Learning to be a Global Citizen

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International Geographical Union Commision on Geographical Education
2004


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INTERNATIONAL GEOGRAPHICAL UNION COMMISSION ON GEOGRAPHICAL EDUCATION

GEOGRAPHY AND CITIZENSHIP EDUCATION: RESEARCH PERSPECTIVES

Editors: W. Ashley Kent and Andrew Powell

Published by the Institute of Education University of London
Learning to be a Global Citizen?
Perspectives of Opportunities to Promote Education for Active Citizenship
and Sustainability in the ENO Environment Online Project

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1. Introduction

ENO (Environment Online) is an international web-based project promoting environmental
learning coordinated from Finland. ENO is an independent application of the GLOBE
Program with a stronger emphasis on collaborative interaction in a virtual learning
environment. The curriculum of one ENO studying year is divided into four periods, which
are focusing on education for environmental awareness and sustainability from different
points of view and fostering active citizenship on local, national and global levels.

ENO succeeded during its first years of action to engage participants with environmental
discussions on a regular basis especially well during virtual lessons hosted by different
teachers. According to feedback and seasonal assessments, virtual lessons based on
synchronized chats were the most appreciated learning environments by students. But were
the educational goals of these virtual lessons achieved? What did the students learn and how
did they use this particular type of Web tool to build knowledge and share experiences of
activities for the environment?

In this article I concentrate on presenting some findings of teaching-learning processes taking
place during virtual lessons of ENO. Chats under the theme “The way we live, sustainability
in our school” from spring 2002 were chosen to be scrutinized. The data was collected from
the ENO chat archive (ENO 2003). Furthermore experiences of implementing ENO in school
curricula are presented in the light of data collected from the teachers and students
participating in the first conference of ENO last summer.

2. The core idea of ENO

The international GLOBE program was successfully implemented in Finland some years ago.
Several teachers, however, found many of the GLOBE protocols difficult to fit in their daily
classes and curriculum. Also the major focus on environmental science with monitoring did
not leave enough time for activities promoting action for the environment, cultural exchange
and sustainable living. Taking into account these aspirations of teachers, this new independent
web school called ENO Environment Online was created from an initiative of an experienced
GLOBE teacher, Mr. Mika Vanhanen (Kaivola 2000; Kaivola 2003).

The main goal was to create a network as active as possible for participants from all over the
world. Accordingly it was especially stressed that students and teachers from developing
countries should also be able to join this virtual community. In the beginning of the third year
there were 104 official ENO schools around the world. The age of participating students
varied from 12 to 18 years. The objectives of ENO are:

- Learning to work collaboratively in a web based environment
• Enhancing environmental awareness
• Increasing global understanding and real internationality among participants
• Fostering sustainability
• Connecting schools from developing countries to a learning network
• Developing and studying teaching and learning methods in a web based learning environment.

The planning and implementation process of ENO started in autumn 1999. Compared to the GLOBE program, the focus of ENO was concentrated more on taking into account the social and cultural life worlds of students. However, the monitoring of school surroundings, weather and potentially interesting local features of landscapes was still included in the agenda. The curriculum of one school year was divided in four major theme periods. These regular themes are based on four ideas: (1) The Place we live in (physical and social environment), (2) This is our Lifestyle (cultural environment), (3) This is our Earth (physical environment and global education) and (4) The way we lead our lives (education for sustainability).

During its first two years of action, ENO has received a remarkable amount of support and publicity including several donations and international awards for its achievements in promoting the use of IT technology and international understanding.

3. The way we live, sustainable development in our school

Learning activities of these weeks under the theme “The way we live” included the task of looking for information on consumption in ENO schools, making a report and publishing it in the form of a poster. Students were also encouraged to give poster presentations to their schoolmates and discuss the findings in web chats. Each week concentrated on a particular theme of sustainability in school, such as saving paper, water and energy.

Altogether 15 virtual chats were arranged during the academic year 2001 – 2002 under this ENO theme ‘Sustainable development in our school’. There were students and teachers from 14 different schools participating in these discussions with topics varying from predetermined issue based questions to chancing frustrated opinions, because videos connected to computers and other IT-technology equipments were not working as was expected at a crucial moment. As can be seen from the table 1, in most of the chats there were students and teachers from two different schools online during one chat. The duration of the chat sessions ranged from 26 to 86 minutes.
Table 1. The ENO Environment Online chat sessions under theme “Sustainable development in our school” in January – March 2002.

<table>
<thead>
<tr>
<th>Date</th>
<th>THEME: Sustainable living</th>
<th>Time UT</th>
<th>Length</th>
<th>Number of teachers online</th>
<th>Number of schools online</th>
<th>Main topic and style of the discussion</th>
<th>IDs of schools online</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.210102mon</td>
<td>Sustainable consumption</td>
<td>10.00-10.32</td>
<td>32 min.</td>
<td>1</td>
<td>2</td>
<td>Predetermined questions</td>
<td>FI02, SI01</td>
</tr>
<tr>
<td>2.210102mon</td>
<td>Sustainable consumption</td>
<td>11.11-12.37</td>
<td>26 min.</td>
<td>2</td>
<td>2</td>
<td>Predetermined questions</td>
<td>FI03, IL01</td>
</tr>
<tr>
<td>3.210102mon</td>
<td>ITC-implementation</td>
<td>19.05-19.45</td>
<td>40 min.</td>
<td>2</td>
<td>2</td>
<td>Problems getting online, study plans</td>
<td>US02, US01</td>
</tr>
<tr>
<td>4.230102wed</td>
<td>Sustainable consumption</td>
<td>12.02-13.15</td>
<td>73 min.</td>
<td>1</td>
<td>2</td>
<td>Predetermined questions</td>
<td>FR01, CZ01</td>
</tr>
<tr>
<td>5.050102wed</td>
<td>Paper consumption</td>
<td>02.05-02.30</td>
<td>25 min.</td>
<td>1</td>
<td>3</td>
<td>Predetermined questions</td>
<td>FI02, FI03, IE01</td>
</tr>
<tr>
<td>6.060202wed</td>
<td>Paper consumption</td>
<td>12.04-01.30</td>
<td>86 min.</td>
<td>2</td>
<td>3</td>
<td>Predetermined questions</td>
<td>FR01, CZ01, IL02</td>
</tr>
<tr>
<td>7.180202mon</td>
<td>Water management and use</td>
<td>10.04-10.38</td>
<td>34 min.</td>
<td>1</td>
<td>2</td>
<td>Predetermined questions</td>
<td>FI02, CZ01</td>
</tr>
<tr>
<td>8.200202wed</td>
<td>Water management and use</td>
<td>12.18-01.19</td>
<td>61 min.</td>
<td>1</td>
<td>1</td>
<td>Predetermined questions</td>
<td>CZ01</td>
</tr>
<tr>
<td>9.210202thu</td>
<td>Water management and use</td>
<td>09.11-10.40</td>
<td>79 min.</td>
<td>2</td>
<td>3</td>
<td>Predetermined questions</td>
<td>FI02, FI06, CZ01</td>
</tr>
<tr>
<td>10.180302mon</td>
<td>Summary of reports</td>
<td>10.00-10.50</td>
<td>50 min.</td>
<td>3</td>
<td>2</td>
<td>Problems with video and IT equipment</td>
<td>FI02, IL01</td>
</tr>
<tr>
<td>11.180302mon</td>
<td>Summary of reports</td>
<td>23.01-23.30</td>
<td>29 min.</td>
<td>2</td>
<td>2</td>
<td>Problems with video and IT equipment</td>
<td>US02, US01</td>
</tr>
<tr>
<td>12.190302tue</td>
<td>Testing video chats</td>
<td>08.55-09.27</td>
<td>33 min.</td>
<td>1</td>
<td>2</td>
<td>Problems with videos and financing</td>
<td>IN01, IL01</td>
</tr>
<tr>
<td>13.190302tue</td>
<td>Summary of reports</td>
<td>09.49-10.46</td>
<td>57 min.</td>
<td>2</td>
<td>2</td>
<td>Changing experiences about ENO activities</td>
<td>FI01, AU01</td>
</tr>
<tr>
<td>14.190302tue</td>
<td>Summary of reports</td>
<td>02.23-02.56</td>
<td>33 min.</td>
<td>1</td>
<td>1</td>
<td>Changing experiences about ENO activities</td>
<td>FI02</td>
</tr>
<tr>
<td>15.200302wed</td>
<td>Summary of reports</td>
<td>12.17-01.27</td>
<td>70 min.</td>
<td>1</td>
<td>2</td>
<td>Changing experiences about ENO activities</td>
<td>FR01, CZ01</td>
</tr>
</tbody>
</table>
4. ENO Chat Monday 21st of January 2002

For this paper I chose one particular chat to be more closely scrutinized. To my mind this first chat of the theme period represents the general line of ENO chats dealing with sustainable development in schools. The students chatting came from two different schools, one from Finland and the other from Slovenia using foreign language. The chat was also relatively short and it followed the line of predetermined questions.

It was learned from experiences and evaluations of the previous ENO year that keeping open and long lasting chat lessons aligned with the aim is quite difficult (Kaivola & Masalin 2003). Therefore the main questions for each chat sub theme were published beforehand on the web site and teachers were informed via the e-mailing list. The purpose of these actions was not only to guide and help the moderation of the chat sessions, but also giving students and teachers in schools time to prepare and connect chat themes more closely to ordinary classes. It should also be kept in mind that most of the participants of ENO are speaking English as their first or second foreign language. This makes preparations even more important.

The chat presented and analysed here took place on January the 21st 2002. The questions given beforehand for this chat were as follows:

- What do you know about sustainable development?
- What do you know about paper consumption in your school?
- What do you know about water consumption in your school?
- What do you know about energy consumption in your school?
- What do you know about environmental education in your school?

Participants of this chat came from two different secondary schools in Finland and Slovenia. The Finnish chat host concentrated very much on keeping these questions in mind. As a matter of fact, she hardly said (or actually wrote) anything else during the session. Her students seemed to be well prepared, too. As can be seen from the example on the table, the Finnish students kept answers to the questions probably following notes written in notebooks beforehand. That might explain, why none of them noticed the initiative done by the Slovenian students concerning an interesting way of fostering responsible consumption. However, this shows us one of the most serious difficulties of chat conversation: It really is a demanding job for participants to concentrate on contributing their own notes to the discussion and at the same time reading and following up the notes of others.

Table 2. An example of ways to respond and not to respond to each other’s notes.

<table>
<thead>
<tr>
<th>Time</th>
<th>Note</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:10</td>
<td>TEACHER]: What do you know about paper consumption in your school?</td>
<td>T-S</td>
</tr>
<tr>
<td>10:11</td>
<td>Jenni S FI02]: We need very much paper in school. We use notebooks,</td>
<td>S-T</td>
</tr>
<tr>
<td></td>
<td>drawing paper, toilet paper, copies, etc.</td>
<td></td>
</tr>
<tr>
<td>10:11</td>
<td>Suvi FI02]: In our school we use paper books, note books, copies,</td>
<td>S-T</td>
</tr>
<tr>
<td></td>
<td>toilet paper, paper tissues and drawing paper. We use paper very much</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I think that we can save paper more than we do.</td>
<td></td>
</tr>
<tr>
<td>10:11</td>
<td>Riikka FI02]: We use paper in drawing, books, notebooks, toilet paper</td>
<td>S-T</td>
</tr>
<tr>
<td></td>
<td>and paper tissues...</td>
<td></td>
</tr>
<tr>
<td>10:11</td>
<td>Grega SI01]: Few years ago we had a magazine called &quot;Firbec&quot;...</td>
<td>S-S</td>
</tr>
<tr>
<td>10:12</td>
<td>Keja D SI01]: we didn't pay nothing-It was free</td>
<td>S-S</td>
</tr>
</tbody>
</table>
The interface during the chat

Perhaps it was these predetermined questions that kept the interface of this particular discussion straightforward and aligned with the target. The question and answer based interface between students and the only teacher played an important role in the chat. Nevertheless, at the beginning and at the end of the session the student-to-student interaction concentrated on mainly social conversation about who is online and who is entering or leaving the session. While looking at the main content categories illustrated in the deck of charts in figure 1, most of the talk of students to teacher consisted of answering questions. And on the other hand, the one teacher alone made most of the questions.

Figure 1. Summary of the interface and main contents during the selected ENO chat.
In student-to-student interaction the social aspect as a warming up activity was very important to students. They had to locate themselves in this virtual temporary group saying hello and introducing themselves. This pattern is evident in all of the other ENO chat analysed during this evaluation research. Also continuing each other’s social comments and issue-based remarks was the most common type of interface among chatting students.

Contents of the notes

What were the students and the moderating teacher talking about during this chat? In order to figure this out, the notes of the chat were classified into more specified contents categories than the ones presented above. From table 2 one can see that the teacher stuck very precisely to the predetermined issues in her questions and students gave her answers. They were mostly talking about paper, water and energy consumption in general and about their own experiences of ENO activities.

Table 2. Contents and interaction of the selected chat session.

<table>
<thead>
<tr>
<th>NUMBER OF CHAT NOTES DEALING WITH</th>
<th>STUDENT TO STUDENTS FR</th>
<th>STUDENT TO TEACHER FR</th>
<th>TEACHER TO STUDENTS FR</th>
<th>ALL NOTES FR</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUESTIONS ABOUT:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper, water and energy use</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Environmental action and protection</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Concept of sustainability</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Local weather and casual talking</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>All questions</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>ANSWERS REFERING TO:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper, water and energy use</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Environmental action and protection</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Concept of sustainability</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Schools’ ENO activities</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Local weather and casual talking</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>All answers</td>
<td>3</td>
<td>25</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td>EXPLAINING COMMENTS CONNECTED TO KNOWLEDGE BUILDING:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paper, water and energy use and production</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Pro-environmental action and responsible behaviour (recycling)</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Sustainability and behaviour in general</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Local weather</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Wrapping up</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>All comments</td>
<td>34</td>
<td>2</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>HELLOS AND BYES:</td>
<td>16</td>
<td>0</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>ALL NOTES</td>
<td>57</td>
<td>27</td>
<td>8</td>
<td>92</td>
</tr>
</tbody>
</table>

Sharing experiences was also an important topic of discussion among students themselves. They continued talking about different ways of sustainable consumption, but connected them more often to their own experiences and ideas of responsible behaviour than in answering to
the teacher. In this particular chat the sharing of practical environmentally friendly daily activities engaged these students in some knowledge building conversations, although these threads of notes were fragmented and short.

5. Experiences of participants

The first face-to-face meeting of the ENO community was arranged in July 2002 in Finland. This conference consisted of presentations of students, teachers and researcher, outdoors activities, excursions and cultural exchange. During one of the scientific sessions, experiences of implementing ENO activities in school curricula and daily schedules were discussed. Also a small form of questions was delivered in order to collect some written data to be more closely analysed.

The small survey form had three open questions in addition to the background information collected for further research purposes. These questions were designed to produce new knowledge of the teachers and students engaged with ENO about the following themes: (1) what did they find rewarding in ENO project, (2) what did they find frustrating or negative in ENO and (3) what kind of expectations they had for ENO in the future. In this paper the first two themes are briefly highlighted.

The survey forms were delivered to the participants during a session about the evaluation research activities connected to ENO (Kaivola 2002). 44 participants of the conference gave a response. 13 of the responses came from teachers or other adults attending the session and 31 from students representing countries from Europe, Africa, South East Asia and North America.

Rewarding and positive things in ENO

Social aspects of ENO were very important to the students. However, in most of the responses also knowledge building of environmental and cultural issues was also mentioned:

*I think they are interested in me and my life and how it has different type of culture.*
Anonymous student.

*Meeting people around the world. Comparing data with other schools and seeing how they vary.* Anonymous student.

*The knowledge of negative and positive environmental aspects of the world and the different cultures around the world.* 12th grade student.

Improving own skills in ENO activities played an important role also. Language skills were often mentioned, but also some signs of fostering higher order thinking were seen:

*There are many positive things in ENO project. I have learnt much English and I have got new friends. This is really good way to develop myself. We are connecting people from all around the world. I have started to think more environment and so on.* Student from a Finnish secondary school.
I think all things in ENO are positive. But the most good thing is solving environmental problems together. Student from a secondary school in Russia.

Remarks referring directly to values and attitudes were mentioned only briefly using scattered words on a high abstract level like world peace and saving the planet. This is understandable and expected, because answering a questionnaire form in a lecture hall in 10 to 15 minutes does not provide a proper situation for deep thinking and reflection.

The comments of teachers were also pleasing and positive throughout. They referred mostly to the well-being, motivation and positive expectations of their students. The real life aspect was the most appreciated feature in the responses:

Students connecting with other students from around the world. This makes them excited to study and helps them to understand environment + cultural issues. Teacher from USA.

My daughter has been involved one school year. She spent her lunch time entering data, so she must like it! Also to me, the ability to meet other cultures is invaluable. Substitute teacher from USA.

It is very flexible for different subjects, for different ages. It use high level IT, very comfortable web site EXCELLENT COORDINATOR – MIKA. Teacher from Russia.

Frustrating and negative things in ENO

As expected, most of the active participants were very committed to the ENO project. More than half of the responding students left the frustrating part of the form either totally unfilled or wrote that there simply was nothing frustrating or negative in ENO. Nevertheless, some of these writers continued, that the only thing they were not pleased with was the lack of time to spend with ENO activities. This common feature of time restrictions and demands of the curriculum in implementing technology-based innovations in school context (Ely 1999; Kaivola 2003) was identified in this data too from most of the responses of the teachers.

As for example Spitzer (2001, 51-52) points out most of the problems of distance learning concentrate on two things: technical problems with software and facilitation and low level on engaging which in many cases leads to dropouts. The factor that made the difference was the amount of personal attention and online interaction. These principles were found in responses of the ENO participants. Most of them mentioned problems with chat arrangements. Many of them had run into technical problems with no working connections at a virtual lesson time, but the most serious problem seemed to be the absence of potential far away chatting partners:

Finding the time to keep up with the lessons is a problem for me. This is getting easies the longer I am in the program. [...] I would like for my students to connect directly with students from other countries through e-mail. Chat is impossible because of the time zones. We work together with schools close to us but not far away. Teacher from US, two years in ENO

When we should be set up for a chat and no one shows up. Student, 10th grade.

Connections. When we have chats, if we have technical problems, or they don't show up. Student, 8th grade.
The third theme of the frustrating things was connected to the arrangements and contents of the project's agenda. Different time zones and lengths of school year turned out to be problematic too, especially from the teachers' point of view. Attention was also paid to the contents of the project and the way results from students' activities were published on the website:

Differences in academic years. When north is on holiday we have our active period. Theme of culture is difficult to participate in (and I believe not related to environment theme). Teacher from southern Africa.

In ENO there are no really frustrating or negative things. But sometimes I have problems with understanding people from English speaking countries. High school student from Russia.

I would like the graphs at the end of the surveys to be a little more clear, but I like the program. Anonymous student.

6. Conclusions

What does the contents of one selected chat and experiences described by active participants tell us about possibilities to foster global citizenship in a virtual learning environment like ENO? According to Wade (2001, 165), the key elements of the framework of education for global citizenship are (1) knowledge and understanding, (2) skills and (3) values and attitudes. In ENO contexts the first and second elements show up very clearly, but values are more difficult to define and assess. This is mostly because the data for this article was collected from written sources like the ENO chat archive and short survey form.

As Hicks and Bord (2001, 413) clearly point out, many of the issues connected to global education highlight major, maybe insoluble, problems about the human condition. Learning about global issues is thus potentially a traumatic activity, so what do students actually experience when they learn about them? Answering this question in the ENO context is quite easy. In a virtual learning environment dealing with environmental issues is based on changing ones own experiences in a simple and quick way during chat sessions. The major part of the work is still naturally left to the responsibility of teachers in their classrooms. But as was pointed out very clearly from the response of the ENO conference participants, the social interaction is the most appreciated feature of ENO.

According to the analysed chat here and the previous ones before (Kaivola & Masalin 2003), it seems to be quite clear, that besides the social activities the talk of students concentrates mostly on local issues, own concrete experiences and general knowledge adapted or copied from study books. Interpreting the comments of the students gives us clues that their idea of ecological citizenship is based on social construction (Huckle 2001, 147). In the light of this data, it is easy to trust that real contacts and relationships with other young people from far away places are one essential key to gain deeper understanding about local and global issues. The sense of global community expressed by the participants of the ENO conference gives us hope that international projects like ENO have chances to support young people to learn to tackle difficult environmental problems and believe in a sustainable future in a world worth living for.
7. References


