to express to what degree they find these goals important for their society. In this case the scale has ten grades, from 1 (Not important) to 10 (Very important). The questions in Part II and III where inspired by the questionnaire that is used in the large international comparative project ”Relevance of Science Education”, ROSE (Schreiner & Sjøberg, 2004).

3.3 Method of Analysis

The answers from the interviews and the first part of the questionnaire; Part I, were categorised to simplify the analysing process. Together with the data from Part II and Part III of the questionnaire the results were analysed using OpenOffice.org Calc an open source software suitable for statistical analysis. The data where analysed and compared looking at statistical tools like range, arithmetic average and standard deviation of the data set (Stefánsson, 2006). Range is the difference between the highest and the lowest ranking in a distribution. The average is the sum of all the values in the distribution divided by the total number of cases.

The respondents express their level of agreement concerning the statements and goals presented in Part II and Part III on a scale from disagree – agree (1 – 4), not important – important (1 – 10). These are the same two scales used in the ROSE study mentioned above. The scales can be interpreted as interval scales and the arithmetic averages have been used as tools to measure the over all tendency of the dataset. The standard deviation and variability where used to determine whether individual scores deviated from the mean of the distribution.

3.4 Limitations of the study

The most important restriction of the scope of the study has been the limited amount of time allocated. This had to be taken into consideration when the study was first planned. One consequence of this limitation was that the sample had to be reasonable in size otherwise it would impossible to manage the both the collection and the analysis of the data. The downside of this is that it probably is difficult to draw any general conclusion on the basis of the results of this study. It is difficult to measure affective characteristics like interests, attitudes and priorities (Schreiner & Sjøberg, 2004). The results of this study are mainly based on the data from the questionnaires. The questionnaire consists of both open-end questions and closed pre-structured questions. Both types of question have it set backs. Open-end question can be time and thought consuming to answer. It was sometimes difficult to get the students to elaborate their answers. Closed questions also have its set backs. You only get answers to the questions you ask and you lose spontaneity and expressiveness.
4. Results

To make the analysing process manageable and the presentation of the results straight forward only parts of the total data set were selected for presentation. The results of this process are presented below. This section has been divided in three different parts in accordance with the three different parts of the questionnaire. The first part of this section is devoted to the results of the questions with a more open character dealing with the students view of different problems in the world around them and with their perception of the concept of sustainable development. In the second part of this section the level of agreement among the students with a number of statements linked to different aspects of SD is presented. Finally in the third part of the section the students ranking of seven different goals for the society are presented.

4.1 Part I – Students perception of SD

The first number of questions of Part I of the questionnaire deals with the students view of the society and environment around them. The students were asked to list some of the problems they face in their everyday life, in the society as a whole, and in the environmental sphere. By learning about the images and visions the students hold of the present and the future, it is easier to understand their motivation, choices and actions.

4.1.1 Everyday life

The first question of the questionnaire was formulated to try to find out what reality the students face in their everyday life. The students answers were divided into six rather broad categories. The categories are listed below together with some of the type of answers that were included in the different categories:

- Education – heavy workload, difficulties to reach higher levels of education.
- Economy – low scholarships, high prices
- Unemployment – difficulties to find work
- Social – includes answers concerning the social wellbeing of the students ex. stress
- No problems – the students included in this category did not see any problems in their everyday life
- Other – this category includes all types of answers that did not fit in to any of the other categories, for example environmental problems of different kind, insufficient communication and problems of more private character.
Figure 2. Answers to the question: “What are the most important difficulties/problems you face in your everyday life?"

As seen in Figure 2, many of the Russian students (28%) express that the difficult economical situation is biggest obstacle in their everyday life. Many of the Russian students also worry about their educational situation (14%) and the risk of facing unemployment (9%). One group (15%) express that they do not see any problems in their everyday life.

Some of the Swedish students share the worries about the economical situation (14%). The clearest tendency among the Swedish students is that a quite large group (21%) express that they feel unsatisfied with their social situation, many of these answer that they find their everyday life stressful in different ways. A little more than one fifth of the Swedish students (21%) do not find any obstacles in their everyday life.

4.1.2 Society as a whole

In the second question of the questionnaire the students were asked to broaden their focus and list some of the problems they see in the society around them. In this case the answers were divided into eight different categories:

- Health – includes answers concerning alcoholism, drugs and diseases
- Economy – low salaries, poverty, economical gaps between rich and poor
- Unemployment – includes answers about difficulties to find an employment and high unemployment rates.
- Terrorism – includes answers that express anxiety about terrorism
- Criminality – includes answers concerning different types of criminality like corruption and violence
• Racism – includes answer concerning worries about intolerance towards ethnical minorities

• Environment – includes answers concerning threats to the environment, pollution, global warming and the depletion of the ozone layer.

• Other - this category includes all types of answers that did not fit in to any of the other categories. For example some of the respondents mentioned the tensed relations between humans in general, the increased number of homeless people and stray animals.

Figure 3. Different types of answers to the question “In your view, what are the most important problems in the society as a whole?”

Many of the Russian students show concern about the health situation (23%) and the environmental situation (21%). The economical situation (8%) and crimes related to economy (7%) are other issues that engage the Russian students. The biggest worry among the Swedish students seems to be different types of threats to the environment (38%). A rather large number of the Swedish students also express a concern about the high unemployment rates (22%) and criminality (22%).

If the answers to this question are compared with the answers to the previous question concerning problems in the students everyday life (Question 1) it becomes clear that the students images of their personal problems are quite different from their images of the problems in the society as a whole.
4.1.3 Environment

The third question of the questionnaire dealt with the students perception of different environmental issues. Again the answers were sorted in different categories depending on the focus of the answers. In this case seven different main categories answers were identified:

- **Pollution** – most of these answers in the category focus on pollution of local and regional character leading to bad air and water quality
- **Deforestation** – includes answers dealing with the depletion of the natural forests
- **Pollution of water** – includes answers with special emphasis on the pollution of water
- **Green house effect** – includes answers by students who are concerned about different aspects of the green house effect and global warming.
- **Ozone hole** – depletion of the ozone layer
- **No problems** - the students includes in this category did not see any problems in the environmental sphere
- **Other** - this category includes all types of answers that did not fit in to any of the other categories. Some examples of concerns in this category are extinction of rare animal and plants, litter and ecological problems in general.

![Figure 4. Different categories of answers to the question “What issues in the environmental field concern you the most?”](image_url)
Nearly half of the Russian students (44%) express their concern about pollutions effecting the local air and water quality. The concerns about the bad water quality were also expressed in the answers sorted into the category “Polluted water” (19%). The depletion of the Karelian forests also engaged several of the Russian students (10%). Among the Swedish students the greenhouse effects and the global warming seem to overshadow all other issues in the environmental field, a majority (64%) of the Swedish students expressed their concern about this issue. Some of the Swedish students (21%) also emphasised problems with pollution of more local character.

4.1.4 Perceptions of Sustainable development

The rest of the questions included in Part I of the questionnaire cover different aspects SD and ESD. As the results in Table 1. indicates a large majority of the Russian students (71%) answered that they had never heard about the expression sustainable development before. And among the students that had heard about the concept most had got to know about it outside school through mass media and sources on the Internet. Among the Swedish students the situation was the opposite a majority of the students (68%) stated that they had heard about the expression before and most of them had learned about SD through school.

Table 1. Answers to question number 6. Have you heard about the expression sustainable development before? Where? When?

<table>
<thead>
<tr>
<th></th>
<th>Rus</th>
<th>Swe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, first heard about it in school</td>
<td>13%</td>
<td>68%</td>
</tr>
<tr>
<td>Yes, first heard about it outside school</td>
<td>16%</td>
<td>7%</td>
</tr>
<tr>
<td>No, have never heard about it</td>
<td>71%</td>
<td>25%</td>
</tr>
</tbody>
</table>

When it comes to the understanding of the concept the situation is another, the general understanding of the concept seem to be rather low both in Russia and Sweden. Just a few of the students expressed that they had a feeling of the meaning of the concept sustainable development. Most students only had a vague idea about what expression stand for. Most of the students, however, answer that they would like to learn more about sustainable development and almost all of the students believe that education and the educational system play an important role for sustainable development. Both the interviews and the questionnaires confirm that students who have been taking part in the exchange program are generally more well informed and positive towards SD.

The results in Table 2. show that most of the Russian students feel that they don't have the opportunity to discuss issues related to SD in school. If it is discussed, it discussed during the biology and ecology lessons. Again the situation is the opposite among the Swedish students a clear majority answer that they get to discuss issues concerning SD in school, but still, many of them believe that the subject is discussed to little and that SD is most frequently dealt with as a subject of it's own and not as a integrated part of different subjects.
Table 2. Do you get the opportunity to discuss these kind of issues at school?

<table>
<thead>
<tr>
<th></th>
<th>Rus</th>
<th>Swe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>22%</td>
<td>95%</td>
</tr>
<tr>
<td>No</td>
<td>78%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Some of the students, both Russian and Swedish, express their doubts about the viability of the concept of SD. One of the most common objections towards SD is that it is “a lot of talk and no practice”. Other students are afraid that human individuality priorities and greed will stand in the way of sustainable development.

4.2 Part II – The individuals role for SD

In this part of the questionnaire, as described above, the students got to express to what extent they agreed with nine different statements concerning different aspects of SD by ticking a four point scale ranging from disagree to agree. The mean of these nine items is presented in Table 3. The listed means represent the average level of agreement towards the different state among the students.

Table 3. Means of agreement with statements about the environment from Part II of the questionnaire. Scale from 1 (Disagree) to 4 (Agree).

<table>
<thead>
<tr>
<th>Part II</th>
<th>Rus</th>
<th>Swe</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Threats to the environment are not my business</td>
<td>1,73</td>
<td>1,93</td>
</tr>
<tr>
<td>B. Environmental problems are exaggerated</td>
<td>1,54</td>
<td>1,61</td>
</tr>
<tr>
<td>C. Science and technology can solve all environmental problems</td>
<td>2,31</td>
<td>2,52</td>
</tr>
<tr>
<td>D. I can personally influence what happens with the environment</td>
<td>2,48</td>
<td>3,02</td>
</tr>
<tr>
<td>E. I am optimistic about the future</td>
<td>3,15</td>
<td>2,62</td>
</tr>
<tr>
<td>F. I am willing to make personal sacrifices in order to solve the</td>
<td>2,60</td>
<td>2,36</td>
</tr>
<tr>
<td>environmental problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Environmental problems can be solved without big changes in our way</td>
<td>2,06</td>
<td>2,14</td>
</tr>
<tr>
<td>of living</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. I believe that the concept of sustainable development can be useful</td>
<td>2,98</td>
<td>3,24</td>
</tr>
<tr>
<td>tool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. It is the responsibility of the rich countries to solve the</td>
<td>1,98</td>
<td>2,82</td>
</tr>
<tr>
<td>environmental problems of the world.</td>
<td></td>
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</tr>
</tbody>
</table>
The results in Table 3. indicate that the Russian and Swedish students share values concerning many of the statements in Part II of the questionnaire. The largest differences in mean level of agreement are shown towards the following statements:

- D. I can personally influence what happens with the environment
- E. I am optimistic about the future
- I. It is the responsibility of the rich countries to solve the environmental problems of the world.

The Swedish students feel, to a greater extent than the Russian students, that they personally can influence what happens with the environment. The Russian students, however, seem to be more optimistic about the future than the Swedish students. The Swedish students tend to place more of the responsibility for the environmental problems of the world on the rich countries than the Russian students do.

4.3 Part III – Ranking of goals for the society

In the last part of the questionnaire the students got to express how important they found seven different goals for the society. The students answered by ticking a scale with ten grades ranging from Not important to Very important. The means of these seven items are presented in Table 4. The listed means represent the average level importance the Russian and Swedish students place towards the different goals.

Table 4. Means of emphasis on different goals for a society from Part III of the questionnaire. Scale from 1 (Not important) to 10 (Very important).

<table>
<thead>
<tr>
<th>Part III</th>
<th>Rus</th>
<th>Swe</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Achieve high economic growth</td>
<td>8,47</td>
<td>7,16</td>
</tr>
<tr>
<td>II. Protect untouched nature</td>
<td>8,62</td>
<td>8,05</td>
</tr>
<tr>
<td>III. More emphasis on healthcare</td>
<td>8,80</td>
<td>8,11</td>
</tr>
<tr>
<td>IV. More emphasis on school and education</td>
<td>8,69</td>
<td>8,11</td>
</tr>
<tr>
<td>V. Protect the environment against pollution</td>
<td>8,69</td>
<td>8,86</td>
</tr>
<tr>
<td>VI. Emphasis on fighting economical inequalities</td>
<td>8,00</td>
<td>6,93</td>
</tr>
<tr>
<td>VII. Emphasis on meeting the demographical challenge</td>
<td>8,18</td>
<td>6,41</td>
</tr>
</tbody>
</table>

As the results in Table 2 indicates all students put relatively high emphasis on all of the suggested goals. The Russian students have indicated higher concern than the Swedish students about almost
all of the goals, with one exception, when it comes to protecting the environment against pollution. The ranking varies rather little between the Russian and the Swedish students in most of the cases. The largest differences in ranking are shown in the following cases:

- I. Achieve high economic growth,
- VI. Emphasis on fighting economical inequalities,
- VII. Emphasis on meeting the demographical challenge.

In all of these cases the mean of the Russian students ranking of the goals where higher than the Swedish students.

5. Discussion

The purpose of this study has been to shed some light over the outcome of the efforts that are being put into the promotion of ESD. The first set of questions were formulated to get an idea about some of the problems and priorities that are relevant for Russian and Swedish students.

5.1 Students perception of SD

The students worries, in many ways, reflect the everyday realities and discussions of the societies. Some patterns connected to the different cultural, economical and social circumstances and contexts in the two countries can be seen in the students answers. The Russian students answers are generally more focused on rather concrete issues. Issues with rather clear symptoms and consequences. Economical hardship, low salaries and low scholarships are the reality for many Russian families. The poor water quality affects the everyday life in a very concrete ways. The answers of the Swedish students, on the other hand, in many cases tend to deal with issues of in some senses less distinct character. Issues like stress and global warming are in some sense less concrete. Previous studies has also shown that societal and environmental matters, such as environmental risks or challenges facing a society, achieve more concern when the matters are connected to the personal life of the student than to challenges on a more distant societal level (Schreiner & Sjöberg, 2005). I believe that it is important to be aware of how the students reason in order to adapt the education to their realities. The students concerns should be the starting point for the education.

As mentioned before the students worries in many ways reflect the issues that are in focus of the current discussion. It is the educational systems responsibility to put the discussion in to a context, to broaden the focus and show that there are often different ways to look up on a certain issue. The focus of the general discussion tends to shift rather rapidly, today global warming is the focus of the discussion, fifteen years ago the depletion of the ozone layer was the biggest worry. This is where ESD has the potential to contribute by showing the links between the individual actions, and individual phenomenon and more general trends. It is encouraging to see that many of the students state that they are interested to learn more and get the opportunity to discuss these kinds of issues more often.

However, if the ambition is, as stated by the UN, to integrate ESD as a natural part of the educational system greater efforts are needed. The results show that just a few of the Russian students have heard about the concept of sustainability and even if a majority of the Swedish students state that they have heard of the concept only a minority of the students of both nationality
expressed that they grasped the general ideas of the concept. One explanation for this is probably the lack of a clear definition of the concept, the concept covers a large range of issues and a wide array of views has fallen under its umbrella. This broad focus may be a strength since it may help to over bridge and integrate ideas and knowledge from different disciplines but there is also a potential risk that the concept becomes impossible to grasp and that it watered down to empty words. So far the commitment to ESD has mostly been limited to the formulation of international declarations and national policy documents if the ambition really is to make a change more concrete commitments has to be made (i.e. economical commitments).

5.2 The individuals and the societies role for SD

The results of Part II and Part III of the questionnaire show that the Russian and Swedish students share many values and priorities. But there are some areas where the answers of the two different groups of students show different trends. Not surprisingly the Russian students rank economical goals like high economical growth and emphasis on fighting economical inequalities higher than their Swedish counterparts. The economical inequalities are clearly visible almost everywhere and many of the Russian students express that they believe that this is one of the most important challenges to overcome. Both the Russian and Swedish students images of the future and their own capability of influencing the future development tend to be optimistic. The results indicate that the Russian students tend to be more optimistic about the future than the Swedish students. The Swedish students, however, seem to be more confident that they personally can influence what happens to the environment. This is positive and something to cling on to. For the students to be empowered to meet the future challenges, they must have hope and visions for the future and a general feeling that she or he can influence the future of the world (Schreiner & Sjöberg, 2005).

5.3 Conclusion

The project reports from the schools that has been taking part in the exchange program between Russia and Sweden show that the outcomes have been very positive (Forsberg, 2005). Both the interviews and the questionnaires confirm that students who have been taking part in the exchange program are generally more well informed and positive towards SD. Maybe this program can function as an positive example for how education can become more interdisciplinary and how international co-operation can be strengthened.

I got the impression both through the questionnaires and the interviews that many of the students think and reason a lot about issues that could be sorted under the sustainable development umbrella. I believe the educational system could play an important role by offering an arena and a forum where students and teachers can discuss these issues together. If this discussion takes place under the label of ESD is maybe not that important, but it is important that the discussion is allowed to take place. I believe that one of the most important spin off effects of ESD is the introduction of a more pluralistic approach to teaching and learning.

It is also important to consider the critique that has been put forward against SD and ESD as concepts, critique which have come from several different direction. Some environmentalists argue that the concept of SD is contradictory and that economic policies based around concepts of growth and continued depletion of resources cannot be sustainable (Sandell 2005). Critique from another angel is clearly illustrated through the following quotation that I came across during my stay in Russia "In order for sustainable development to work in places like Scandinavia, they have to convince everyone else to live the same way. The Europeans dislike Americans for lots of reasons, but one of the big ones currently is their belief that we 'burn to much oil'. It is hard to make alcohol

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fuel seem competitive, or windmills seem practical when there are people who continue to run their cars and power plants on gas and oil.”

As mentioned before the complexity of social, political, and economic aspects of different countries has to be taken into consideration when formulating all educational policies, this is also the case with ESD. Models that work in one country and one contexts are not necessarily applicable, meaningful or useful in other countries and contexts. For some countries the path to sustainable development begins with greater access to basic education. Literacy and numeracy allow farmers to adapt to new methods, cope with risk, to respond to market signals, to gain title to their land, and to apply for bank loans and other credit (Hopkins & Mc Keown, 2003). And on the other end of scale some societies might have to reorientate the way of living to better coincide with the limited amount of resources available.

As I have been trying to stress in this discussion there are lot of aspects that need to be taken in to account if the ambition is to implement the UN strategy for ESD in the Russia and Sweden. Both countries share a lot of strengths that could be beneficial in this strive: rich human resources, good theoretical science, a good coordination system in education and a highly developed system of national education are some of these (Elias et al., 2004).

6. Further research

If ESD is going to play any role in the formation of the future society research on teaching and learning regarding SD and ESD has to be strengthened. One of the main obstacles to the integration of SD in all education seems to be a lack of understanding regarding the concept of SD and in particular a lack of integration of the pluralistic dimensions of SD. ESD is still a very young field both on the practical educational arena and in the academic world. More research will be needed on all levels.

The lack of clear intentions from local and national authorities on the importance of SD and ESD is another barrier that needs to be overcome. Here the research community could contribute by identifying the bottlenecks that prevents an effective implementation.

More efforts have also to be put into inclusion of more actors in the process, both on local and national level. For the ESD to make any difference, the concept has to be a natural part peoples consciousness and actions. As indicated by the results of this study the concerns and priorities vary quite markably from one country to another. Taking this in to consideration I believe it is important to keep conducting more studies exploring different actors perceptions of SD and to keep exchanging experiences on the performance of ESD in different context. One possibility would be to perform a study in the same spirit as ROSE (Schreiner & Sjøberg, 2005) but with the focus entirely on SD including several countries and several different actors from the educational field.
References


URL: [http://www.regeringen.se/content/1/c6/03/41/44/0fe2be94.pdf](http://www.regeringen.se/content/1/c6/03/41/44/0fe2be94.pdf) (2006-09-12)


Appendix: Questionnaire

Petrozavodsk November 2006

Male: Female:

Age:

Education:

Part I

1. What are the most important difficulties/problems you face in your everyday life? How do you think these difficulties/problems can be solved?

2. In your view, what are the most important problems in the society as a whole?

3. What issues in the environmental field concern you the most?

4. Why?

5. What do you think of when you hear the expression «sustainable development»?

6. Have you heard about this expression before? Where? When?

7. In your opinion what is role of education and the educational system for sustainable development?

8. Do you see any particular problems with the concept?

9. In your view, what are the main obstacles that need to be overcome in order to implement a sustainable development?

10. Do you get the opportunity to discuss these kind of issues at school?

11. Additional comments:
Part II

To what extent do you agree with the following statements?  
(Answer by making a mark on the scale 1 – 4)

A. Threats to the environment are not my business

\[
\begin{array}{cccc}
\text{Disagree} & 1 & 2 & 3 & \text{Agree} & 4 \\
\end{array}
\]

Comments:

B. Environmental problems are exaggerated.

\[
\begin{array}{cccc}
\text{Disagree} & 1 & 2 & 3 & \text{Agree} & 4 \\
\end{array}
\]

Comments:

C. Science and technology can solve all environmental problems:

\[
\begin{array}{cccc}
\text{Disagree} & 1 & 2 & 3 & \text{Agree} & 4 \\
\end{array}
\]

Comments:

D. I can personally influence what happens with the environment.

\[
\begin{array}{cccc}
\text{Disagree} & 1 & 2 & 3 & \text{Agree} & 4 \\
\end{array}
\]

Comments:

E. I am optimistic about the future:

\[
\begin{array}{cccc}
\text{Disagree} & 1 & 2 & 3 & \text{Agree} & 4 \\
\end{array}
\]

Comments:

F. I am willing to make personal sacrifices in order to solve the environmental problems.

\[
\begin{array}{cccc}
\text{Disagree} & 1 & 2 & 3 & \text{Agree} & 4 \\
\end{array}
\]

Comments:
G. Environmental problems can be solved without big changes in our way of living

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

H. I believe that the concept of sustainable development can be useful tool.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

I. It is the responsibility of the rich countries to solve the environmental problems of the world.

<table>
<thead>
<tr>
<th>Disagree</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4</td>
<td></td>
</tr>
</tbody>
</table>

Comments:

Part III

Below is a list of possible goals people may find important. In what degree do you find these goals important for your society? (Respond by making a mark on the scale from 1 to 10)

I. Achieve high economic growth

Not important 1 2 3 4 5 6 7 8 9 10 Very important

II. Protect untouched nature

Not important 1 2 3 4 5 6 7 8 9 10 Very important

III. More emphasis on healthcare

Not important 1 2 3 4 5 6 7 8 9 10 Very important

IV. More emphasis on school and education
V. Protect the environment against pollution

VI. Emphasis on fighting economical inequalities

VII. Emphasis on meeting the demographical challenge

Which of the goals mentioned above do you find most important (chose two and motivate)?

Thank you for your participation!