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on

Sustainable Development

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STUDENT MANUAL

Problems of sustainable development are typically complex and perspectives on the nature and solution of these problems are likely to vary with national, cultural and disciplinary background. Transboundary competence, the ability to communicate and collaborate across the boundaries of nation, culture and discipline, is therefore an essential competence for sustainable development. In the European Virtual Seminar on Sustainable Development, or to use its acronym EVS, students with different national and disciplinary backgrounds work together on case studies in sustainable development, using modern ICT to overcome the constraints of place and time. The heterogeneous student groups are an excellent learning environment to develop transboundary abilities, as you and your group members experience different peer views in a very direct way when you have a dialogue on sustainable development issues and try to come to a joint solution of the problem.

What is EVS?

The European Virtual Seminar on Sustainable Development (EVS) may be defined as 'a didactic concept that promotes an international, multidisciplinary dialogue between a learning community of geographically distributed students on current and authentic sustainable development issues, using modern ICT and the internet to overcome the constraints of place and time'.

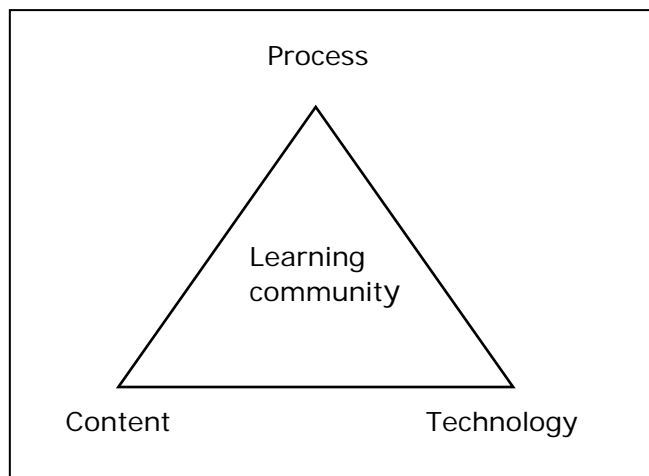
In terms of the learning process, it is important to be aware of the differences between:

- a discussion, where a student wants to make clear what he or she thinks,
- a debate, in which a student makes a point, but is also willing to listen to points made by other students, and
- a dialogue, in which students question each other to understand the ideas underpinning their statements.

The ultimate goal of EVS is to create a dialogue between a learning community of geographically distributed students.

The components of EVS (see figure):

- a learning community, consisting of geographically distributed students (and their tutors) studying and working in small heterogeneous students groups;
- a learning process that supports collaboration between students of different nationalities and from different cultural and disciplinary backgrounds;
- a learning content that delivers background information about sustainable development and case studies on current and authentic issues;
- a learning technology based on modern ICT and the internet that facilitates collaboration, communication and interaction between students.



Aim and learning objectives

The aim of EVS is to foster an international, multidisciplinary dialogue on sustainable development among students from all over Europe. The EVS confronts students directly with divergent peer views on sustainable development, and their implications for a societal shift towards a more sustainable Europe. These differences in student views depend on differences in the social, economic, political, cultural or environmental contexts in which the students live.

On the basis of this aim, the learning objectives for students are as follows. After participating in the EVS, you should be able to:

- describe and operationalise the concept of sustainable development;
- analyse sustainable development issues from a European perspective;
- link local, national and European policy-related issues to a societal shift towards sustainable development;
- collaborate with students of different nationalities and from different cultural and disciplinary backgrounds;
- take into account different cultural and disciplinary views on sustainable development issues when your group has to develop an enriched problem definition and possible solutions for the problem at stake;
- use the computer-conferencing system effectively for collaborative learning.

Educational format

The educational format of EVS can be described in terms of its underlying educational principle (collaborative learning), the operationalisation of this principle (some rules and protocols that support the learning process), the content of the seminar (case studies on sustainability problems) and the learning technology applied (modern ICT tools).

Collaborative learning

Collaborative learning between geographically distributed students is a new and complex type of learning practice (for both students and teachers), and differs considerably from face-to-face meetings (f2f), where all participants are present in the same place at the same time. The term 'collaborative learning' refers to an educational approach in which students work in small groups to achieve a common goal. The student groups in EVS are extremely heterogeneous, in terms of nationality, discipline, institution and gender. The basic idea is that each group member collaborates with the others and contributes to the group activities from the perspective of his/her own cultural and disciplinary background.

Group communication and interaction

For EVS the educational format is geared towards the use of asynchronous (not real time) communication tools, especially group discussion boards. The serious risk of long delays in this kind of communication is minimised by the adoption of a clear set of rules:

- Log-in frequently to check for announcements and other information from staff (such as timetables, assessment criteria, case study materials, etc.).
- Check your student group at least twice a week to see whether there any new entries on the group discussion board or updates of documents in the file exchange circuit. Ideally, you should check every day.
- Reply as soon as possible to questions or messages from other group members. Never leave them unanswered for a week or more.
- Post all messages on the group discussion board. If you use the e-mail facility, be sure to copy-in all group members (and the tutor).
- Inform your tutor immediately if any problems arise within the group that the members are unable to resolve themselves.
- Reply as soon as possible to any message you receive from your tutor.

Staff support

The student groups in EVS are responsible for their own learning process, keeping the learning process going and delivering high-quality products by the deadlines set. The experience is, however, that students also need coaching from a tutor, as well as in-depth knowledge from an expert; which is what they normally receive from their teachers. Both roles (tutor and expert) are foreseen in EVS. The role of the tutor is particularly important, whose job it is to solve any problems in the group as quickly as possible. We have developed a strategy for collective action in the event of problems:

- The students of the group first try to solve the problem by themselves.
- If they do not succeed, they inform the tutor, who then tries to solve the problem.
- If the tutor does not succeed, he/she informs the institutional coordinator. If the coordinator and tutor conclude that the problem is due to a disruptive student, they may decide to exclude the student in question from taking part in the EVS.
- The tutor informs the central EVS coordinator, and the student is excluded from the electronic learning environment (he/she has no longer access to EVS).
- The student receives a message from the central EVS coordinator explaining why he/she is no longer permitted to take part in the EVS.

Alongside the tutor, each student group has access to an expert, i.e. the author of the case study on which the group is working. Compared with the tutor, the expert plays a passive role. The students are free to contact the expert for information or advice about the case study, but they are also required to find other sources relevant to the case on which they are working. The expert also comments on the group research proposal.

Assessment and marking

The assessment procedure is based on the quality of the group products (i.e. a group report and a policy summary) and the group process (i.e. the group's performance). The expert assesses the group products (i.e. the group report and policy summary), whilst the tutor is responsible for assessing the group process (i.e. the group's performance). The two assessments are combined to give a final mark for each student (group). The final marking awarded is based on:

- a mark for the group product by the expert, representing 50% of the final mark;
- a mark for the group process by the tutor, representing 25% of the final mark;
- a mark for the individual student by the tutor, representing 25% of the final mark.

Students who pass the EVS are awarded a 'certification of completion' by the central EVS coordinator (signed by the central EVS coordinator and their institutional coordinator).

Case studies on 'wicked problems'

The overall theme of the EVS is sustainable development in Europe. In the EVS, a case study is an open problem description that invites students to seek the best possible solution. Typical for the sustainability problems addressed in the case studies, they are 'wicked' (i.e. complex and difficult) rather than 'tame'. This type of problem requires the selection and assimilation of information from a multitude of sources, domains, discussions and argumentation, thus maximising the potential benefit of collaboration. The students in EVS are challenged to address these problems by using all the expertise and perspectives possessed by their group members. The assumption is that a student group can perform an in-depth analysis of a case study, and hopefully come up with an enriched problem definition, as well as a proposal for solving the problem.

Each student group works in EVS on one case study. They have to formulate a problem description, write a research proposal, select information from a range of sources (e.g. internet, reports, journals, newspapers, interviews, etc.) and integrate these with current theory to devise the 'best possible' solution to the problem. Their work culminates in a group report, in which they operationalise the main terms in the case study, produce a group definition of sustainable development, integrate the views of the group members

(from a range of cultural and disciplinary backgrounds) on the problem, and produce a policy summary for the target group (i.e. the stakeholders).

Modern ICT tools

The computer conferencing system used for the purpose of the EVS is the Blackboard Learning System (maintained by the Open Universiteit Nederland). All course materials (case studies, guidelines for students and staff, lists of individual and group activities, assessment criteria, timetables, etc.) are accessible via Blackboard. More important, however, are the tools for communication and interaction, at two different levels:

- tools at the central level may be used by all students and staff enrolled in EVS:
 - discussion board: pre-structured in forums for everyone in the course.
 - collaboration: to organise chat sessions with students from other groups.
 - email facilities: to select individuals or groups from the EVS course.
 - group pages: identical button (crosslink) as 'Student Groups' in navigation.

- tools at the group level are accessible only to the group members and tutor:
 - group discussion board: pre-structured in forums for your group.
 - collaboration: virtual classroom to organise chat sessions with your group.
 - file exchange: upload and download of documents in your group.
 - email facilities: for you, your group members and the tutor.

In EVS the emphasis is on asynchronous (not real time) communication, and therefore the use of (pre-structured) group discussion boards is obligatory and the backbone for your group work. Asynchronous communication have the advantage that it gives you and your group members time to think about the meaning of a message or to reflect on the collaborative process. To facilitate the group process the tutor will also initiate some chat sessions ('live meetings').

The learning process

The learning process in the EVS differs greatly from 'traditional' education. There are no lectures in the EVS, the students have to work in international, multidisciplinary groups, the group members cannot organise face-to-face meetings, and all collaboration and social processes depend on communication using modern ICT. Moreover, the learning process is spread over a relatively long period (i.e. 14 weeks) so as to create the best possible conditions for virtual collaborative learning and to allow the students to participate in the EVS alongside their regular study programmes. The study load of the

EVS is approximately 120 hours, and students are required to spend 8-10 hours a week working on it.

To support such an 'exceptional' learning process, the EVS is divided into four stages:

- 1) orientation and student selection;
- 2) group forming and community-building;
- 3) writing the group research proposal;
- 4) research of case study and writing the group report and policy summary.

Note: each stage consists of activities you need to perform before you can pass on to the next stage. Students who are unable to perform the activities are excluded from the EVS.

Stage 1: Orientation and student selection

The first stage consists of a number of individual activities. The individual activities are intended to help you to explore the EVS and to acquire basic skills in working in Blackboard, the electronic learning environment of the EVS.

The individual activities are intended not just to acquaint you with the EVS, but also as a selection mechanism. Students who successfully complete the individual activities are allowed to enter a student group and embark on group work. Students who do not successfully complete the individual activities are excluded from further participation.

Stage 2: Group forming and community-building

In the second stage the groups are compounded by the central EVS coordinator and the process of community-building starts. After the student groups are formed you start working on group activities. The intention of these activities is to support group forming and community-building, and to facilitate communication and interaction between the group members.

The first group activity focuses on sustainable development as a concept. Each student group has to define sustainable development, specifically from a European perspective, and make sure that the definition applies to the topic of their case study. To formulate a definition on which all (or, if this is not possible, most) group members agree, you are required to discuss the concept of sustainable development on your group discussion board. Here, you can comment on the views of other group members and formulate an 'enriched' definition of sustainable development.

In the second group activity, the group members discuss the subject and objectives of the case study you will working on during the EVS, and their own knowledge of the

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subject. By the end of this activity, the group should be ready for the next stage, i.e. writing a research proposal. The communication between the students in this activity runs via the group discussion board. The tutor will also initiate a 'live' chat session.

Stage 3: Writing the group research proposal

The third stage of the EVS involves writing a group research proposal on the case study. The basic input for the proposal derives from the previous stage, i.e. the group definition of sustainable development, and the results of group discussions on the subject and objectives of the case study. In this stage, however, the groups have to translate their tentative research plans and learning objectives into a coherent group research proposal. An outline research proposal is provided to give all student groups a clear picture of what is expected at the end of this stage.

Each student group is required to produce a first draft of their research proposal. The tutor checks the draft on the group discussion board, and asks the expert (i.e. the author of the case study) to publishes his or her comments on the group discussion board, and asks the students to redraft their research proposal accordingly. The final research proposal is published on the group discussion board, and the group enters the final stage of the EVS. The communication between the students, tutor and expert in this activity runs via the group discussion board. This is the backbone of your collaboration process (and visible for the tutor and expert). In this stage the tutor will also initiate a 'live' chat session.

Stage 4: Research of case study and writing the group report

In the fourth stage of the EVS the student groups research their case study, and publish their results in the form of a group report and policy summary. The research starts from the group research proposal published in the previous stage. In order to perform the research project, the students divide tasks and often roles between group members (e.g. project leader, English editor, etc.). The students are required to make full use of the members' different cultural and disciplinary backgrounds in analysing the problem presented by the case study and finding a sustainable solution. The basic idea is that each group member contributes to the group activities from the perspective of his or her own cultural and disciplinary background. The communication between the students in this activity runs via the group discussion board. In this final stage the tutor will also initiate a 'live' chat session.

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The experience with the EVS is that some groups produce comprehensive reports based on detailed discussions and reviewed contributions from all group members, while other groups publish reports consisting of no more than a series of individual contributions.

To make this point clear:

- we like to see a dialogue between all group members,
- resulting in clear contributions of different disciplines and cultural backgrounds,
- these individual contributions are the core of the draft group report,
- in the final report the individual contributions are redrafted into a coherent group text,
- all discussions and contributions are published in the group discussion board.

Remember that the EVS is about collaborative learning, and that the learning process is geared to foster an international, multidisciplinary dialogue between all group members.

The groups should publish not only a report, but also a policy summary in which they address the problem and present their solution for a specific target group (i.e. the stakeholder). Finally, all group reports and policy summaries are published in the EVS, and made available to the entire EVS community.