

ENEWS: AN ODL PLATFORM TO SUPPORT ENVIRONMENTAL CITIZENSHIP

Karl Donert

ABSTRACT

This article describes the main activities and approaches of the eNews Minerva (Open and Distance Learning - ODL) Project. eNews is an initiative of the European Commission SOCRATES Minerva Program 2001 with the primary objective to promote cooperation between European schools and departments of teacher education. This paper reports on the interim progress made by the eNews Project team to create and pilot suitable approaches and related tools to examine national and international environmental news through the eNews platform. It examines the needs of teachers and some of the pedagogical approaches in using the on-line and off-line Web tools developed in the project to enable, support and enhance cooperative learning, specifically associated with issues concerning deep European citizenship (Donert, 2002). The paper reviews and assesses the initial findings from the pilot phase of the project.

KEYWORDS

ODL, Open and Distance Learning, Internet, Geography, Environmental Education, citizenship, news

INTRODUCTION: ICT IN EUROPEAN SCHOOLS

The European Commission (2001) reported on the growing use of the Internet in European schools as part of surveys undertaken for the eEurope Action Plan benchmarking initiative. They commented that European teachers were said to be overwhelmingly open towards the use of new technologies with their pupils. Lower levels of Internet classroom take-up in some Member States were mainly due to the lack of computers and Internet connections. The survey showed that in the EU school technology remains dominated by narrowband technologies, although high speed Internet has made breakthroughs in a few Member States.

Major European Education Ministry initiatives such as European SchoolNet have promoted Internet developments through activities such as the European Year of Learning, eSchola, Comenius Space and the School Managers Centre. Many of the most significant projects and programs that have been carried out have been important as ways of providing schools and other training and education institutions with computers and other associated technological devices while also enabling connections to the Internet. Scheffknecht (2000) comments that these information technology developments result in three main educational consequences, IT literacy through culture, technological training for employability and computerisation of the school-home system (BECTA, 2002).

Information and Communications Technology (ICT) opens new possibilities for interaction and relationships between students and experts deepening and broadening teaching and learning processes. The uses of online learning by for example information research, discussion forums and email changes the roles

of teachers and pupils (Hudson *et al.* 2001). Access via the Internet to live data like satellite images can readily be associated with current issues and problems through authentic locally generated examples (Simpson *et al.*, 1999).

EUROPEAN CITIZENSHIP AND ENVIRONMENTAL EDUCATION

The European Union seeks to build a cohesive and inclusive society based on solidarity. It aims to reduce economic disparities leading to a democratic and peaceful Europe. In order to promote these goals Member States are encouraged to stimulate the development of European Citizenship through their educational policies and initiatives (European Commission, 2000a). Europeans are encouraged to become more aware of their common cultural heritage (European Commission, 2002b) while recognising the value and importance of our unique local identity.

Originally European Citizenship was defined under specific laws and entitlements (European Commission, 2000a). In educational terms Citizenship is normally described in a much broader way that conveys culturally based, value-laden understandings (Beck, 1996). This approach deals with the extent to which those concerned feel associated with the society and community to which they belong (Dekker and Portengen, 1996). Citizenship is therefore closely related to the promotion of social responsibility towards society. One central component of this is environmental citizenship where learning to live positively in the collective European environment.

Most definitions of Environmental Citizenship in education relate to the development of:

- knowledge and social, intellectual and technological (lifelong) skills
- attitudes (respect for diversity, argument, interest in community) and
- values that stimulate participation (Kerr, 1999) in the democratic and cultural process of identity.

This implies establishing a clear understanding and response to the ways that local, regional, national and European environments relate to global issues. Environmental Citizenship education therefore focuses on the relationships between individuals and society where complex opinions and attitudes to school, home, neighbourhoods, communities and places are paramount (Cullingforth, 2000).

Andrews and Lewis (2000) analysed curriculum approaches through four theories of Citizenship, active, cultural, global and combined citizenship. The most relevant approaches to environmental education involve Active Citizenship, where participation is associated with obligations and responsibilities. The concept of Cultural Citizenship is based upon a sense of belonging whereas Global Citizenship is usually addressed through environmental awareness of the impact of human activities on our society. The latter is normally based on the global monitoring of environmental indicators, such as air quality, deforestation or ozone depletion. Combined Citizenship implies a comprehensive and profound approach to citizenship and in the case of studying the environment this should lead to the development of a sense of responsibility and the desire to 'make a difference'. This results in a much deeper approach to environmental education.

PEDAGOGICAL APPROACHES TO ENVIRONMENTAL EDUCATION

Pedagogical research in Environmental Education has commented on experiential approaches (Kolb and Fry, 1975; Kolb, 1984; Letiche, 1988), constructivist pedagogies (Vygotsky 1962; Steffe and Gale 1995), child-centred (Lynch, 1992) and socio-cultural communicative perspectives (Crozier, 1999, Hudson *et al.*, 1999). In these situations it is considered common for learners to generate their own knowledge through analysis, reflection and summarising topics and issues at local, regional and global levels.

Teachers respond by setting purposeful tasks that can and should involve field studies (Donert, 2003a), group work, discussion, problem solving and the use of ICT (Baacke, 1998). ICT provides a liberating

influence enable ‘virtual’ activities beyond the classroom (Donert, 2001). The use of ICT allows an active learning approach with an emphasis on learning by doing (Hindson *et al.*, 2001), concentrating on active learning (Luisoni, 1997). ICT also has the capacity to provide the necessary information for pupils to understand the complexity and dynamics of a given phenomenon which allows a reflective approach supported by problem-based learning and critical thinking (Tardiff, 2000). Unfortunately to achieve this takes a lot of curriculum time, which is rarely available (Chevalier, 2000).

THE eNEWS PROJECT

The eNews Project has been developed as a two year Open and Distance Learning Project under the Socrates, Minerva Action (<http://europa.eu.int/comm/education/socrates/minerva/ind1a.html>). eNews is an educational initiative with a distinct European dimension. It aims to establish, by cooperation and mutual understanding, a Web site (Figure 1) that will help to make the younger generation more conscious of their common European environmental identity without losing sight of their global responsibilities or their national, regional and local roots (EURYDICE, 1998). It thus hopes that young people should be inspired to take an active part in shaping the future environment of Europe.



Figure 1. The eNews Web site (<http://www.e4news.net>)

The eNews Project Web site will link current and archived environmental issues and aspects that are important to students. eNews aims to provide a place for students and their teachers to present and then discuss from their different perspectives environmental issues that are of interest to them, thus developing interesting and effective dimensions to support their learning and teaching (Reeves and Reeves, 1997).

ENVIRONMENT, EDUCATION AND ICT

An environment is established by a combination of elements where the conditions frame the interrelationships of individuals and society (Office for Official Publications of the European Communities, 1983). Three main aspects of environment are the natural environment, the built environment and the social environment. The natural and built environment together form a physical environment and according to Rikkinen (1992) all three combine to form the living environment.

Environmental Education is a process that aims to develop environmentally-literate citizens by increasing their environmental awareness, so that they can compete in the global economy, have the skills, knowledge

and opinions to make well-informed choices and encourage others to act responsibly (Reid, 2000). The main goal of environmental education is for people of all ages to know enough about environmental science and related social issues so that they can make sound and well-reasoned environmental decisions (NTEEF, 2001). However, it is a very worrying to consider that in the past ten years the school curriculum in many European countries has limited the amount of formal teaching about the environment (Haber, 2000).

ICT can contribute to Environmental Education by:

- providing a range of information sources including easy access to maps, photos and lesson materials
- developing pupils' understanding of the interrelation between natural and human activities including the awareness of complex aspects such as sustainable development (European Commission, 2000b)
- exchanging data, information and opinions via Internet and ICT among schools and countries (NTEEF, 2001).

Hence the role of ICT is to provide powerful tools to search for and gather information, to transform and produce information, to enable channels for collaboration about information, to present information and to communicate information beyond the local to a global scale. These tools therefore provide greater flexibility and autonomy while enabling creativity, imagination and critical thinking (Donert, 1997; Donert 2002).

End user research was carried out in the six countries involved in the eNews Project (Austria, Finland, Greece, Hungary, Romania and UK). In all cases Environmental Education did not exist as an independent discipline in the school curriculum. In most countries environmental education was positioned as a cross-curricular theme to be delivered by several subject disciplines. The main issue appeared to be that there was no responsibility for or coordination of the delivery of Environmental Education in schools, though environmental themes such as sustainable development, waste management, climate change and human impact on the environment were often approached in school classrooms by a several independent subjects. This led to duplication of some themes and the omission of others as a result of the lack of responsibility or coordination at local, regional and national levels. Teachers were usually confused in their approach to the delivery of Environmental Education. The cross-curricular approaches adopted frequently meant that environmental issues were not dealt with effectively, if at all. This was often said to be due to insufficient materials, poor pedagogical approaches and a lack of coordination. Environmental education was also almost absent from teacher training in most of the countries.

Young people seem to be greatly affected by and interested in environmental issues (Casciani, 2001). They are influenced greatly by the media, such as the news, radio, television and Internet. These channels are highly significant in providing informal education (BECTA, 2001; Matache and Donert, 2002). If this were to be harnessed then greater involvement in Environmental Education might be fostered. One possible strategy to enhance Environmental Education could be by specifically using young people's enthusiasm for ICT (Donert, 2002). In fact Information and Communications Technology offers a high degree of relevance in the modern curriculum because it significantly influences the construction of new ways of life and modern economic, social and cultural approaches.

The teachers involved in the eNews Project identified 'media' as the most important environmental resources component they used in the classroom. This was normally accessed through regular and online newspapers, TV and video clips and increasingly via Web sites. Often their lessons involved exchanges of information making comparisons and value judgements. A few teachers mentioned the exchange of ideas through discussion and email. They suggested that the types of activity that should be undertaken ought to involve information gathering, processing, presenting and analysis. The approaches the teachers wanted to use with their classes varied widely, they included individual actions such as research, reflection and analysis, group activities involving presentation, collaboration and communication even perhaps via

international contests and trans-European collaborative exchanges using email, chat and discussion. It appeared that the teachers surveyed therefore wanted to implement appropriate learning situations that would ensure that their pupils not only developed opinions and ideas, but also to provide them with opportunities to communicate and express their views with others through the eNews Web site. Above all, the teachers wanted advice on ways they could integrate the use of ICT into their activities.

THE eNEWS APPROACH

The eNews approach combines environmental concerns about what happens nearby with global awareness. This follows the 1960's environmental approach to think locally and act globally. The eNews Project user needs survey has highlighted the possible role of a spatially explicit Web platform that would focus of enhancing cyber-geographical skills (Donert, 2000). The Web site will consist of environmental information case studies generated by classes and pupils across Europe. Web-based geographical information systems will provide a set of tools that will make the Web site highly interactive (Figure 2).

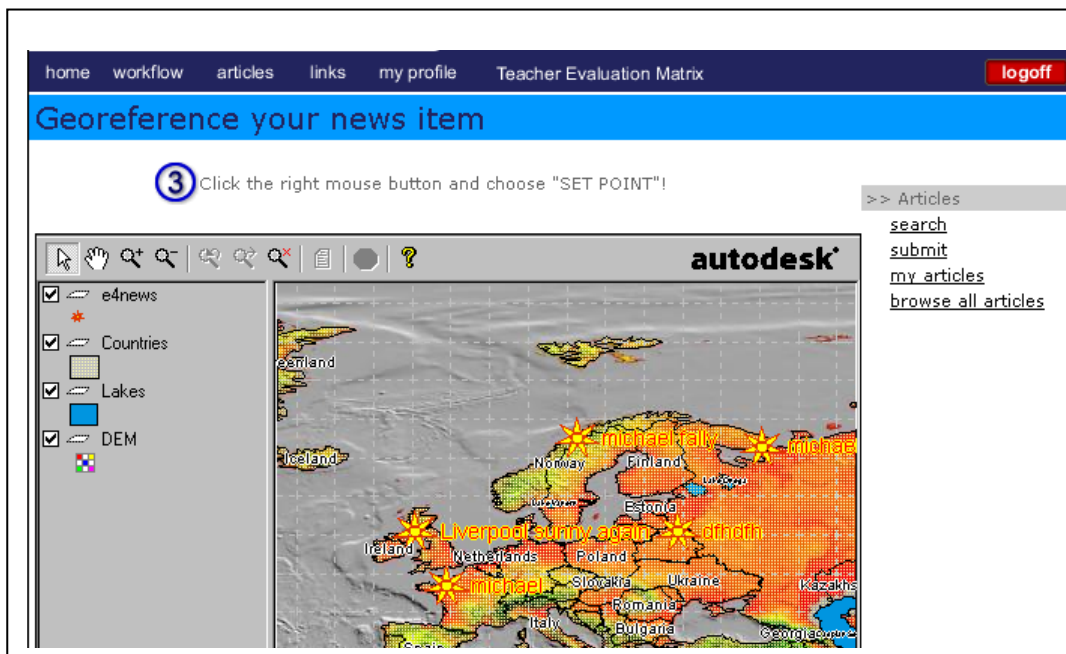


Figure 2. Geographical Information Systems on the eNews Web site

The case studies developed by pupils will be used to promote environmental citizenship through integrating ICT in their work. In these examples pupils will use ICT tools to find, explore, analyse, exchange and present information responsibly, creatively and with discrimination (Kinnear *et al.*, 2001). ICT will be used to promote independent learning (Sandholz *et al.*, 1997) with pupils being able to make informed judgements based on reflection (Erault, 1995).

It is expected that pupils will report on present environmental concerns, this currency of events is likely to make them feel more involved (Robinson, 1993). They will be able to relate their activities to other reports in different parts of Europe and then be encouraged to use the online platform to communicate with others, thereby putting their events in perspective by recognising that there are different valid viewpoints. The ODL platform will also enable pupils to explore the context of their work by providing background links to

assess why things might have happened, what occurred in the past, related events and also to link to European policy documents that will point our relationships between 'events', policies and backgrounds. The Web site will also support teacher resource needs by the creation of a set of teaching tools (Haber, 2002). As pointed out by McLoughlin and Oliver (2000), the delivery of such educational resources must take account of users if the project is to meet the needs of the culturally diverse learners in different countries and settings. They suggest that there are cultural dimensions in teaching, which must be taken into account in the design process. The eNews Project Web site therefore plans to allow specific local content components to be presented, which can be visited by others. These will consist of specific context embedded in the styles of a particular culture (DeVoogt, 1998). The Web pages will also contain significant international aspects designed specifically for cross-cultural collaboration (Collis and Remmers, 1997; Wild and Henderson, 1997; Damarin, 1998).

Henderson (1996) suggests Web design principles that should be constructive, authentic, flexible and supportive to allow self-direction, collaboration and multiple perspectives to be considered. Learners (including teachers) will therefore require components to be available that will support structured learning scenarios that they can explore while providing sufficient flexibility to meet their needs. As a result, a component-orientated problem-based process is likely to evolve on the proposed eNews Web site (Driver *et al.*, 1994) around the core environmental skills of awareness, information, understanding, involvement and responsible action (Donert and Matache, 2002) which can then be mapped onto ICT opportunities (Donert, 2002). Table 1 shows some potential aspects of and activities associated with this approach.

Table 1. eNews pedagogical components

Environmental component	Description	Activity	Approach
Awareness	describe the problem and its origin, plan activities	create the context through discussion and review	Collective
Information	collect and collate information from different aspects	pool existing knowledge	Collaborative research
Information	assess the problem in the light of information	process information in order to establish visions, values, rights and opinions	Sharing
Understanding	understand the situation concerned	present information to clarify process and approach to be adopted	Cooperation
Understanding	generate and consider different points of view	extract and problem-solve, communicate information	Knowledge construction
Involvement	decide on a particular standpoint and provide the arguments for and against	present ideas and share, discuss and reach conclusions, complexity	Reflect, and discuss
Responsible action	devise action plan to meet objectives	debrief, act on views and opinions	Produce and publish action

Through establishing a clear pedagogical approach and sound organisational models as illustrated in Figure 3, it is anticipated that clear learning approaches will be generated to establish ways of teaching the subject more effectively and innovatively in an interactive, motivating and enjoyable way (Schulz-Zander, 1998). eNews thus seeks to relate to a learner-driven process orientated through examples, experiences and concrete information that will support the exchange of ideas and the sharing of experiences.

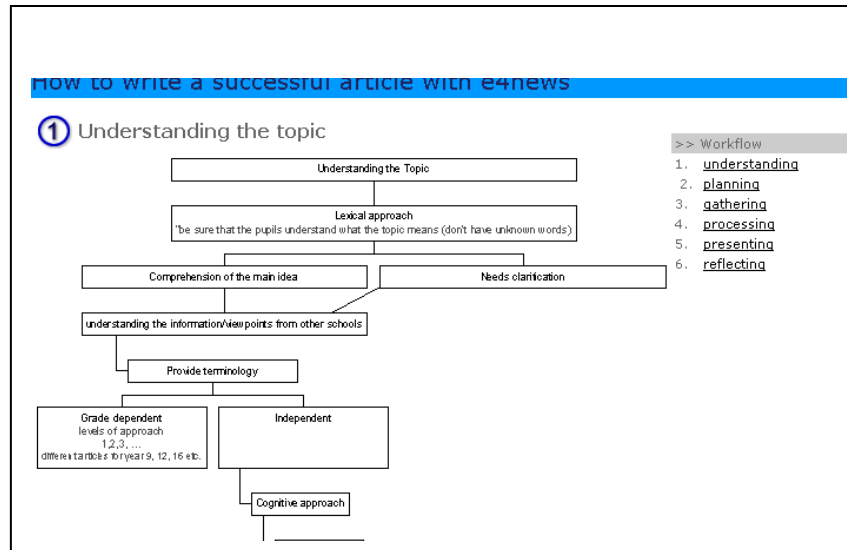


Figure 3: Organisation as part of the eNews platform

CONCLUSIONS

The eNews Project is being designed to encourage the meaningful integration of Information and Communication Technologies into the learning process. As such it impacts significantly on the development of young people, while challenging the pedagogical practices implemented by their mentors. eNews will therefore plan to provide opportunities for teachers to generate flexibility in the learning process. It is hoped that the project outcomes will lead to variety in the learning situations implemented allowing teachers to grasp the changing dynamics of learning using ICT and to establish the experiences they need to plan and support these learning situations. Evaluation is being undertaken during the piloting phase (Donert, 2003a), with pupils, teachers, teacher trainers and Web experts being involved in the formative (Scapin, 2000) and summative analysis (Nielsen, 2000) of the eNews project Web site and outcomes.

eNews examines some of educational changes associated with the construction of tomorrow's society. It will require teachers to integrate challenging environmental issues, multiple perspectives and trans-cultural interpretations into their teaching. This can only be possible if their students have an opportunity and curriculum time to communicate, collaborate, be creative and reflect (Norman, 1997; Mason, 1994). This will encourage them to manage and be responsible for their own learning. In the coming months eNews will hope to pilot and evaluate tasks which will require learners to engage in higher-order cognitive processes such as synthesis, analysis, restructuring of information and ideas, reflection and evaluation. It is clear that ICT can deliver freedom of choice and independence in space and time (Boonen, 2000). But the impact of digital technologies on pupils, their values and perceptions and thus needs patterns is much more difficult to assess. The effects of the resultant interactions are likely to take a long time to assess and interpret (European Commission, 2002b).

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Karl Donert
Liverpool Hope University College,
Hope Park, Liverpool L16 9JD, UK
Email: donertk@hope.ac.uk
<http://www.hope.ac.uk/ebs/ebswww/www/staff/karld.htm>