

Seija Karppinen (Ed.)

Neothemi

Cultural Heritage and ICT at a Glance



University of Helsinki
Department of Teacher Education
Vantaa Institute for Continuing Education



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Available from:
Department of Teacher Education
P.O. Box 9 (Siltavuorenpenger 20 O)
00014 UNIVERSITY OF HELSINKI
Phone +358 9 191 29603
Fax + 358 9 191 29611

<http://www.malux.edu.helsinki.fi/tt/neothemi>



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Neothemi
Cultural Heritage and ICT at a Glance

Helsinki 2002

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Preface

The preliminary planning of NEOTHEMI (The new Network Of Thematic Museums and Institutes) occurred in autumn 2000. In autumn 2001 the project received EU Comenius 3 support and ‘take-off to reality’. Ten European countries (Italy, UK, Finland, Denmark, Norway, Germany, Ireland, Portugal, France, and Hungary) and thirteen partners are involved in this 3-year collaborative project aiming at creation of a virtual educational museum.

The first Conference of the Neothemi Project “Neothemi—Cultural Heritage and ICT at a Glance” was held in Budapest, Hungary, on the 7–8th June 2002. This publication is based on selected conference presentations. Additional contributions were accepted for the purpose of searching theoretical basis and concrete research possibilities of NEOTHEMI. This publication is the first of three conference publications. The first publication indicates the importance of preserving cultural heritage and examining it by the use of new information and communication technologies.

The formation of a virtual learning environment challenges us to create an interesting and inviting e-learning environment, which could give benefit to its various visitors: children, students, teachers, researchers, and groups who would not be able to visit museums and culturally meaningful places in reality. Nowadays ‘borderless communication’ is everyday life and the new communication technologies give access to different information sources world-wide. That, undoubtedly, leads us also to think of all aspects of the use of the internet—both good and bad—due to recent horrific incidents all over the world.

To make the e-learning process effective, not only ‘finding out facts’, reflective interaction is expected and needed. That means creation of an educational web-environment where people can communicate and interact in the virtual world on cultural issues, but not to neglect teachers’ role in this process in classroom situations. The articles show that motivation is the most powerful element in successful learning and that teachers must be encouraging and exciting. However, the new technologies not only secure self-initiation and motivation, but also give possibilities for students to participate in planning action.

The publication outlines theoretical and practical aspects of cultural heritage and ICT. It is divided in two sections: **Part I** presents theoretical basis and current research on the use of the new communication technology in cultural issues. **Part II** concentrates on pedagogical aspects of the project, presenting the launching of Neothemi national pavilions, themes, and sub-

themes by partners of the project. Articles chosen for publication in Part I are peer reviewed in order to ensure that articles are of the highest quality. All contributions have been submitted to at least two independent peer reviews before acceptance for publication.

In Part I Claudia Saccone, co-ordinator of the Neothemi project, presents the main aims of the Neothemi project, the conference theme, and the theoretical background of the project. The new ICT has remarkably changed the character of knowledge and flow of information. A parallel change has occurred within terminology. Arja Puurula illuminates in her paper three concepts, 'telematic teaching', 'media education', and 'virtual pedagogy' as searching new pedagogy and teacher's role in virtual environments. The use of ICT has advantages not only in processing information, but also enormous advantages in arts, in media education, and in manipulating elements of creativity, as Zsolt Gyenes displays. Gyenes also indicates a radical change in defining artistic talent. Above all, the learning situations have changed from 'learning to use ICT' to 'using ICT to learn'.

Margarida Felgueiras explores how physical artefacts can allow us to recapture vanished social settings of childhood, when they are illuminated by the techniques of ethnology and oral history; school buildings and their associated educational artefacts provide clues to past patterns of educational interaction, while the past social world of the playground can be resurrected with the aid of surviving toys and oral histories. My own contribution presents some theoretical elements for examining cultural heritage and how to approach cultural heritage and ICT by using socio-cultural animation as a pedagogical method.

The second group of papers in this section are concerned with how effectively the potential revealed by the first group can actually be used. Information flow in the internet is enormous, therefore some guidelines are needed to make the learning process profitable. Alan Pritchard highlights in his paper aspects of how to make use of information from the internet effective. Astrid Myskja indicates how e-mailing can be a highly motivating factor in the classroom learning process in arts and languages. The Neothemi project will be evaluated using different methods to ensure the quality of the work. Sean Neill presents in his paper how the project will be evaluated during the three year of its development.

Part II is mainly devoted to partners' presentations on the creation of national pavilions and has therefore a more practical orientation. Due to such a large variety of cultures and different educational philosophies of partner institutes the concept Cultural Heritage is examined here from widely different points of view. The most outstanding innovative feature of the network is

that it allows bringing together different educational information, which is normally widely separated by geography and/or institutional background. At the start of this section Giovanni Cannata, head of the co-ordinating institute, describes the Neothemi project as a basis for testing new developments in information and communication, and in learning possibilities, offered by the new technology. Mario Petrone indicates how information science and particular hypermedia and computer graphics offer great range of instruments for studying cultural heritage.

Professor Veijo Meisalo, Head of the Department of Teacher Education University of Helsinki, has kindly given permission to publish this report in the series *Studia Pedagogica* of the Department of Teacher Education and Vantaa Institute of Continuing Education. The publication is sponsored by the EU.

I express my gratitude on behalf of the Neothemi partners to the colleagues all over Europe who contributed to this publication. I warmly acknowledge all reviewers for their expertise. I am also grateful to Sean Neill for his skills in many languages and his kind help in editing the English of the papers. Especially I wish to thank Arja Puurula and Sean Neill whose comments on editing issues and on the scientific quality of the publication content have been invaluable. I am deeply grateful for the technical assistance of Minna Piirainen and Kari Perenius, and for their expertise in technical and layout issues.

Helsinki, November 26th, 2002

Seija Karppinen

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PART I

RESEARCH ON ICT IN CULTURAL ISSUES

Claudia Saccone
University of Molise, Italy

A collaborative network > An educational cultural heritage > A 3-d virtual museum

1. Introduction

NEOTHEMI (The new Network Of Thematic Museums and Institutes) is a 3-year Comenius-supported European project aiming at the creation of a strong collaborative network for cultural heritage developed in the framework of a virtual educational museum. Traditionally, museums would only display the cultural heritage of one or more countries thus illustrating some nationally relevant ‘realities’. A reframed concept would instead see the museum as both a physically flexible place and a virtual space where visitors could find, close to each other, and compared, physically-distant objects, texts and artefacts from different countries but belonging to similar cultural horizons (history, style, society).

The contributions of the countries involved are grouped in broad areas, called thematic ‘pavilions’, which are designed around themes of varied types but all related to cultural heritage. National differences are respected, together with the promotion of a larger European perspective to overcome cultural divides. Each of the partners from 10 different countries and institutions (schools, universities, museums, training centres) is organising one theme autonomously, but only after negotiation with the other partners to ensure compatibility. The selected themes are: ‘Folklore and Traditions’ (Denmark), ‘Communication and Interaction’ (Finland), ‘Arts and Cultures’ (France), ‘Through Memory’ (Germany), ‘Signs of Spirituality’ (Hungary), ‘Ordinary People’ (Ireland) ‘City Images’ (Italy), ‘Sense of Identity’ (Norway), ‘Educational Heritage’ (Portugal) and ‘Symbols of Citizenship’ (UK).

2. Objectives and target groups

The rationale and background of the network Neothemi is to find an open but regulated way of allowing local cultures to compare themselves and interact effectively in a global project. Cultural heritage, based on the memory of the past, is a driving force behind how individuals form their

identities, and at the same time it travels with them towards the future and globalisation.

The most outstanding innovative feature of the network is therefore its ability to bring together educational information, which is normally widely separated by geography and / or institutional background. This conjunction of normally disjointed information is only possible through computer technology, a clearly visible benefit for educationalists of investment in ICT (Information and Communication Technologies); a second benefit is the possibility of direct and co-operative connections between institutions of the same or different type across national boundaries. Primary users will be therefore colleagues of the partners and members of the network; such groups as students, teachers, experts in libraries, cultural centres, museums, universities, research centres, tourism agencies, and visiting Web users.

2.1 Aims and objectives of the network

As a result of the development of this network, Neothemi will allow:

- The creation, at a European level, of a common platform for cultural heritage, which could strongly support information exchange.
- A basis of knowledge and respect in the young, to encourage them to examine, protect and increasingly value the various aspects of their own and other people's culture.
- The availability of a virtual museum of variable geometry, accessible all over the world via the Internet.
- The creation of a dynamic and democratic network between different institutions (schools, universities, museums, training centres) in order to promote cultural heritage.
- The expansion or the introduction of ICT in the educational process.
- The activation of ODL processes (Open and Distance Learning).
- The setting up of a strong and profitable dialogue with the various local institutions (municipalities, superintendencies, didactic sections of museums), which could take part in the project as effective interlocutors.
- A continuing expansion of professional expertise in the teaching body thanks to the training and updating, in non-distance and distance learning, provided by Universities.

- A large dissemination of the results of European projects both through the use of Internet and by the organisation of seminars and conferences.

2.2 Neothemi target groups and users' needs

There will be two major types of output of the network—virtual (e.g. on the Web) and real: both will create a platform offering information and services to those in education. In fact Neothemi has already created a first part of the “virtual museum” web-site on the Internet and established other virtual communication media: the newsletter, the notice board and the forum. Besides the project has already produced seminars and conferences organised by the partners for teachers and experts. This variety of outputs has its target groups always in mind.

In the Virtual Museum, addressed users are such groups as students, teachers, teacher trainers, museum experts, educators, and ICT experts. These target groups can intervene using the feedback mechanism involving questionnaires designed to suggest new developments and increase shared consciousness of the themes highlighted from time to time. In the real world the target network group for the seminars and conferences is mainly composed of colleagues of the partners and members of the network, with the addition of local and international educational personnel involved in European projects. All meetings are aimed at giving concrete support to schools and institutions of various kinds, which are already cooperating and exchanging experiences in the common field of cultural heritage and new information technologies.

Beyond the expected direct target group either in the participant institutions, or in institutions directly linked to them (for example schools in an educational district linked to the participant institution which would be expected to link frequently to the participant institution's web-site), a visitor counter will be part of the home page to give figures about the estimated indirect target group, people who will be speaking the languages of the participants and who might be expected to visit the network via web searches or links.

These selected target groups and their needs were considered at the initial planning phase of the project and the aim is to improve the quality of educational and / or training services and the participation by professionals, children, youth, and web users in general. The main pedagogical and didactical methodologies used by the network participants have a common basis in developing analytical abilities, lifelong learning and the method of

project work, but their precise applications vary slightly according to the institutional setting.

For participants, in general, the project is designed to encourage cooperative learning such as group and team working skills: learners take autonomous responsibility and develop self-esteem for their own learning, respecting others and being flexible. They also acquire the ability to take varied roles within a team, and systematic organisational skills to allow collection of information from the web and other sources in a differentiated way. This approach is highly motivating for children and young people as it connects the classroom with the outside world and encourages tolerance rather than xenophobia. The network therefore aims at an increased openness; an important cause of misunderstandings between cultures are the implicit differences between them which result from the different use of terms in other languages resulting from the cultural setting, of which users of the culture are unaware. Having to work within the setting of another country's pavilion will help participants clarify these implicit differences and make them explicitly aware of the importance of transparently intelligible communication.

In addition, the network is designed to meet and solve the following needs and problems of museums and other sources exhibiting cultural heritage:

- They provide information only for visitors physically presented in their buildings.
- Exhibitions are usually dedicated to one country, nation, area—flexible comparisons between different fields are more difficult to organise and economically demanding.
- Exhibitions are set up by specialists and often hardly reflect the special interests of pupils or students.

3. Theoretical framework

3.1 Towards an educational collective intelligence

In a new century where users are in contact with much of the world via computer and geographical separation is replaced by virtual common spaces, global connectivity makes people become netizens (Net-citizen). Limitations in space, time, availability, social factors, conventions are replaced by an open, ever-growing possibility of communication.

‘When minds interact, new ideas emerge. We want to talk about the creative aspect of communication’ (Licklider 1968). It is this possibility of going beyond. Both fields of investigation are the foundation of the development of the theories of computer-supported collaborative learning.

3.2 Collaborative learning to promote a net culture

The concept of collaborative learning has been widely studied and researched. It refers to a method in which students work together to reach academic goals in pairs or in small groups, at various performance levels. The students are responsible for each other’s learning and their own. Vygotsky (1978) suggested the idea of learners who can perform at higher intellectual levels when working together or in groups and he affirmed that in this way they are able to connect their everyday concepts to analytic concepts and therefore build from their own experience and knowledge. A few years later Bruner (1985), following Vygotsky’s research, underlined the greater competence in problem solving strategies and critical thinking skills of students involved in a collaborative setting. It is through discussion and the possibility of analyzing, synthesizing and evaluating ideas together, in a more informal setting, that learners can be more successful and proficient. The teacher is not only the information-giver but a facilitator and a mediator, sharing authority and knowledge with the students. Everyone learns from everyone else and in this way more active participants can show competences in self-assessment and collaborative work.

It is possible to talk about *collaboration* both in small and large groups, while cooperation “..working together to accomplish shared goals...” (Johnson & Johnson 1989) is a form of collaboration possible especially for small groups of students.

Group acquisition is therefore a ‘learner-centred model’ and Slavin (1995) stressed the positive effects of cooperative learning in achieving better motivational, developmental, social, and cognitive perspectives. One of the Neothemi project goals is to apply such concepts to the promotion of a wider net culture by helping students to take part in and share the methodology of an active European network.

3.3 CSCW (Computer Supported Co-operative Work)

Researches in cooperation in the computerized work context combined from the beginning two perspectives: computer supported (CS) and co-operative work (CW). On one hand researcher-engineers have been more

interested in developing software-based communication systems for organized contexts of work, and on the other hand social scientists have considered the human and social dynamics of work a more relevant issue.

The term CSCW embraces therefore a variety of overlapping researches whose key feature is a clear interest in supporting groups rather than individuals with information technology. The claims of artificial intelligence are rejected and a 'human centred design' promotes shared creativity; the advantages of networking different competences and expertise in modern work, 'fanning the collaborative flame', was largely examined by Schrage (1990). In CSCW a complete culture of teamwork, leadership, management, was therefore necessary with the development of groupware applications to technically support discussion, exchanges and the creation of an interactive electronic space.

Embracing theories about the advantages of group-work and searching the field in more detail, the difference between *cooperation and collaboration* (Hooper 1992) lies in assigning different roles to individual members in an activity. Cooperation is based on 'the shared mind' and a division of labour where every actor is responsible for a part of the work, while collaboration involves all workers in a common effort for the creation of a product. The planning of our Neothemi network bears in mind these two types of creative participation. In this first phase of the project every participant is organising one theme and pavilion autonomously, after a choice negotiated with the other partners; in a second phase, the logical development of the network will allow the passage from cooperation to teamwork where everybody is able to assist by contributions, to the themes proposed by other group members, redefining them according to differentiated thematic perspectives.

3.4 CSCL (Computer Supported Collaborative Learning)

The technological revolution leads to big issues facing researchers in education: how to cope with the necessity to create independent, motivated cyber-learners? How to help the creation of pedagogically superior formats? How to give due relevance to electronic communication?

In an information and communication society, beyond these single queries, lies a common ground where education researches and application projects study the importance of learning behaviours using ICT and contribute in preparing learners for a networked organized society. In the nineties the solo-learner model was replaced in schools and universities by collaborative learning, which moves between an interaction *around* and *through* computers (Crook 1994).

In a classroom context students can use the computer as a tool to help them in reaching a fuller collaboration. Attention and interest can revolve around shared computers which facilitate the learners in face to face interaction. Interaction through computers is something totally different, offering a variety of solutions: e-mails, forums, chats, videoconferences, boards for ads etc. Creating an interest in how students can interact both around and through computers, Neothemi gives learners and teachers from ten different countries the opportunity to share knowledge and competences; through our mailing lists documents will be created, discussed and revised. Learning can become a social event and the development of Neothemi as a network includes work performed by students and therefore their compared views of cultural heritage. The network also includes a feedback mechanism by which the reaction of external users to the materials produced in the earlier stages of the project can be used to modify subsequent development. The idea of computer-supported learning is therefore present from the very start of the project and will put both teachers and students in contact with a new cultural multimedia model characterised by crosscultural knowledge, and interdisciplinary and multicentric logic.

New technologies are central to the project allowing constant contact between distant realities in both time and space. This is in accordance with the logic of ICT in passing from local to global. This reflects the importance of art and cultural heritage as a universal language, which should help overcome cultural and anthropological differences, and therefore combines perfectly with the logic of transmitting information and knowledge across national barriers by ICT. The presence of diverse stimuli helps students to develop individual creativity and self-expression and the possibility of on-line teaching and learning will be tested to evaluate the advantages / disadvantages of 'mutual distance learning', by which network participants produce materials which can be used by learners, and the learners in their turn can influence the materials provided by the network, all at a distance.

3.5 Virtual reality, a *virtual* museum to show a *real* cultural heritage

“If prizes were awarded for the best oxymoron, *virtual reality* would certainly be a winner” (Negroponte 1995); virtual reality is not such a new trend, in fact it dates back at least 25 years, when Ivan Sutherland, supported by ARPA (Advanced Project Research Agency), developed an enhanced VR system.

Nowadays technology has developed various models of virtual reality ranging from non-immersive through immersive ones, to the cyberspace of Gibson's literary fiction. "...as the matrix began to unfold in my head, a 3-D chessboard, infinite and perfectly transparent.." (Gibson 1987). Without believing in the possibility of actually being mentally or physically translated into a Matrix-dimension, it is still possible to distinguish between different models of VR.

One VR model implies all-round individual experiences by means of goggles or other outfits providing a sensory feedback, while another model is usually a collective experience obtained at best when the person enters a room or a simulator. Without the help of any sensory perception, but focusing it on a pure intellectual and aesthetic experience, video games and CDs create electronic surrogates of reality which young people find more realistic than reality.

There is a great difference between the virtual construction of the game setting where the hero is acting and living his adventures, and the image of the virtual museum in Neothemi where, at the click of the mouse, visitors find efficient and meaningful information about cultural heritage. The virtual museum follows the new trends in museology which, in the last decades, have shifted the focus of their attention from a museum having a mere preserving value to a place interested in attracting a large variety of visitors and providing them with educational material in a pleasant setting; the importance of objects is questioned in favour of the importance of information.

New means of cooperation between schools and museums and the involvement of pupils and students has often occurred through the introduction of new technologies. New media and the Internet offer new ways of interactivity with information, images, sounds and pictures in motion, offering a new way of learning connected with entertainment often called "edutainment".

"The Work of Art in the Age of Mechanical Reproduction" (Benjamin 1995) described how the notion of the work of art was affected by its mechanical reproduction, underlining the loss of a special quality referred to the artwork as an original piece: the *aura*. "...That which withers in the age of mechanical reproduction is the aura of the work of art.." Opponents of the virtual museum therefore reject the ability of a digital environment to reproduce both the artwork and the aura mentioned by Benjamin. Supporters instead stress the unprecedented complexity of such a new experience of the artwork which involves texts, sounds and images, both static and in motion, an experience which does not substitute the real experience of the

single object but makes it still more desirable nesting it into a complex framework of cultural references.

The multimedia experience can therefore make a VM (virtual museum) more appealing, but the social value and the potential of a wider dissemination must be taken into account. In fact, in the age of mechanical reproduction artworks can be accessible to everyone showing a shift from private to public and supporting the effort of museology in attracting a new and larger audience and new market segments. Access to cultural heritage is therefore more democratised: virtual museum-goers do not belong to privileged social classes any longer.

In analysing literature focussed on the possibilities of virtual presentations on the web, the term virtual gallery, visit, exhibition is still improperly used to present any existing form of gallery on the web. But if we evoke 3D rooms created with VRML software, virtual museums can be three different environments, they can be: i) on-line reproductions of real places, ii) virtual constructions which have a basis in reality and iii) pure creations of totally new virtual settings. Real museums are already exceptional places born from “..the idea of accumulating everything, the idea of constituting a sort of general archive, the desire to contain all times, all ages, all forms, all tastes in one place...” (Foucault 1964), they are *heterotopias* which can therefore have their pixel counterpart.

In Neothemi the ten countries' pavilions do not exist in reality, they are electronically constructed on the WWW and there is not the slightest connection to actual sites. Upon opening a door from the virtual entrance hall, the visitor enters different rooms ('pavilions') with architectures or open spaces (a Tudor yard, a Danish landscape, a Finnish art gallery, an Irish castle, a classical Italian museum, an old German factory) chosen to represent a national culture to cyber-visitors. The icons of art in each exhibition are clickable links connecting to useful information about the selected themes. The web potential for organizing and presenting knowledge therefore offers a new dimension to the management and promotion of cultural heritage. This new way of presenting the information is called *connectedness* by Hoptman (1992). It is the freedom in presenting and assembling material and choosing new forms of representation. “The virtual museum provides multiple levels, perspectives, and dimensions of information about a particular topic: it provides not only multimedia (print, visual images through photograph, illustrations or video, and audio) but more importantly it provides information that has not been filtered out through these traditional methods..” (Hoptman 1992). Moreover an on-line experience allows features which would be real impossibilities in a physical mu-

seum; a cyber gallery can in fact be easily expandable, flexible and versatile.

In the organization of the material Neothemi will try to ensure a process which will not mean just skipping from one page to the next without a real process of discovery and development. The educational value of the site will reach its full potential in entertaining, educating and informing visitors, enhancing the expendability of their knowledge on the widest arena of the network culture rather than being exploited by a commercial system.

4. Methodology: An action research project

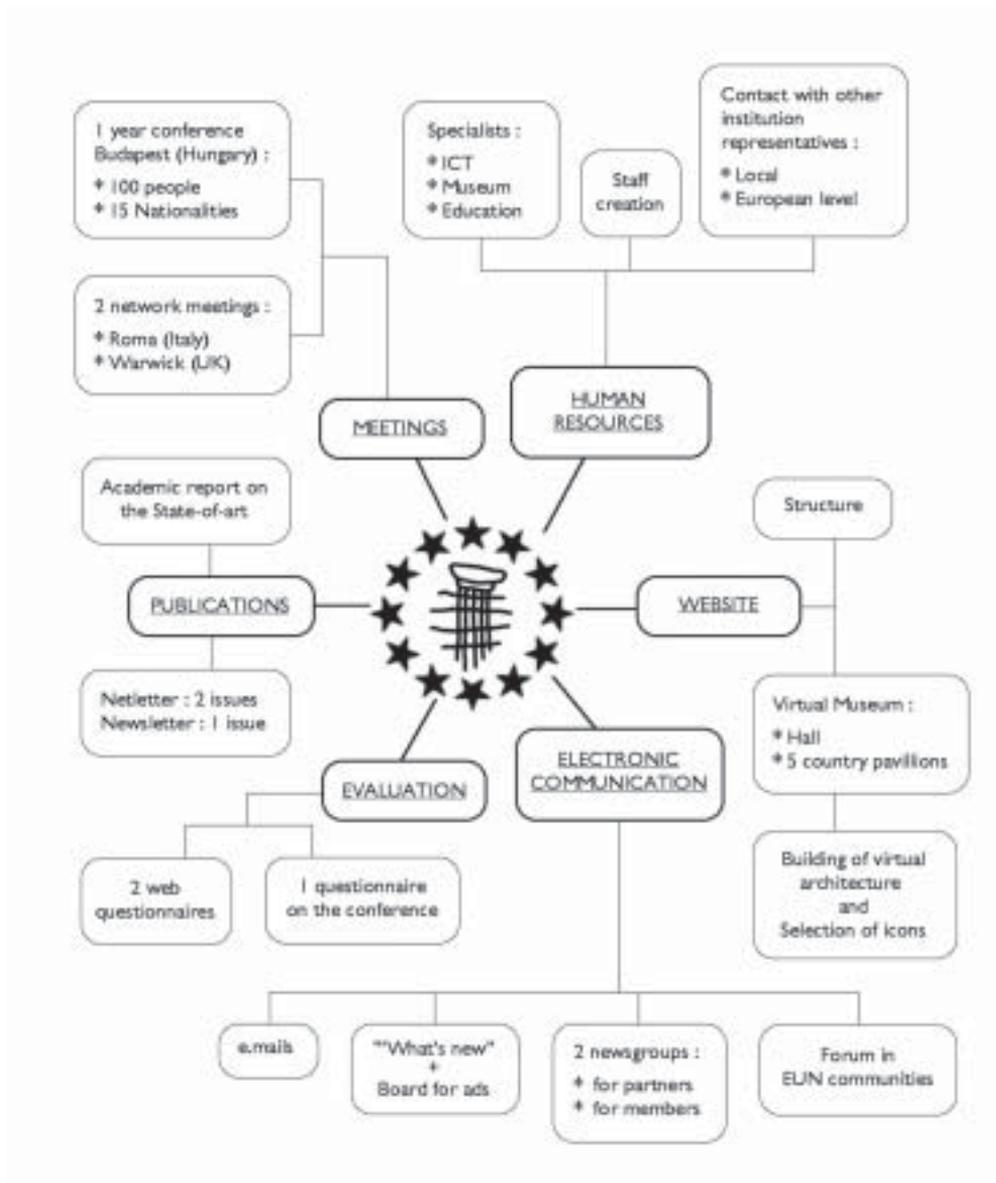
Plan > act > observe > reflect (and then > plan etc..) (Kemmis 1988). This is the cyclic research methodology Neothemi has applied from its very first steps. It considers the nature of being a Comenius 3 pioneer project which suggests pursuing action and research outcomes at the same time and advocates criteria like recurrence, participation, reflection and responsiveness.

In planning the structure, the project was organized following a similar sequence where turning points are the yearly conferences and publications. Neothemi has in these occasions the opportunity of opening up to a larger audience, receiving a large feedback and stimulating critical reflection. Through questionnaires the network is recollecting and criticizing what has already happened, to adapt and redesign the later steps. In this organization, planning is not a separate moment detached from real outputs but it is embedded in the research itself. All partners and members are actively participating in this model offering mainly qualitative but also quantitative data to be analysed. Neothemi action research is therefore empirical, and learning from experience can come only after an effective reflection on data collected.

The reason for choosing this methodology comes from an analysis of methods best suited to schools and educators in general. It is important in a classroom context not to have a rigid distinction between researchers and participants. The same teachers who are responsible for the research are implementing the changes, creating a better understanding of how students can interact with European cultural heritage through computer supported learning.

‘When someone reflects-in-action he becomes a researcher in the practice context’ (Schön 1987), it is not a top-down process but a context-specific analysis taking place in real classrooms in the schools and universities involved. ‘Through systematic, controlled action research, higher edu-

cation teachers can become more professional, more interested in pedagogical aspects of higher education and more motivated to integrate their research and teaching interests in a holistic way.’ (Zuber-Skerritt 1982) and in fact the teachers participating have as a common feature the attempt to produce a better knowledge about ICT higher education learning and teaching and to improve the quality of their job and relationship with students. In the long run in the partners’ institutions an improvement in students and a greater job satisfaction in educators is expected.



Various observation techniques can be chosen to provide data for action research. Neothemi in this first phase of the project has chosen closed and open-ended questionnaires, and the use of diaries / journals. A web questionnaires has been constructed and a further questionnaire, which has been distributed through the newsletter, after the first launching conference in Budapest. Besides data can be easily collected through the large email exchanges and the reports sent weekly by all partners to the coordinator, providing not only impersonal documents but, respecting the very nature of an action research, they are partly what has been done and partly what has been thought while doing. Triangulation is therefore respected in its nature of comparing and justifying data from one source against that from another.

Appendix A: The logo for Neothemi

Neothemi is a manifold project and its logo should reflect its educational aims, its intercultural attitudes, its ability to link different cultural heritages within a network, and most of all its use of the new technologies as formative active elements.

The first idea was to put culture as the focus of attention: an ancient column, which does not refer to any specific culture, but rather to a wide spreading cultural style such as Classicism. Furthermore, Ionian columns have few or no decorative elements and this makes for an easier stylization. In fact the vertical lines of the column have been used as bi-dimensional graphic elements and criss-crossed by similar transversal lines. The graphic net pattern shifts perceptions into notions and the icon of the column into the idea of network. Together with this notion automatically comes the idea of new technologies, hinted at also by the evident Photoshop-style of the logo. And yet Neothemi should give the feeling of coming from below, from local realities expanded into a global network granted by the E.C. Hence the regularity of the 12 stars, the reassuring grid of the European logo. And most of all hence the freehand style of the graphic line: no photographic exactness, no highbrow paternalism, but rather an almost childish graphic flow. The style of this logo implies that culture should feel as lively and compelling as the will to draw lines in the sand (by the way, sand is made of silicon...).

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Arja Puurula
University of Helsinki, Helsinki

Searching for a pedagogical basis for teaching cultural heritage using virtual environments

One of the new words that have entered classrooms since the fast development of new IC technology is telematic teaching. ‘Telematic’, not ‘telepathic’ teaching, as some years ago one hopeful group seeking an EU grant for their project labelled it! Even if teachers in general are quite clever at reading the minds of their students and some of them might even wish to be able to do that perfectly, this could be somewhat too much. But we may play with this idea: imagine a school where a teacher can give fast feedback, *sense* the motivational stance, and *perceive* the cognitive, affective and social demands of each individual student, *detect* the attitudes of students towards each other when working in groups, and *intuitively know* and *notice* the unspoken fears of inferiority, have enough time to *observe* their progress and support their development towards critical, creative and responsible adults and members of the society. Even if not telepathic abilities, these things call for telematic pedagogical skills.

Virtual reality, the three-dimensional representation of the real world and its artefacts makes the teacher no longer the main determinant of teaching. New possibilities for students to use their creative imagination position him/her as a bystander, mentor and evaluator of teaching situations. The teacher’s professional role changes. To guide students towards active but critical information seeking in a knowledge intensive world is not always an easy task. However, a lot has been gained since PCs were introduced to classrooms, when they were mainly used by teachers of mathematics. New technology is easy to use and it is ready at hand. The number of computers per class is now much higher than a few years ago, when more than 75 per cent of lower secondary students in Canada, Finland, Iceland, Denmark, Luxembourg and Norway had access to the Internet. The percentage of computers in primary education ranged then from 25 (France) and 28 (Italy) to 55 (Norway) and 88 (Finland) in the NEOTHEMI-partner countries. (OECD indicators 2000, 249–250). Telematic teaching will soon affect all schools, all subjects and every teacher (Aviram 2000). The benefits and demands of new pedagogy—why do we strive for new teaching methods—seem to be a rather engrossing question among teachers.

This article attempts to illuminate three concepts, “telematic teaching”, “media education” and “virtual pedagogy”, and to consider what these concepts mean to the teaching of cultural heritage and to creating a virtual museum based on these new pedagogical methods. Some examples of the use of telematic teaching, media education and virtual schools are also given to illustrate several methods that can be used. The perspective is not technological, but that of children and students: how can a teacher use new pedagogy with students from 3–18 years. The wide age-range may seem somewhat surprising, but the fact is, that small children find new media much more self-evident and easy to tackle than their teachers and parents seem to think (Tarozzi & Bertolini 2000).

“It doesn’t matter, which subject we teach and it doesn’t matter whether we are working at the primary level or even pre-school level right the way through the curriculum, simply because the ways of communicating and getting information are increasingly going to move in this direction. I believe that it will happen whatever happens with the economies of Europe.” (Ferguson, interviewed by Lundgren 2002)

Telematic teaching and a model for the future curriculum

As a concept, telematic teaching seems to be more often in use in connection with adult education, high schools and universities. It is included in the framework of distance education, but is mostly designed and processed together with an international project team. Telematic teaching crosses borderlines and gathers human capital for the use of a wide, extended audience. For example, the Royal Library of Belgium has launched a project “Telematic network for teaching art history in universities” which is an ambitious project for combining the resources of four European universities. The aim is to introduce and test a mechanism that will allow the exchange of digital images employed for the university teaching of art history, and further: “The project makes provision for the introduction of digital photo libraries within the different partners to replace conventional multimedia slides. This will involve a richer and more flexible perception of the works of art.” Also, the partners will study the technical, educational and legal implications of multimedia use in the teaching of art history. (http://www.kbr.be/telemat/reseau_eng.html)

According to Thornburg (2002), a “telematic” model of work means that workers are free to jump from client to client and country to country at the speed of a DSL connection. In the context of school education, this

means that students are free to move from one source to another at a speed that has been unusual in traditional classroom settings. They can also study independently of time and place: “Especially with extensive computerization, community and international access, and the need for time flexibility and for after-hours access to computers, the school day must surely be re-worked”, says Beare in his book “Creating the Future School” (2001, 89). He continues with an image of a school being open late at night and open early in the morning, and not closed during holidays. Demands like this mean that new staff are needed: educators may work in shifts, he claims, and a lot of work in schools will be done by adults other than teachers. In his vision, human knowledge is not necessarily parcelled into predetermined boxes called ‘subjects’ or ‘disciplines’. Students are capable of travelling by several paths through material, often handling complex material before the simpler emerges. There will be no set class groups based on age-grade structures, he thinks.

Beare thus turns old pedagogical principles upside down in a rather provocative way, but he stresses that teachers are expert educators of their fields, who have multi-disciplinary qualifications and are skilled in learning theory, especially child development (Beare 2001, 191). Teachers work in teams, often supported by other educators. His vision of the curriculum for twenty-first-century schools is quite radical. It consists of three dimensions based on the basic premise of schooling as an enculturation process, education for community membership. The model for a new curriculum consists of a cognitive axis (sequenced learning of subjects/disciplines), a cultural axis (studies about self and community) and a personal axis (problem solving skills). To him:

1. Schooling requires learning about the community in which one lives,
2. Schooling conducts the learner through the rites of passage into community membership,
3. Schooling provides the survival skills for planetary citizenship,
4. Schooling involves an apprenticeship for being a fully functioning individual in society. (Beare 2001, 158–163)

Of Beare’s three dimensions, the cultural axis is especially relevant for the NEOTHEMI project. Beare writes: “On this axis are placed aspects like developing one’s own identity and abilities; valuing oneself (self-esteem); developing a value-system and a set of beliefs; understanding society and how it operates, the world community and the planet’s ecology; and negotiating the rites of passage.” (2001, 160). When constructing the NEOTHEMI pavilions, the other axes of Beare’s model are also relevant.

We are collecting cognitive materials though maybe not presenting them in sequences but in modules. As Beare remarks, there are areas in the future curriculum that are regarded as core studies, like numeracy, literacy and science, but there are also other areas by reason of shared humanity, like art, drama, sport and music, that are important for the cognitive development of students. We are definitely concentrating on the latter areas in our virtual-museum project, while also touching the first ones. It may be that the division of the two is rather arbitrary when working in virtual environments like the one designed in NEOTHEMI. Further, we are dealing with the personal axis and problem solving skills,—“engaging what is happening within one’s own community and taking constructive responsibility for it is an endemic aspect of being educated.” (Beare 2001, 160)

Two definitions of media education: traditional and modern

Along with “telematic teaching” expressions like “virtual pedagogy”, “on-line teaching” and “media education” are also used, the last of these being probably the broadest in scope, as the following UNESCO definition of media education evidences:

Media Education . . .

- deals with all communication media and includes the printed word and graphics, the sound, the still as well as the moving image, delivered on any kind of technology;
- enables people to gain understanding of the communication media used in their society and the way they operate and to acquire skills in using these media to communicate with others;
- ensures that people learn how to
 - analyse, critically reflect upon and create media texts;
 - identify the sources of media texts, their political, social, commercial and / or cultural interests, and their contexts;
 - interpret the messages and values offered by the media;
 - select appropriate media for communicating their own messages or stories and for reaching their intended audience;
 - gain, or demand access to media for both reception and production.”(<http://www.en.eun.org/eun.org2/eun/en>)

Media education is a step towards virtual schools and the pedagogy needed in virtual environments. Tella (1997) distinguishes on the one hand “mainstream” mass media focused media education and on the other hand “telelogically defined media education”. The latter focuses more on educational applications provided by modern information and communication technologies. It focuses on pedagogical issues in virtual environments, modern information and communication technologies, and distance education. While the “mainstream” media education leans heavily on trying to understand the hidden messages of mass media and to educate people to analyse and critically reflect upon media texts as in the UNESCO definition above, the new media education accepts the crucial element of pedagogy and the responsibility of educators when facing the free flow of information on the Internet. The responsibility of educators is equally important albeit of a different genre, says Tella. However, as I see it, ethical issues are more problematic with the Internet than they used to be at the time of traditional media education, and more severe in the teaching of small children, the neglected group in traditional media education as well as the forgotten group in telematic education.

One example of mainstream media pedagogy is the project carried by the Kiasma museum of contemporary art together with six European cities in 2000 (http://www.kiasma.fi/index_en.html; the final report of the project “Learning in Museums: Cultural Heritage and Citizenship” will be published later). The partners assumed that direct co-operation between museums and teachers helps pupils from minority groups to appreciate common features in their diverse cultural heritage and have a greater understanding of European Citizenship. The notion of citizenship was linked to cultural heritage in its widest sense. The students of the project came from comprehensive schools that had more minority students than average. The first group of eight students were aged 10–13, and the second group consisted of 11 students aged 14–17. The connection between media education and the general aim of the project is evident from the following excerpts that describe two teaching situations:

“Theme: Mosaic/digital image. The exhibition Alien Intelligence to be used as a starting point by viewing one work of art belonging to the exhibition and visiting the workshop of the museum. The selected work, a large size mosaic, is entitled Output: 62. 500 Materialized Pixels by Arno Coenen & Rene Bosma and is located in the entrance hall of Kiasma. In addition to the viewing there is discussion about the work. In the workshop the idea of a digital image and its connection to an ancient mosaic technique to be stud-

ied. The difference between digital and analogue images to be discussed. During the session participants work on a computer, and they may bring one image of a place that has significance to them. This image will be used as a background image during the photo-shop part of the session.”

“The first session on the 27th of April proceeded mainly according to the plan followed by previous groups: introduction, getting to know the mosaic from different perspectives and the workshop. Lara Croft was also known to this group, as was the mosaic technique as an art form. The Estonian, Russian and Vietnamese students had got to know mosaic art from previous contexts. Contrary to the previous group the students wanted to be photographed in pairs and some of them also worked on the computer in pairs. One student did not want to use his own picture, but worked with a picture taken by his friend. The students spoke about their own and each other’s pictures during the session. For some, working with a computer was familiar and they had time to do various intermediate stages of the process or altogether new pictures.

The second session on the 4th of May involved the introduction of one’s own object, and worked very well with this group. Everybody had brought their own object with them and they all shared stories connected to these objects enthusiastically and openly. The moment was very touching when the students travelled back to their past, to the scenes and people already lost to them. Others were carefully listening to and clearly empathising with their comrades. This working method proved to be more fruitful with these students, who were somewhat older than the students in the previous group.”

The researchers of the project report that it was not important to teach the participants to master the computer programs, but the computer was rather used as a vessel for understanding the content. They lacked time and it was not possible to arrange sessions utilising the mosaic technique. But some criticism is also easy to make: pedagogically the Kiasma teaching situation was rather far from the reality of classroom instruction: the group sizes were about one third of the class sizes at schools. Also, there were several teachers or educators working with the students—this kind of situation would be luxury to most European teachers. But one cannot deny that these children had most excellent “mainstream” media education and that they probably got to know the Kiasma museum of contemporary art much

better than other student visitors. This leads us to the very basic questions for Neothemi: how to develop a virtual museum together with students, teachers and museum educators, and what kind of new pedagogy we should then utilise.

Towards virtual schools: Can there exist virtual pedagogy?

Common themes in discussion about the use of new technology in schools are demands of image education and media literacy; the question of promoting critical thinking, supporting capacities of reflection and reaction, the breakdown of the traditional curriculum, and the possibility of developing international communication and interaction between students. Pär Lundgren, the Head of the Media Department at the European Schoolnet interviews Bob Ferguson, a researcher of a group called “Culture, Communication and Societies” and asks: “Explain what is media education in England about?” He replies:

“Media education is a concept; it is an approach that tells us there is much more common ground in good practice by teachers working across the curriculum. It does this by studying the way the world is represented to us, from textbooks all the way through to film, television and computers and the web. The way the world is represented and structured, the way knowledge is formed, becomes something that stretches across the curriculum, and of course the media are absolutely at the core in all of this, they are absolutely implicated in it.

Any education of worth in the future is going to incorporate media representation as the core of what it does. Once you couldn't teach without books. Well now you can't teach without recognizing the whole array of media and you have to engage with that, but it has to be across the whole spectrum and not to make exclusive claims for one medium, whether it be television, film, computer technology, or the web—you have got to have an educational approach that encompasses the whole lot. And you've got to find a way of working with all of those, and encourage teachers to see that it's part of what they have to do, a part of what education is about. Whether you teach maths, science, languages, humanities, it doesn't matter.” (Lundgren 2002)

What is then “virtual pedagogy”? At first sight the concept seems impossible at least to a non-native speaker of English: the thesaurus gives following synonyms to virtual: practical, implicit, pragmatic, substantial, effective— each of these connote something quite else than the new situation of teachers when confronting information technology and especially the www- environment. Also the Oxford dictionary definitions lead to other meanings: virtual as related to computers is “Not physically existing as such but made by software to appear to do so from the point of view of the program or the user”. (<http://dictionary.oed.com/cgi/>. My emphasis.). However, as I understand it, at least when working with small children, a teacher must definitely be present, physically existing. No software can substitute for her/him. A teacher may appear on a screen, or he/she may be on the phone, but he/she still needs an assistant to be actually present with children. The philosophical and pedagogical basis for my conviction of the role of a teacher stem from the definition of teaching / instruction as an intentional interaction process between two or more persons. Virtual interaction is partial in this respect. It does not allow for immediate responses and reactions—as far as at present stage of technological development. The second feature of the definition is that of intentionality: a teacher is a person who designs teaching situations and carries the moral responsibility of educating.

The concept “virtual pedagogy” is thus rather problematic. One cannot find a single reference to “virtual pedagogy” in the main databases of the educational sciences—ERIC, Sociological Abstracts and Social Sciences Abstracts, and ISI Web of knowledge. Tella (1998) defines virtual pedagogy as a systemic study of education (educational sciences), but which specialises in the possibilities enabled by the virtual school or virtual class and virtual university in a telematic, multimedia-based and networked learning environment. The main task of virtual pedagogy is to study and develop teaching and learning strategies and practices as well as to help understand the various functions (the salient features) of various media, he continues. Together with didactics (= the science of teaching), virtual pedagogy is concerned with issues related to virtuality, immersion, possible worlds and virtual or imagined communities. (Tella 1998)

Rönkä (1998) reports a virtual school project, UTOPIA, which concentrated on improving various virtual school working methods and teaching practices to meet the needs of both comprehensive and senior secondary schools. A considerable part of the studying process was transferred to the students’ homes: one or more school classes were transformed into ‘virtual classes’, some of the tasks and assignments given at school were planned to be completed at home as the students sent their answers to a common

computer conference or to the teacher's mailbox or they made use of fax machines and mobile phones when sending their answers. At school students were given preliminary preparation for virtual homework, which allowed them to engage in collaborative work in pairs or in small groups. Students' tasks simulated real life learning situations as closely as possible, according to constructivist concepts of learning.

The findings of the UTOPIA project show that (my emphasis):

1. By participating in computer conferences teachers and students not only acquire good skills in using the tools of telematics but also gain experience in accessing information to be used in various discussions;
2. The handling of larger topics underlines the multi-faceted nature of communication and work methods (with special emphasis on the co-operative, self-tutoring, problem-oriented and autonomous methods of working);
3. The information provided through the Internet or some other information service system is directly applicable to studying, teaching and supporting the individual intellectual growth of both the teachers and the students;
4. In a telematic learning environment the teacher has to consider more carefully than before what kind of communication serves the teaching-learning process best both from the teacher's own standpoint and that of a student or a student group;
5. Virtual school is an effective tool in the integration of various school subjects and levels of education; the resulting advantages being a higher tolerance of ambiguous information, the ability to interact on several levels and directions, and to comprehend change and growth;
6. Virtual school is a perfect place for putting into action many of the work methods introduced by the constructivist concept of learning. (Rönkä 1998)

The degree of actual interactivity varies greatly from one media education project to another, and it seems that most telematic experiments so far rely on the use of ready-made modules in a server, e-mails and faxes between the students and tutors, computer-based evaluation sheets, and videoconferencing or computer conferencing. Needless to say that this kind of technology is far too expensive for most schools for younger children, and the development of programs suitable for their teaching has but started.

From the pedagogical point of view, there are at least two features that are not similar when using software material designed for computers without net-connections compared to the Internet. First, even complex material is faster to process than the Internet and second; the Internet allows the distribution of knowledge and e.g. problem-solving with no limits concerning user numbers (see e.g. the immense work done by <http://www.distributed.net>). It is important to notice that the virtual image of reality is possible with both media; only the Internet and similar networking brings the ethical problems without any limits to the classroom. The issue of controlling the unlimited flow of knowledge is real and no teacher and no school should avoid it (Tarozzi & Bertolini 2000).

Pedagogical possibilities of virtual environments

To conclude, I present a list of some benefits and possibilities of telematic teaching and pedagogy for virtual environments. I shall illustrate the main features with quotations from several research reports where telematic teaching and media education of students, including small children, has been under study (see also Leach 2001, and Sinker 2000).

The main features are comprehensiveness of learning and teaching, social interaction, the sense of flow and democratic prospects.

1. Comprehensiveness of learning and teaching: When working with computers, the human senses are in an active state not comparable to traditional teaching. Cross-curricular approach and themes in instruction follows this, with an opportunity for pedagogical, individual differentiation. The pace of working depends on the student or the student group, not on what a teacher says. Practical examples show that producing a digital image is rather a process than an end-product, as Barnes (2001, 165) writes: “The greater the opportunity to change an image and refine it, the greater the interest there seems to be. Within the process of changing and refining images there is an inherent bonus. Each stage of change and refinement can be saved, revealing in the final analysis a sequence of artistic thought and judgement”

Human capacity of visual perception is far more complex and rapid than the traditional classroom teaching presupposes. Lecturing as the main pedagogical device prevails in the traditional classroom, supported with books. However, it seems that children remember more of the teaching based on modern media technology, as the following extract shows:

“The CD-ROM’s represent a good example to understand the power of PCs at school. I have used them extensively and I think I can

talk about that. I saw how students remember with precision some paintings of Leonardo and Caravaggio that I showed them only in the PC. The paintings they studied from their book were not so well fixed in their memory. But the former stood in front of their eyes just some seconds, the latter were printed in a book! We do infer, that their concentration in front of the monitor was very high, and very low in front of the hated book! “ (Bonavoglia 1999)

2. The sense of flow: The intensiveness of work seems to increase when using computers and networking in classrooms. Deep motivation, even enthusiasm by students is described in several reports. Cohen (2000, 116) reports that young children tend to stay at the computer for long periods, forgetting that others are eager to have access to it as well and that there needs to be a rule for organising time. “In fact, as work develops, the span of attention and concentration increases and so does the speed of the learning process: we have observed children under 5 staying more than 45 minutes at the computer, while educational psychology says about 20 minutes is the limit for concentration for a young child.”

Csikszentmihalyi (1996, 110–113) describes nine elements as typical for a flow of creativity, the feeling when things are going well as an almost automatic, effortless, yet highly focused state of consciousness:

1. There are clear goals every step of the way.
2. There is immediate feedback to one’s actions.
3. There is a balance between challenges and skills.
4. Action and awareness are merged.
5. Distractions are excluded from consciousness.
6. There is no worry about failure.
7. Self-consciousness disappears.
8. The sense of time becomes distorted.
9. The activity becomes autotelic, an activity is an end itself.

He continues by comparing autotelic and exotelic experiences. “Some activities such as art, music, and sports are usually autotelic; there is no reason for doing them except to feel the experience they provide. Most things are exotelic: We do them because we enjoy them but in order to get at some later goal.” (Ibid 113.) From several descriptions of computer-based instruction the students’ feeling of flow is evident:

“The atmosphere in both groups was positive and all kind of mischief was done in a friendly manner. The students were very concentrated on their work and everybody seemed to have a good time.

A good indicator of their enthusiasm was that they hardly wanted any time for breaks. The Kiasma staff also enjoyed working with the students. In comparison with other groups that have worked in the workshop, the students were very active and eager to try new things. Boys, who constituted the majority of the students, had more courage than girls. (This might be, although difficult to prove, due to the fact that boys are generally more familiar with computers than the girls). Nevertheless, the shyest ones also gathered more courage to work with the computer. In general, learning to use the computer program went without problems.” (<http://www.kiasma.fi/site/tpl>) (My emphasis)

3. Social interaction: Several studies evidence that group-work is used inefficiently in classrooms where traditional teaching methods are in use. Students are grouped but in fact they work individually. Telematic teaching seems to give opportunities for real co-operation in creative work processes. Leach (2001) calls this explicit phenomenon of new technologies and pedagogy as the social dimension of learning.

Empirical research findings indicate that social context plays an important role when students learn with new computer technology. In an extensive meta-study consisting of 11317 students from 122 studies, small-group learning had significantly more positive effects than individual learning on several process and affective outcomes, and also on student individual achievement and group task performance. This means that when working with CT in small groups, students in general produced substantially better group products than individual products and they also gained more individual knowledge than those learning with CT individually. The effects of small group learning were significantly better, when: a) students had group work experience, b) specific cooperative learning strategies were employed, c) group size was small, d) using tutorials or practice software or programming languages, e) learning computer skills, social sciences or other subjects such as management and social studies, and f) students were either relatively low in ability or relatively high in ability. The data of the meta-study contains several subjects, including art (no music or drama, however), and students from pre-school to college and adult/vocational education. Some of the teaching situations seem to have been arranged with computer-based software, some with internet information; the distinction between the effects of different media (Internet or CD-ROMs) was not studied. (Lou, Y., Abrami, P. C. & d’Apollonia, S. 2001) (my emphasis)

“The learning situation provides the child with interesting opportunities for creativity, a variety of experiences and self-corrections,

the possibility to work at his own pace. It also provides an opportunity for social interaction (cf. Vygotski) with other playmates. Laughter and constant exchanges around the computer corner prove that this is a happy experience for the children, major condition for stimulation and learning.” (Cohen 2000)

4. Democratic prospects: The virtual museum offers an opportunity to study cultural heritage for sparsely populated areas and for students in rural schools, who do not have the opportunity or financial resources to travel to the actual sites and museums. Also, the virtual museum serves minority groups, because the pavilions can include information about their own cultural heritage, and also contain links to distant countries, including perhaps their country of family origin:

“The most interesting experience with the Web was with the fifth class, with boys and girls of 18 and 19. They had to find news, texts, and images, for their final short thesis. I knew that the WEB in Italy is not as good and rich as in other countries, but it’s useful especially for people that live in towns and little towns. Civita Castellana, the town where is my school, has 15,000 inhabitants, many other towns from which our students come have no more than 5,000 inhabitants. It’s difficult to find a good bookshop or a good library in this area. It’s easy to understand how much the WEB can be useful here.” (Bonavoglia 1999)

Yet another advantage is stated by Cohen (2000, 103), when she remarks that children belonging to lower socio-economic classes must be offered a rich and stimulating environment in pre-schools (in France: Ecole Maternelle from 2 to 6 years olds) in order to compensate for the lack of motivation in curiosity and activity in the home environment. She is an expert in early childhood literacy education and experimented the use of computers with good results even with under 3-years. But the point she makes is as relevant with students of all ages, adults and elderly people. Virtual museums can and should be seen in public libraries, they can and should be reached in remote and under-developed areas.

In one of our e-mails Dr. Sean Neill summarised the above to the following ideas:

Advantages 1 and 2 refer to the **quality of learning**. It engages a wider range of senses and faculties and involves greater engagement and ‘flow’; these are aspects of individual experience. Advantages 3 and 4 involve, in rather different ways, the **social experience of learning**, either by greater social engagement with physically present companions, or en-

gagement in a virtual community for those who are physically constrained by geographic remoteness, or restraints on mobility due to extreme youth, extreme age, or limited resources. In some ways the vividness of learning promoted by computers (1 & 2) draws in those who might otherwise remain disconnected (3 & 4). Such involvement has always been possible, for example in intense sporting, musical or religious experiences; but the power of computers is to make it available across a wide range of situations.

As Tarozzi and Bertolini (2000, 199) conclude:

“Teachers should pay greater attention to the processes of the Internet rather than its products. In other words, the pedagogical effectiveness of the Internet in the school is not to bring into the classroom the results of productive research carried out by the teacher. It is, rather, to lead children along new paths to access information and to organise such knowledge.”

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Zsolt Gyenes

Pécs University, Institute of Visual Arts, Pécs, Hungary

Kaposvár University, Teacher Training Institute, Kaposvár, Hungary

Zichy Mihály High School of Applied Arts, Kaposvár, Hungary

ICT in art education

From ‘learning to use ICT’ to ‘using ICT to learn’

With the change of the millenium the terminology concerning ICT in Education has changed. In 2001 the term ‘eLearning’ became fashionable. The European Commission defines eLearning as ‘the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaboration.’ (Policies concerning ict in education 2002).

There are a great number of art educators who are anxious to try computers in their classroom, but are not quite sure what it is computers can do, and how they might be used within the art curriculum.

The computer as medium

Computers have characteristic features, which differ from the other media developing in former years. These features determine the users’ thinking, creative and methodical approach. It is important to summarize (here) these differences from analog media, like film, video etc.

The advantages of computers for practical use are:

1. Innumerable copies can be made.
2. No quality deterioration.
3. Possibility of more free experimentation.
4. Variations can be created easily.
5. Play is an important part of freeing creativity.
6. The measure of risk is reduced.
7. Deletion happens in an instant.
8. Successive drafts of the work can be preserved.
9. Different versions can be seen at once.
10. Only the important settings have to be saved.
11. It is possible to return to the original starting point or to any variation in a moment.

12. The automatic steps possible in many programs.
13. Unlike analogue media, an element can be inserted anywhere at any time, and the material can be enlarged.
14. Associative thinking comes into prominence. This is favourable to the constructive, creative approaches.
15. The process can be followed or recalled in full by the instructor or the student. The working log is preserved in the computer.

The following students' works were made at the Zichy Mihály High School of Applied Arts, Kaposvár, Hungary.

Pictures: Student's works (19 years)



1. In connection with the free variations of a self-portrait experimentation can be realized quickly and easily. (László Pap)
2. A / The elements of the 'process-illustration' can be copied and formed by steps. (László Pap)
B / The phases of the optical toy (phenakistoscope) can be produced with geometrical exactness. (Gergő Borbás)



3. Variations of the photo-montage can be created very easily. (Péter Homoki)

Creative practices

Education in visual art is changing. It is in keeping with the challenge of our period. Visual communication, the technical picture (new media) and the ‘culture of environment’ had an important role in the last decades in our national education.

Visual art education offers huge possibilities for the adoption of creative practices. It primarily derives from the character of the subject.

The methodical equivalents of the creative activities are the creative practices. We can summarize the important features of these practices as follows:

- The students participate in “real” situations (e.g. planning and advertising of a student election in the school).
- The students play an important part in the activity. Students can choose roles (e.g. art director, copywriter, performer etc.).
- Problems are solved as they arise in the situation (e.g. the realization of a school’s newspaper: graphic design, literary work, editing, distribution etc.).
- The importance of roleplay is emphasized.
- In connection with the creative activity, the way the students get experiences and knowledge on the functioning of some

media (e.g. with making / playing a show-program, which brings to light the “manipulated technics”) is important.

Our experiences show, up to now, that the use of the computer and the Internet in visual education, results in new methodological approaches. These new approaches mostly result from the different features of using computers according to the subject specialism.

We need to redefine artistic talent. ‘For most students, artistic talent is defined by a person’s ability to render objects with traditional realism. Many avoid art courses because they assume that since they cannot “draw”, they are not artists. When using computers, students seem to come to an understanding that there is much more to artistic talent than the ability to render objects realistically; traditional representation is only one aspect of creativity and artistic skill. Computers allow students to explore design, composition, and colour freely. They seem to learn quickly that careful placement of images is important, that there are other media that also define artistic talent, and that artistic sensibilities go beyond work with pencil and brush.’ (Greh 1990)

Pictures: Students’ works from the practice of computer aided visual art teaching and learning (19 years)



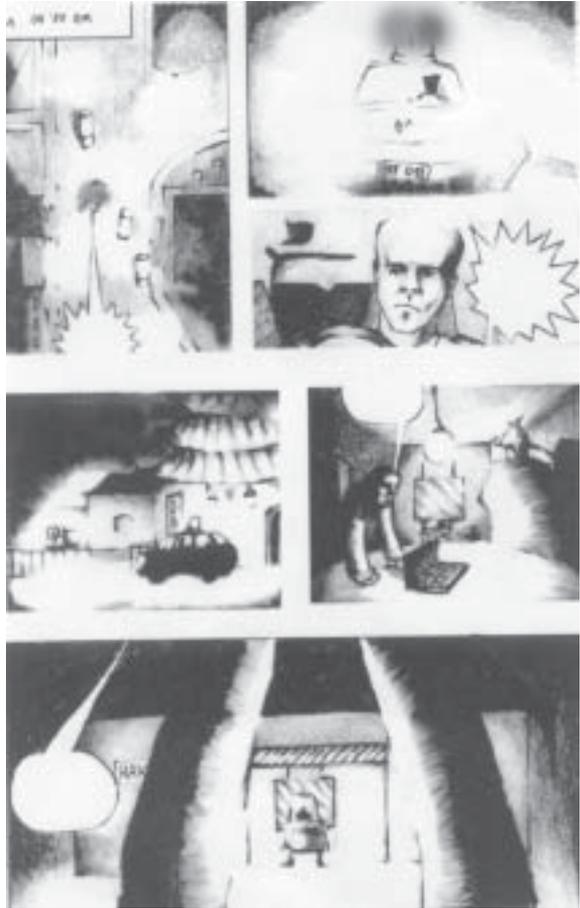
4.

Using the Internet is emphasized. The Net is one of the most important sources of obtaining knowledge. It seems that in the future television will be built into this structure and then the telecommunications of the world will be changed (again). The Internet is the most practical, fastest and cheapest forum for remote connections, collaborations and exchanges. The possibilities of the Internet (e.g.

mass of knowledge, interactive functions, virtual reality etc.) appear especially in visual art education activities, like art history and analysis of works of art. We can experience virtual visits to the large art museums of the World. Downloading materials can be achieved easily. The enclosed example is a free transformation of Delvaux’s painting (made with Adobe Photoshop). Copies of the picture’s elements can be obtained quickly.

5.

Traditional manual drawing can be fused well with the new technique. The picture was made first manually, and after scanning it was manipulated with the help of the computer's wide-ranging capacity (contrasts, colours etc.). (Krisztián Minya)



6.

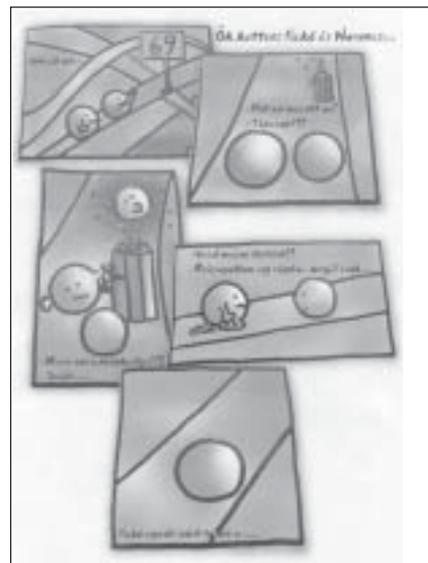
Within a short time we can make an attractive abstract picture by altering a photograph. (Joel Gyenes)





7.
The fineness of the computer-drawing is similar to free hand drawings. (Máté Troll)

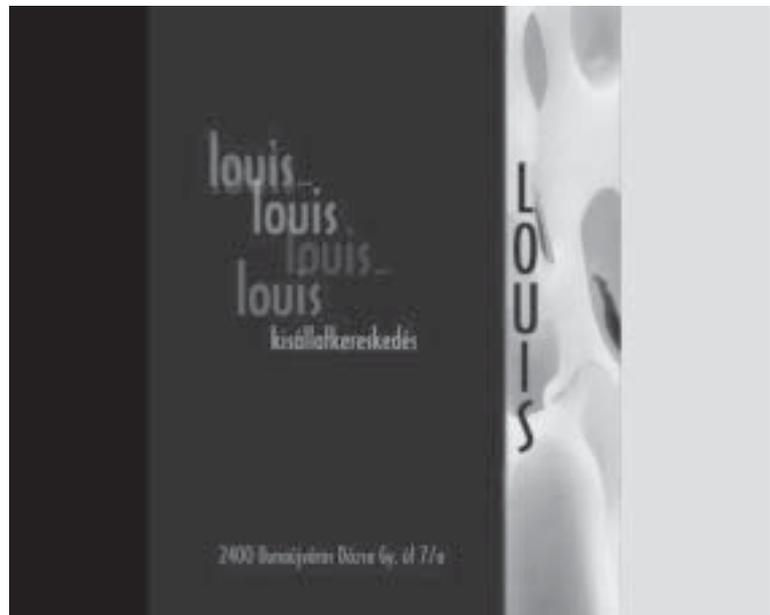
8.
The digital montage can afford new opportunities to free creation (e.g. following, fitting the measurements, correct inserting, transparency of the layers, 'feather-effect', making the edges better etc.). (Péter Homoki)



9.
We can design easily a complete aspect of an imaginary shot.



10.
Because of the development of the use of computers in making motion pictures, animations are now changing. This change demands a new approach to non-linear editing and the use of wipes, effects etc. The digital working process perfects the combination of picture and sound, facilitates the handling of the whole "film" and allows the immediate scrutiny of all the effects that have been used. The complicated process of making animation can be limited to only one computer and one creator. The (analog) video builds in the computer. The present day computers can make "everything"; we would have not thought that possible ten years ago.
(Sherif Eltuhami)



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Margarida Felgueiras
University of Porto, Portugal

Educational heritage in a virtual museum

1. Introduction

We are used to looking at schools as spaces for the transmission and acquisition of knowledge, where educators initiate, in a variety of modes, socialization of children and young people according to socially accepted objectives. In the last century the educational enterprise gained in ‘relevance’ and nowadays attention is focusing on the use of computer aids in school. If the pedagogical discourse now stresses the need for intercultural Education for Peace, or responsible citizenship, in order to achieve a balanced socio-affective development, all this seems to happen because the awareness of social change generates new demands. There has been a slower perception of school as a physical human structure, with its identity and history, with its own frame, which influences the type and quality of the work done. In the last decades Sociology of Education, Curriculum Theory and History of Education have been attempting to study the school culture and the cultural changes that have been operating in its midst. The material culture of the school has remained little noticed by either pedagogues or by research.

2. School as a means to globalization

Schools have been the guardians of the written word, and in the process played a normalising role in codes and practices. They have prescribed ways of seeing the world and of interpreting life and death. They have always been expressions of their own time interpreted by means of a knowledge selected from an inherited past. We can say that since the Romans the school has been simultaneously an instrument of enculturation and cultural production. In this sense, the school in the western world has been an institution of an international character promoting the globalisation of forms of thought, languages and juridical instruments. The school was and is still one of the structuring features of European culture.

Portugal has one of the oldest universities in Europe and was the first European state to constitute a national public educational system, in the 18th century. As in the other European countries, the institution of school,

in its long historical trajectory, constituted itself both as material and immaterial object. However till the mid 20th century, it was only seen as the place where pedagogical ideas or educational policies were applied. The structure of educational systems was analysed; the biography of educators seen as either innovative or exemplary was written. Scientific and political discourse relegated both school practices and living experience to the realm of romance and family memories. The school buildings that were built throughout towns and villages stood out in the landscape and gradually structured the life of the children. But their interior remained obscure to the society that had produced them. Historians and sociologists talked about “black box” of the school. (Vide Dominique Julia, António Nóvoa, among others, and Apple 1979)

3. School museums

In the 70s of the last century, all over Europe, there was an explosion of museums, aiming at safekeeping and displaying the widest variety of contents. This movement symbolised the need for a social identity and a need for cultural democratisation. The former caused by the disaggregation of communities, ways of life and ways of working; the latter generated by the awareness of the diversity of cultures present in the same society. Culture is seen as appropriation / production / transformation of a legacy by the varied social groups and not as the attribute of a dominant social group. The deep impact that technological changes have had on all areas of activity produced among many professionals the need to safeguard, through museum artefacts: instruments, equipment and clothing, memories of daily life, which they felt were disappearing. From the fallibility of personal memory arose the need to preserve the collective memory, capable of communicating a sense of continuity between generations. In the educational field the eighties saw the blooming of museums and school collections, taken as a way to show and analyse the educational past of the community. Germany, Holland, the United Kingdom, and France are some of the countries that have done this on a larger scale and with better results, preserving their educational heritage. In Portugal we can see now a similar movement since the nineties, as a result of the profound changes occurring in the educational system. In 1986 the Law of the Educative System pointed towards new objectives and new ways of working for Basic Education. This movement has not however succeeded yet in creating a large museum; there are only projects, research in some cases, and through the initiative of former senior teachers, with local authority support, some collections and museum

rooms were created; however these remain unknown by the public in general.

4. Educational heritage

What do we actually mean when we talk of ‘heritage’ or of ‘patrimony’? The term ‘patrimony’ has signified mainly the category of private goods, passed on from parents to children, from generation to generation. For Babelon and Chastel (1994, 49), the addition of the meaning of common property to the concept of patrimony is a generalization from its first use and emerged from a collective consciousness. The authors stressed that the heritage could include marketable goods, that is the benefaction, and keepsakes that in some way represented the person, were non negotiable and should remain in the family. Following still the definition of Babelon and Chastel (1994, 58), this double meaning is also present in the current concept of patrimony: a more or less valuable marketable possession but which is considered fundamental, inalienable be it by the values that are attributed to it and give it meaning, or by the feeling of a shared location, and of a moral heritage. In the past this referred mainly to the individual nation, but now it appears ubiquitous because of the support of professional groups, local, regional, or supranational communities, or Humanity in general. (UNESCO 1972). Therefore we need to look at the European patrimony and to preserve objects considered of universal value. As a result of the unprecedented developments in the current ‘post-industrial’ era, and of the resulting destruction, a new preoccupation with patrimony has developed, of an ethnological character, related to the conduct of the simple life, that is of everyday life and its spaces, of folk traditions, improving the awareness of a shared patrimony. Patrimony is seen as part of a structured lived space occupied by buildings and objects which impart a set of forms, images, and values. This patrimony acquires a new significance first to the inheriting communities, but now can and should be shared by the large and amorphous groups of today, to contribute to the creation of a common imagination which can strengthen affective links between people.

In contact with educational heritage we share feelings inherent in our shared state of pupil, as we used to be, and of teacher, as we are now, from the perspective of a social history which articulates material culture with an ethnological vision. In educational patrimony we include buildings, furniture, teaching materials, pupils’ possessions, the decorative and symbolic elements present in schools, as well as teaching practices, children’s behaviour, in games and nursery rhymes, as can be revealed through the recollections of memories of school life by teachers and pupils. From canteen

and medical cabinet, to administrative office, the school presents itself as a location for interactions in which teachers, pupils, officials, and families construct and delimit a relational space, structured both physically and socially. This socially constructed space participates in the definition of the concept of childhood. Pedagogical ideas and theories can be represented by written materials, such as customary school routines, and the lived experience and condition of childhood can be investigated through recollections and the materials associated with them.

Material culture and recollection emerge in specific social contexts and thus consideration of educational heritage must be contextualised to be comprehended. This suggests that the development of educational systems in the different countries of Europe must be integrated in the field of social policy, bearing in mind that education became, in the second half of the twentieth century, a consumer product and a factor in the productive process (Fernandes 1977; Mayer, Ramirez & Soysal 1992).

5. Playground games¹

Our project ‘Living Museum of Primary Education’ was privileged to draw on the secret memories of games played by pupils in the school break. This work culminated in the production of the video “Minha mãe, dá licença?” (Felgueiras 2000). Resulting from a seminar organised with a group of retired teachers, this project, on the games played by pupils, ran for a year, with monthly meetings. It shares their memories of childhood and allows one to encounter or recreate the materials and rules used in games, with a minimal worksheet. The team continued to collate oral histories which were recorded with the same group. This reliving of the past allows us to return to the 1920s and re-create games which have now disappeared. In collaboration with three schools we recreated some of these games with the pupils.

From this perspective we aimed to unite the objects or instruments of play, the rules of the games, the spaces and times where they were played and especially the memories, and the behaviour which developed and disciplined the growing bodies of children. We do not consider the toy as a manufactured object to be used by children, but instead we value the dynamics, the creativity and the culture in which each game was situated. We do not ignore toys but we are concerned mainly with the involvement in play activity as a doubly socialising form: because it initiates in children

¹ We use here the paper presented to the Ibérico Forum of Educational Museology, Santiago de Compostela, 8 to 10 November 2001.

the process of internalizing rules and dominant skills of the social life of their time and because it is a facilitator for contact, communication and negotiation between children. This aspect of games, both collectively and individually, participates in all the changes during the development of children, both physical and social skills.

The toy is material evidence both of the activity of children, and, indeed of adults. For the adults this is part of their manufacture or craft. The first type refers to standardised consumer products, distributed on a large scale, the second type to production in small woodworking, tinsmiths', or potters' workshops or the sophisticated porcelain dolls associated with traditional seamstress work. Thus through the toy we move from work to play, to the infant care within the homes of various social classes. The catapult, like several others, is a typical toy produced by children themselves which can test and display the development of penknife and imagination, and the search for materials of high durability and elasticity. These products return us directly to the social stratum and to the place where they were made, allowing us to overcome barriers of geography and time (Amado 2000).

Games are often realised without the necessity of recourse to material mediators, using only traditional rhymes (Opie & Opie 1969). Many exercise dexterity, attentiveness, calculation and cunning. In a Foucaultian perspective we can return to a society where one can obtain a form of discipline which develops physical and social competences (Foucault 1984).

Toys and games represent memorable aspects of infancy, which can easily be recalled. Through them we can make a chronology of infancy catalogued by its expression "we played hide and seek"; "I used dressing-up clothes for playing house"; "I skipped a lot"; "I was always the teacher when playing schools". As we organise memories of places and times we have experienced, we can construct or visualise "a workshop of development". Even if the history of games research is always linked to the constraints of the group attitudes specific to each period (Elias 1994, Foucaults 1984, Crespo 1990, Vigarello), to the culturalist and anthropological stream, which was expressed after the Second World War with the work of Margaret Mead and Erving Goffman, behaviour is the product of a culture and its social situation. According to Schmitt (1986) this analysis allows us to compare systems of values and behavioural norms, which vary between societies and historical periods.

In the study of games we can see that many survive for centuries but others disappear or decline progressively (Opie & Opie 1969). Memories of the old and practices of the young allow us to observe how much our society has altered in recent decades. What has become disused becomes

difficult to revive. How can we demonstrate games in a practical way? How to recover the memories of infancy which go with the games?

For the history of games and how they were used it is fundamental to observe and record. Much of what we know of the past is filtered through material and symbolic images which adults transmit to us. Even a photograph is a crystallised moment, enveloped in the ambiguity and subjectivity of its production. As Roland Barthes found, photographs can capture the real but associated with ideas and occult significances, which offer multiple interpretations to the observer (Barthes, cited by Campos 1992).

Despite all the limitations which written and iconographic accounts present, a collection of images accompanied by a corpus of oral accounts represents much the best way of reconstituting games. This is how we proceeded in the video: we started from the accounts and behaviour of the teachers, in the school, and the teaching of the identical game to primary pupils.

This experiment, undertaken with retired teachers, reveals the importance of a space for encounter, which allows the involvement of senior retired teachers as autonomous subjects, vehicles and producers of knowledge, and not merely consumers. The development of these seminars served to establish the invisible threads which stretched from what the retired teachers could pass on to children in their schools and to their present teachers, to oral recordings from people in the street and park. This work highlighted the fact that investing in people and their life experiences allows the construction of meanings and the involvement of varied social actors and enables the visibility of so called “minority cultures”.

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Seija Karppinen
University of Helsinki, Finland

Communication and interaction in arts and culture

Formation of culture is often understood as a one-way process: From the older generation to the younger. We teach and give information about our national cultural values, heritage, beliefs, and habits, which will be adapted by our children consciously or unconsciously as time passes. This is a very important way to educate children to understand national and cultural values and to respect other nations, but we often forget what we might learn from the younger generation. Cultural heritage is not meant only to be preserved as untouchable, but also to develop over time. Anyway, our children will be guardians of heritage, important users of the culture, and future developers of the culture. As Heidegger writes, inheriting the heritage is not the same thing as respecting it; actually they are even opposites to each other (Reé 1998, 22). Human beings do not become guardians of their heritage by maintaining the status quo and orienting to the past, but by extending the heritage again towards the future (Reé 1998, 22).

If we talk about cultural communication and interaction, we cannot omit the new communication technologies. In the Neothemi Project these new tools challenges us to create an interesting and an inviting e-learning environment—virtual museum. That means that children can observe, not only their own cultural values and artefacts of heritage, but other nations' culture as well.

Culture, cultural heritage and ICT

Globalisation, new communication technologies, and the development of European countries are obvious reasons for increased recognition and valuation of cultural heritage. Nations are more and more aware of the danger of loosing identity. However, cultural heritage gives a solid basis for a dialogue between different generations and history, by which people and nations could share understanding of the past and orientate towards the future. Cultural heritage is not only a basis for theoretical knowledge but also essential capital for practical knowledge, self-understanding, and identity (Melanko & Elo 2000, 94).

Culture is constructed through experiences, habits, and values in everyday life situations and free time activities (Puurula 1998, 6; Kurki 2000, 55). Thus, all people create culture, no matter young or old, educated or less educated, culturally oriented or not. Culture is a social heritage, which acquires from the past, develops in the present, and by social interaction will be adapted among citizens. Culture integrates all habits, values, and knowledge formed as society develops over time and appears in several forms—intellectual, immaterial (as knowledge, values, beliefs) and material (as objects) (Kurki 2000, 55). There is no nation without culture and every nation has its own way to exist and express its own features. Thus all communities have a common and historical heritage that partially captures the socially negotiated meanings, which includes shared goals, meanings, and practices (Barab & Duffy 2000, 37). Even in the use of new technologies some characteristic differences can be seen depending on the nationality of a user / creator.

In examining cultural heritage the basis is on significant values, which exist from ancient times and are nowadays fundamental concepts of aesthetics: beauty, goodness, and truth. A heritage, which is beautiful or good is appreciated, as it is connected with human endeavour towards beauty and goodness or virtue, or has significance in aspiration to find truth (Melanko & Elo 2000, 11–12). Beauty is a value regardless of whether we deal with physical, mental, intellectual, or moral issues. Anyway, in the arts, it is not only aesthetic pleasure that is sought for but also displeasure: the experience of suffering, danger, and destruction plays a meaningful role (Sepänmaa 2000, 95). All these aspects are as meaningful in the virtual world as in reality.

Human goodness is connected with human virtues, but it is not connected with benefit, rights, or duties (Airaksinen 2000, 96). If goodness is a virtue, it is a comprehensive attribute and calls for a consideration of the whole person (Airaksinen 2000, 96). The whole nation can be seen as benevolent towards cultural heritage or not: for example by preserving (or not) culturally valuable buildings or natural environments. For example, in Finland in the 1960's and 70's, in many towns many culturally and architecturally valuable buildings were ruined to be replaced with new efficient office buildings. Does that mean virtue in our nation, national board, or officials? No, certainly not.

Human beings have a natural aspiration towards truth. Cultural and world heritage provide irreplaceable evidence for finding out how things were and for understanding how they are (Niiniluoto 2000, 97–98). The pursuit of truth not only leads us to discover our own culture and identity; it is also part of understanding other nations, cultures, and people.

Socio-cultural animation (encouragement)

One pedagogical approach in examining cultural issues and values can be called socio-cultural animation (see, for example, Abbé 1994; Ander-Egg 1986; Kihlström 1998). The aim is to encourage children and students to learn from the past, develop their own individual way to interpret cultural values and objects, and find their own existential values in this society and environment and also in a historical perspective. History will help us in the formation of culture by giving an understanding how and why we are what we are and why our society looks as it is. Students and children participate in the process as creators, not only as products, of their culture. Therefore culture is always a 'future project' (Kurki 2000, 56).

The main elements of a culture according to the constructivist view are human activity, participation, and action. These are not only activities of specialists or privileges for a few, but a conscious choice for everybody. Everybody should have the opportunity to enjoy art, culture and cultural heritage as this will lead to responsibility for their own life and creation of their own human existence now and in the future. In this transformative view of culture the meaning of everyday life is emphasised (Kurki 2000, 56), which leads us as educators to stimulate students and children to act and think reflectively.

'Animation' originates from Latin word 'anima', which means life and soul, but also from 'animus' which connects it to the terms 'purpose, intention, animating spirit' and 'soul, feeling, courage, passion' (Webster's Encyclopedic Unabridged Dictionary). The concept has a dual meaning: On one hand it means to give life and soul, on the other hand it means to put into relation to something, in other words to motivate into action, and acting pro society. (Kurki 2000, 19)

The main point is that 'animation' is the way to develop human sensitivity and self-consciousness. It increases awareness of humanity, organises action and pushes people to act. Animation encourages increasing social communication and interaction between people, and develops person-to-person relations (Kurki 2000, 19). By these actions, the intention is realised to create possible situations for social and cultural transformation, in order to see values in one's own existence and in developing one's own self-consciousness and identity. That would mean also increased knowledge about cultural heritage in one's society and in the world. The character of the communication and interaction is rather different in the virtual world than in reality. For example some senses and feelings cannot be expressed in the virtual world. Therefore, some real life interaction and com-

munication are needed to ensure the quality of the learning process, particularly in arts and culture.

There are three key concepts in socio-cultural animation: First, to give life, to animate. That means supporting cultural creativity and local cultural phenomena, and learning from local traditions and cultural history. Secondly: there is the interventor / mediator role. That means encouragement for group processes; creation of social networks; participating, planning and carrying out local projects and programmes in arts and culture by active pedagogical methods. In research animation would mean ethnographic research, action research, and participant research (Kurki 2000).

In our Neothemi network we partners are all kind of interveners / mediators who encourage students, children, teachers, and other people to examine and explore cultural heritage and invite them to a dialogue in a real world and in a virtual world. The process can be seen as a meaning-making process where humans interact with other humans, and with artefacts, continuously attempting to make sense of those interactions and phenomena. The meaning-making process is a process of social negotiation among participants in any activity, and thus learning from this perspective is inherently a social-dialogical process (Jonassen & Land 2000, vi; Wilson & Meyers 2000, 71). And further, if we want to investigate a learning phenomenon we are obligated to consider not only the performances of learners, but also the socio-cultural and socio-historical setting in which the performance occurs, and the tools and mediation systems (interactional network, e-learning environment) that learners use to make meaning (Jonassen & Land 2000, vii).

The third concept in socio-cultural animation is qualitative transformation. In practice the aim is to change peoples' attitudes and interactive situations from passive to active, from individual-centred to participating, towards more creative, self-initiative, and innovative processes where the result will be a new culturally active life style. That means promoting human beings' participation in preserving and developing their own culture by creating situations and opportunities where communication and interaction between people occurs, in the virtual world also.

That is exactly what we try to do in the Neothemi project. People will see that they have the opportunity to make their own choices and to affect the quality of their surroundings. The new communication technologies mean also remarkable changes in learning process and learning opportunities. The important question is how to empower learners in virtual learning settings to become active and self-regulated learners (Niemi & Ruohotie 2002).

Animation is a key to motivate individuals and groups for self-learning and life-long learning. The role of the teacher is not to give information, but to discuss together with a group, encourage participants to express their own thoughts, and to engage in dialogue. Particularly, new communication technology demands a change in teaching methods and in the role of a teacher (see for example Puurula 2002). By socio-cultural animation and active methods we try to increase knowledge about cultural heritage, use of museums (including virtual museums) as natural ways of seeking information, and the use of the Internet as an open-ended learning environment (see Jonassen & Land 2000).

To summarise, culture and cultural heritage are tools for human behaviour—tools for communication and interaction, but, also tools for conscious human existence. As Heidegger says, if human existence should be rooted truly in some tradition one should look forward, not backwards (Reé 1998, 23). The main object is to develop ways of learning so that children get tools to participate, communicate, and reflect (deliberate observation) on their environment so that they can have the ability and courage to live and enjoy their life truly in modern society and in a rapidly changing world, but also respecting their own and other nations' cultures and cultural heritage. People construct 'everyday projects' of their own life and of their society in interaction with their social, cultural, and natural environment, but nowadays also in the virtual world.

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Alan Pritchard
University of Warwick, UK

Making effective use of information from the Internet

Introduction

The Internet is enormous and is growing at an almost incomprehensible rate¹. It is enormous both in terms of the number of machines attached to it and in terms of the almost immeasurable quantity of information accessible through it. Teachers are being encouraged to take advantage of it both in their teaching and in the course of their other professional duties. Internet availability and accessibility in British schools is also increasing rapidly. Primary schools in England and Wales, for example, had an average of twelve computers each with an Internet connection in 2001, compared with an average of six each in 2000. The parallel increase in secondary schools is less striking, but these schools were much better equipped in respect of Internet connected computers by comparison with primary schools in 2000. The total annual expenditure for all schools in 2001 was £ 390 million, compared with £ 283 million in the previous year. Much of this, it appears has been used to increase Internet connected machines and networks. (DfES 2001.) In the classroom it is not always clear how to make fuller use of the Internet, and it seems that in some cases best advantage of what is available is not taken. In other cases attempting to make use of the Internet as a resource have negative effects on the quality of children's work and learning experiences.

The use of the Internet to find things out, is one of the many areas which are being promoted to teachers. "Finding Things Out" is one of the strands of the programmes of study for ICT in the British National Curriculum.

In Key Stage Two (children aged from seven to eleven years), for example, it states that "Pupils should be taught ... to talk about what infor-

¹ "The exact size of the Internet can only be estimated, but one thing that is known for sure by many different measurements is that the Internet is growing exponentially, approximately doubling in size each year, and has been doing so for at least the past six years now. Each year there are as many new people on the Internet as all the people on the Internet the year before." (Quarterman undated)
"The Net consists of 2.5 billion documents, growing at a healthy clip of 7.3 million pages per day." (Varian undated)

mation they need and how they can find and use it [for example, searching the internet or a CD-ROM, using printed material, asking people]”. (DfEE / QCA 2000a). The schemes of work for Key Stage Two give suggestions for pursuing these points from the Programme of Study: Using the internet to search large databases and to interpret information (Unit Ref 6D Year 6) (DfEE / QCA 2000b). The use of the Internet in the context of other subjects of the National Curriculum is promoted too. In particular it should be used when a topic can be researched and the findings used in a way, which will lead to children achieving learning objectives concerned with knowledge and understanding.

It is reported anecdotally by teachers, and also in the educational and wider press that there are certain dangers associated with Internet use by children. The most obvious and most widely reported is the danger of undesirable and highly unsuitable material being displayed. It is common knowledge that pornography is rife on the Internet. This is a serious danger, but, thankfully, there is a good deal that can be done to protect users from it. (For a thorough treatment of this subject in an educational context see DfEE 1999)

The danger which we will consider here is the danger of becoming overwhelmed by the sheer quantity of information that can be accessed so very easily, and an inability to make effective use, in terms of increasing knowledge and understanding, of this wealth of information. Here we are considering the danger of not knowing how to deal with the plethora of information and as a result using it to no good purpose. This particular danger has the potential to drive teachers away from Internet use: One teacher reported ... “That is precisely why I won’t use the Internet... there’s too much (information) and they (the children) don’t know what to do with it.” (See, for example, Pritchard 1998 and 2000 for short treatments of this concern)

Educators need to be concerned that children are not benefiting, to the extent that they might be expected to benefit, by using the Internet as a source of information. Children need to be taught actively to use certain strategies to assist with both the process of searching and the process of making selections from the enormous volume of information with which they might be confronted. It is very easy to produce a reasonably well-presented piece of work, which is taken wholly from an electronic source. A neat, and highly informative piece of writing can be compiled from even a single electronic source, and then be submitted as an “original” piece of work. The child working in this way will have learned how to carry out certain technical operations more adeptly—cutting and pasting for example, and will have learned a little about deceit, though perhaps inadvert-

ently. The expected learning outcomes set by the teacher, that the child would perhaps know more about the topic in question or understand some of the ideas contained in the field, will, in many cases, not have been achieved.

Internet users need skills above the level of the technical. It is possible that many users need to develop search skills, but this paper is not directly concerned with locating information, it is concerned with using information. It is possible to teach certain strategies which allow for more effective use of information, these are the skills of research and information handling. Internet sites can be designed with effective information use in mind. The ways in which design features are employed should reflect what is considered good practice in the field of information handling and use and what could be termed “good learning practice”. Good learning practice will reflect what is known about learning. It will be underpinned by principles derived from a range of learning theory. In particular ideas from constructivist learning theory will be taken into account.

Constructivist theory and engagement

Put simply, constructivist-learning theorists consider that knowledge and understanding is constructed by the individual learner, on a foundation of what is already known and understood. This runs counter to other models of learning, which are sometimes characterised as “transmission” models whereby learners are seen as empty vessels to be filled with knowledge. Constructivist theory sees learning as an active and not an absorptive process. (Brooks & Brooks 1998)

So, constructivism as an underpinning theory of learning in the contemporary classroom is founded on the premise that we construct our understanding of the world through reflection on our experiences. We use the “rules” and “mental models” which are generated in this process to make sense of experience. Learning is the process of adjusting our mental models to accommodate new experiences.

The guiding principles of constructivism seem to be:

- Learning must start with the issues around which pupils are actively trying to construct meaning.
- Meaning requires understanding the larger whole, as well as smaller parts. Parts must be understood in the context of wholes. The learning process focuses on linked primary concepts, not isolated facts.

- If teaching is to be effective (i.e. lead to established learning) teachers need to understand the mental models that their pupils use to understand the world, and the assumptions supporting their models.
- The purpose of learning is to construct a personal meaning, not to memorise answers by recalling someone else's meaning.

These principles have certain implications for the ways in which teaching and learning situations are designed. There needs to be a distinct focus on making connections and creating new understandings, and the moving of teaching strategies away from simple pupil responses and towards extensive pupil-pupil dialogue, open-ended inquiry and a focus on making the process of collecting, analysing, interpreting, predicting and synthesising of paramount importance. In the context of what might be independent, or even solitary work, involving Internet-based materials, there are certain design features which can support the notion of constructivist learning. We will consider some of these later.

The key activities of collecting, analysing, interpreting, predicting and synthesising are in need of some deeper consideration. In a hierarchy of learning activity certain levels of sophistication have been defined by various writers over the years. These structures, or taxonomies, are set out in terms of behaviors, which begin as simple and become progressively more complex. The first substantial consideration of this notion came from work coordinated by Bloom (see appendix), in the 1950s. (Bloom et al 1956). Others (for example, Kohn 1967; Biggs & Collins 1982; Vosniadou & Brewer 1987), have produced other interpretations of the same phenomenon and there is an apparent consensus about the route which developing learners take when becoming more adept at learning from information sources. At the simplest level, the would-be learner collects information; knowledge is amassed. Those who work effectively at this entry level are able to recall factual information, or processes and patterns, but no understanding is implied. At successive levels learners are able to display understanding, are able to relate items of information to other items, and are then able to apply what they have learned: "... use of abstractions in particular and concrete situations." (Bloom et al 1956, 205) The ability to undertake analysis of gathered information which is understood comes next, and then synthesis: "... putting together of elements and parts so as to form a whole ... arranging and combining them in such a way as to constitute a pattern or structure not clearly there before." (ibid 207) The highest level of operation, for Bloom, is that of evaluation. This is the stage where informed

judgements are formulated based on a deep level of understanding of the domain in question.

The SOLO Taxonomy (Structure of Observed Learning Outcome, Biggs and Collins 1982), describes the way that learners display a consistent sequence or learning cycle in the way that their learning proceeds. This is said to apply over a large range of tasks, and in particular, school-based tasks.

The stages in the sequence are set out as below:

1. Preliminary preparation, at this stage the task is not attacked in any particularly appropriate way. This is called the **prestructural** stage.
2. One (**unistructural** stage) and then many (**multistructural** stage) aspects of the task are picked up, this time in a serial or unrelated manner.
3. These several aspects are integrated into a coherent and independent whole. This is the **relational** stage.
4. The independent and coherent whole may be generalised to a higher level of abstraction indicative of the learner having attained a high level of learning and understanding. The **extended abstract** stage.

The structure of the SOLO Taxonomy becomes more interesting when considered in the light of the three stage hierarchy set out by Vosniadou and Brewer (1987). The hierarchy is based upon two concepts, that of accretion and that of restructuring. Accretion refers to the change, which occurs through the gradual accumulation of factual information within existing schemas and restructuring to changes in knowledge, which involve the creation of new structures.

1. **Accretion**—occurs when new factual information is gradually acquired within existing cognitive structures—this can be understood in terms of Piaget's assimilation and the cognitive structures as schemas.
2. **Weak restructuring**—occurs when cognitive structures evolve to better interpret the information this is a 'vertical' process, in which the structures are stored beneath a relating or integrating concept.
3. **Radical restructuring**—occurs when new cognitive structures are used to reorganise the problem or topic. This is a shift in thinking extending into a more abstract level of operation.

Radical restructuring is not achieved until knowledge has been gained (in 1) and structured (in 2).

Biggs and Moore (1993) put this simply when they suggest that after accretion students are competent, after weak restructuring they are clever and after radical restructuring they are very clever indeed.

We can see then that “collecting” is most usually the initial activity, which takes place in the course of undertaking work with information. This is followed on, in approximate order, by the activities of analysing, interpreting, predicting and synthesising. It is these different levels of activity with information, which can be termed “engagement”. If learners do not engage in a meaningful way with the facts and ideas with which they are dealing, then little higher level, effective learning takes place.

It is one of the roles of a teacher in constructivist style classrooms to promote and enable engagement with information and ideas. In the absence of a teacher, or with a learner who is not skilled in working with and engaging with information, it is possible for the structure of the information itself, and any related (suggested or even prescribed) activities, to promote engagement and encourage effective learning. If children are left to their own devices when working with information sources it is very likely that they will not engage in a meaningful way with the content, and as a result of this non-engagement, it is highly likely that only minimal learning will take place. (Pritchard in preparation)

Biggs and Moore (1993) outline the distinction between deep and surface learning. Deep learning, they suggest is most likely to take place when the learner becomes very involved in the task(s) in question – they use the term “engage” to illustrate their point. Surface learning comes about when the learner undertakes the minimum amount of work, or engagement, that is possible. As an example they say that “... a surface learner would learn the “story” of Hamlet: Prince of Denmark ... the deep learner would speculate about the meaning of the play from a personal to a universal perspective...” (ibid 312) Clearly not all learners can be deep learners on every occasion, and not all learning needs to be deep. However, as an ideal, deep learning is something to which we can aspire and without engagement, through cognitive activity, this is less likely to come about. “The deep approach is ideally what school learning should involve.” (ibid 313)

Reid et al put forward a model for learning, which is based upon constructivist and socio-constructivist views (Reid, Forrestal & Cook 1989). They suggest that effective learning is most likely to take place when the intention to learn has been established. This, they suggest, is most likely to occur when learners

“... ”

- have a clear sense of direction and purpose,
- can build upon what they know already, and
- are actively participating, using their own language and cultural images to help them to understand” (ibid 10)

All three of these points are extremely important. They relate to aspects of cognitive, constructivist theory, which puts the learner close to the centre of the enterprise of learning. Firstly the learner must have the motivation to learn. This can be intrinsic motivation, or can be encouraged by the teacher and the teacher’s choice of material and context. This can give the sense of purpose and direction, as can involvement in authentic situations; Secondly, the principle of building upon current knowledge and understanding. Before beginning a new topic it is very helpful to review the learner’s current position in relation to the knowledge and understanding associated with the field of study. The knowledge and understanding of a topic, which a child brings to new research and investigation can shape everything that follows. In some cases current knowledge and understanding may be weak, vague, or even inaccurate. The building up of new knowledge and understanding, and the correction and restructuring of misunderstanding is an important part of Piaget’s notion of assimilation and accommodation. (Piaget 1973) The third point above relates to the notion that learning is “situated”. The notion of situated learning (see, Lave & Wenger 1991), put very simply, suggests that skills, knowledge and understanding, which are learned, and even mastered, in one context may not necessarily be transferred successfully to another. More relevant to this discussion is the notion that learning can be situated in cultural settings, and that if a learning activity falls beyond the cultural understanding of the learner then learning is likely to be, at best, less successful than had it been situated in a more familiar cultural setting.

Returning to Reid et al’s model we see that “engagement” is the entry stage in the process of learning:

- Engagement
- Exploration
- Transformation
- Presentation
- Reflection. (Reid et al 1989, 28)

Engagement is described as “the time during which students acquire information and engage in an experience that provides the basis for, or content of, their ensuing learning...” (ibid 28) The next stage in the model—

exploration is closely related to the stage of engagement. This stage can be an open ended process, where children follow their instincts, but possibly a more profitable approach might be to set short tasks which develop both engagement and exploration. These tasks are designed to give the child an overview of what is contained in the information under consideration and may take many forms, as we will see later.

Transformation is the stage in which information with which the child has engaged, and has explored, might be re-configured into a form which allows for presentation (the next stage), but importantly, transformed into a format which will, from the teacher's point of view, enable learning objectives to be met. From the point of view of the child certain questions will now be able to be answered. Transformation and the resultant presentation is not the end of the process. Time to reflect upon what has been undertaken, the process and the content, gives the opportunity for internalisation, and for a deeper level of understanding to be developed. Reflection can also take many forms. One common approach is to ask children to give a short presentation / explanation of what they have been doing and what they have learned. This can take a variety of different formats, prepared for a variety of different audiences—a poster to display, a newspaper front page, a multimedia presentation, and so on. Sometimes teachers feel that some form of assessment is necessary, and the opportunity to revise before a test could be viewed as the stage of reflection.

Encouraging engagement

It can be surmised that an important element of the role of the teacher is to encourage engagement, since without some measure of involvement with information and ideas there is severely reduced opportunity for learning to take place effectively, especially the deep learning which is normally the aim of most teaching situations.

There are many effective ways of encouraging children to engage with factual information. One important principle is to insist that children focus on a specific aspect of what is probably a wide field of interest. Wray and Lewis (1997) set out the use of a KWL grid as a starting point for research work with non-fiction texts. This is a general approach, not restricted to use with information specifically from web based or other electronic sources. KWL comes from: "What do I KNOW—What do I WANT to find out—What have I LEARNED (KWL)". The use of such a grid (probably set out on a piece of A4 paper), encourages children to focus on what they already know about a topic, to identify what they would like to know about it and then to plan and find something out and note what they have

learned. The KWL grid (alternatively known as “Prior Knowledge and Reaction”) was first put forward by Ogle (1989) and has been further extended by Wray and Lewis (1997). (See examples in the Appendix.) Another approach, which could well be of value in work of this nature with children, is the use of a writing frame. This notion, also explained by, Wray and Lewis (1997) is a simple scaffolding device which gives a structure for children to use when writing in a format or style which is new to them. (See an example in the Appendix.)

Internet-based information

In the context of Internet-based, information-rich study situations there are certain approaches which teachers can take to assist in the process of engagement. In the absence of a teacher to guide and scaffold the experience there are certain features, which can be incorporated into the design and structure of web-based information, which can open up possibilities for learning. These features fall into two broad categories: i) Layout and design; ii) Activity and advice.

Layout and design

Those of us who have spent any time at all browsing web sites know that some are better designed than others. Sometimes this can be a matter of personal taste—we don’t like a particular font, or particular color combination, but at other times elements of design, from both the technical and the aesthetic point of view, can make a very big difference to the ease of access to a particular site.

- Speed of opening—if a site takes a long time to appear in full the potential user is likely to try elsewhere. Large images take a long time to appear.
- Volume of text—large tracts of unbroken text can be daunting and off-putting, especially for younger or less competent readers.
- Inclusion of images—pictures and diagrams can act to break up the text but they can also serve to illustrate certain points from the text.
- Size, font, color / background—many combinations of font and background color lead some readers to difficulty. There is

some anecdotal evidence that some combinations are better suited to readers who suffer from particular types of dyslexia.

- Use of frames—text broken up by the use of boxes and frames, in a structured and logical way, can be more reader friendly in some cases. Children are used to this less conventional layout.
- Many textbooks make use features such as frames, boxes, arrows and other graphical devices.
- Language—the style and complexity of the language used must be at a level that the intended audience can follow easily.
- Title and opening comments—a short title, or brief set of introductory comments, can act to stimulate interest in the site and its content. This could even go as far as to set out what it is that a reader will learn, or find out more about, by visiting the site.

Activity and advice

If web site users are to reap the optimum benefit from the content of the site, especially younger users, and especially in educational settings, it can be very helpful to provide some form of advice or a limited number of varied and carefully selected activities to undertake. An overemphasis on activity could have the opposite of the desired effect.

- Introductory advice. For example, an introduction to the reading system known as SQ3R² (Survey—Question—Read—Recite—Review), or the approach known as PREP³ (Preview—REad to understand—Process to learn). Both of these systems of approaching non-fiction text encourage the asking of questions, the making of notes and other activities, which encourage cognitive activity.
- Open ended or rhetorical questions. Points for consideration at the end of passages of text can both break up the longer passages, and, more importantly, focus the attention of the reader towards the important elements of what has been read.
- Activities. There are an enormous number of activities, which can be suggested, or even insisted upon when children are deal-

² Detail can be found at: <http://virtual.parkland.cc.il.us/studyskill/Reading&StudySystem/ClassicSQ3R.htm>

³ Detail can be found at: <http://virtual.parkland.cc.il.us/studyskill/Reading&StudySystem/PreP.introduction.htm> and at many other places.

ing with non-fiction texts. Creative teachers will always develop new and improved activities, which suit their needs or the needs of their charges.

Some examples might be:

- Write down three main points from this piece of writing.
- Summarise the points in favour of from this article.
- Write a shorter and simpler version of this piece of writing for younger children to understand.
- Find out the meanings of the following words... ; or, pick five words which you are not sure about and look them up in a dictionary.
- Write three points in favour and three against ... which are included here.
- Write a one hundred word report on what you have just read. Include some short extracts from it and comment on why you have included them.
- Find the answers to these three / four / five questions.
- How would the events described here make you feel if you had been there at the time?
- Draw a timeline of the event described here.
- Draw a diagram to show how was affected by
- Write a letter to a friend / newspaper /... explaining what you understand from this article.
- Produce an advertising handbill to publicise
- Write a short informative radio news script to pass on this information.
- Print out the passage about then use a highlighter pen to show every reference to ... (use two different colored highlighter pens for highlighting different aspects).
- This tells us that Can you find any other evidence to support this?

The above suggestions are a small selection of some general ideas, which could be employed in the promotion of engagement with the content of factual information. Creative teachers are extremely good at devising activities like these and they are able to tailor them to local requirements of pupils, exam syllabus requirements, or the interests of those involved.

Concluding comments

Learning from information sources such as the Internet does not happen by chance. Teachers, in conjunction with the designers of web based materials, can do quite a lot to promote situations where effective learning is more likely to take place. However, any sort of learning can never be guaranteed.

It is incumbent upon those who provide materials for use in educational settings to encourage good practice, which in turn has the possibility of leading to effective learning taking place. Not to do this could be to encourage poor practice and the development of behaviors which could be described as deceitful or deceptive and could easily lead to plagiarism, whether intended or otherwise, and can create educational situations where no learning actually takes place.

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Appendix

Bloom's Taxonomy is not a consideration of the psychology of the processes of learning but a conglomeration of the opinions of 2000 educators who contributed with their views on what constitutes good learning. Based on these views Bloom and his associates built their classification which is organised into six major classes:

1.00 Knowledge: at this level learners are able to demonstrate that they know particular items of information by the rote repetition of correct responses.

2.00 Comprehension: at this level learners are able to use their own words to illustrate the meaning of the subject that they are dealing with.

3.00 Application: learners are able to apply their knowledge in a practical situation.

4.00 Analysis: learners are able to seize upon and isolate particular important components of knowledge.

5.00 Synthesis: separate elements of knowledge are combined to create new knowledge.

6.00 Evaluation: new knowledge can be tested and treated problematically.

Topic: _____ Name: _____

What do I know already?	What do I want to find out?	What have I learned?

KWL Grid

Priorknowledge and reaction



Example of a writing frame for a story:

Setting

Characters

First event

Second event

Third event

End of story

Example of a writing frame for non-fiction writing

This report is to tell you something about

There are three / four / five things that are very important / interesting / surprising about ...

They are:

- 1.
- 2.
- 3.
- 4.
- 5.

These facts came from ...

The reasons why they are important / interesting / surprising are ...

Astrid Myskja

University of Technology and Science (NTNU), Norway

E-mail communication and classroom culture

This article is based on a qualitative study of an e-mail communication project in English classes between a Norwegian art class at upper secondary level and a group of English peers majoring in art. Through qualitative methods like interviews, log, and e-mails the study looks into the way such working methods can influence all aspects of the classroom culture. The classroom culture is here defined through Schwab's (1970) four basic elements in a learning situation: Learner, teacher, context, and content. This study especially focuses on the importance of the learning content in such a project, and how the learning content might influence the outcome of the project. The study also shows what factors are vital for a successful outcome of an e-mail communication project.

Introduction

In 1994 a comprehensive reform, Reform -94, of Norwegian upper secondary education was put through. Two highly prioritised fields in this reform were internationalisation and the use of ICT in education. The Norwegian Ministry of Education published comprehensive guidelines for teachers in both these fields. Teachers were now not only encouraged to use ICT in their classes, they were now obliged to integrate the use of ICT in several school subjects. (KUF 1996–99; KUF 2000–2003)

Working as an English teacher these new governmental priorities were an inspiration for innovative thinking in my work. Like many other teachers I felt scepticism towards extensive use of technology in classes. This scepticism was for many reasons; a feeling of incompetence in the field of computer technology leading to a high degree of frustration when the machines did not behave according to plan, and a lack of technical support in such situations. There is also a sense of losing control at the moment when the students turn their faces to machine. According to an evaluation of a Norwegian net-based educational programme for teachers, "Språktårnet", approximately 70 % of teachers experience a notion of lack of control when taking the students to the computer room (Lund 2002). This feeling of lack of control leads to another worry: Do the students really learn something in the computer room?

When a teacher decides to use ICT in the learning situation the first question is: How can ICT be integrated successfully in my classes? How can the use of ICT improve learning methods and then maybe enrich learning?

In my case I wanted to focus on the C in ICT, i.e. interhuman communication. This is where the ICT tool can not be easily replaced by others. Through initiating an e-mail communication project with an English school class, the international aspect of the curriculum would also be covered.

Focus:

The focus of the e-mail project was to see how having a distant peer audience for text production affected the students' motivation and learning. In addition I wanted to study how the different aspects of the classroom culture were affected by the use of ICT, how the setting of the computer room affected the roles of teachers and students. The thematical content for the e-mail project turned out to be a very decisive aspect for the progress of the project, this aspect therefore become of central importance in the study. Working with one class of twelve pupils this was a qualitative study with emphasis on the students' and teachers' personal experience from the project through interviews, logs and evaluation mails, plus an analysis of the students' e-mail exchange.

- Why use e-mail as a tool in foreign language learning?
- What factors are essential for an e-mail project to succeed?
- How important is thematic content for the exchange, and its importance for the communicative process: preconstructed or constructivist content?
- What are the effects of learning content and identity?
- What is the importance of context—the classroom as workshop?

Project description:

The following discussion and analysis is based on a project which took place in the school year 1999–2000. The project class majored in art, advanced level, and there were twelve students, two boys and ten girls at the age of 17–18.

The planning phase:

The planning of the project was accomplished through e-mail correspondence from May 1999. This phase did not run as smoothly as expected. It was difficult to establish contact with the English teachers; Their answers arrived only after repeated attempts at contact via fax, e-mail and telephone calls.

There were several reasons for these communicative complications. One reason was the ongoing rebuilding of the English school buildings, which led to a three week delay in their start of term. Another reason was that this school was not yet well equipped with computers. The art department had no computers at the planned starting point of our project; the teachers involved eventually had a computer installed at the art department. This machine was to be shared among the eight English students involved in our project. Other useful equipment, like scanner, digital camera etc., was not available. In my opinion the main reason for the lack of communication flow lay in the human resources. The contact teacher took a strong interest in ICT and international work. He had arranged for the school's membership in the ENIS (European Network of Innovative Schools) network, being convinced of the importance of this type of communication for his students, especially since this school was situated in a rural and rather isolated setting. This teacher, however, was working in school administration, and could therefore not be directly involved with a class. Since both schools offered an art course, we decided to initiate a communication project between the art students at both schools. The art teacher, who was to be our main contact person, had no computer experience. Even if he volunteered to participate in the project, I believe the main reason for the lack of communication flow lay in his lacking sense of ownership and direct involvement in the project.

Project content:

We wanted to focus on two different topics relevant for the curriculum in our project:

- Knowledge about British society, here represented by England.
- We expected to gain a lot of information directly and indirectly through the e-mail correspondence. Through getting to know the English students we would learn about English youth

culture. In addition we would direct concrete questions about their school system to their students.

- Knowledge about art, being the students' major subject. The English school naturally wanted to focus on this part of the project, as Norwegian culture was not a part of their curriculum. They were, however, very keen on the exchange artistic ideas and products.

Going through with the project:

The project work took place during our weekly double lesson in English. Due to the previously described delays in communication flow the e-mail project between the classes commenced around Christmas. It was therefore impossible to follow the intended progression plans, as a result we had to just start sending the first e-mails and take it from there. Our students picked one mail partner from the first e-mails arriving from England. Common interests were the main criterion for their choice. Some hit it off from the first mail, others never got any answers from their partner. This was a most frustrating factor in the project. The students interpreted the lack of reply as a personal rejection even if they made jokes about it.

The e-mail correspondence continued through till the end of April; we sent answers in our English classes as soon as we got the awaited replies. The rest of the time we did completely different types of language work in our English classes. In my experience it is of vital importance to keep an attitude of improvisation during such a net-based communication project. Delays and change of plans will always occur in this context, for instance delays related to different holiday schedules are a well-known problem in this type of exchange. If you manage to keep a relaxed attitude to the progress of the project, as you are running other projects in parallel, this sort of obstacle will cause less frustration.

Why use e-mail as a tool in foreign language learning?

“Truth is not to be born nor is it to be found inside the head of an individual person, it is born between people collectively searching for truth, in the process of their dialogic interactions” (Bakhtin 1973).

According to the American language researcher Stephen Krashen (1988) there are two different approaches to foreign language learning; the acquired system and the learned system. Where the learned system is based upon formal instruction, such as grammar exercises, the acquired system

requires a meaningful setting. The acquired knowledge is a result of an unconscious process demanding meaningful interaction. One type of meaningful interaction, according to Krashen, is interhuman communication. In an e-mail communication project the necessary elements for such interaction is present: You have a factual recipient for the written message, preferably a peer. According to the students this in itself is a highly motivating factor:

Student quotations:

- *“I think it’s good training since we write with English people, and we get an impression of how the youth down there express themselves, AND we make new friends.”* (Girl, 17 years)
- *“It was more fun in the way that you write about yourself, and there was a person writing back to you.”* (Girl, 17 years).
- *“It’s much more fun writing emails to an actual person than just writing random nonsense in the classroom.”* (Girl, 18 years)

The students evidently find it meaningful having a peer receiver for their own utterances. A teacher will necessarily represent a totally different audience compared to a fellow student. Firstly teachers are representatives of a different generation, secondly the teacher’s role as evaluator will always be present in the student’s consciousness: Will the teacher appreciate what I’m writing? Will this text grant me a good grade? Oppositely a fellow student will represent a motivating target for dialogic interaction and a free space for language expression.

There are contradictory research findings regarding the learning achievements from electronic text production. Neuwirth et al (1992) detected no progress in students’ texts when using electronic conferencing as a method. Others, for example Barker and Kemp (1990) claim that the exchange of text on-line promotes the power of the text. A more recent study from New Zealand (McKinnon, Nolan & Sinclair 1996) claims that the students made academic progress in English language skills when using ICT at least three times per week. To prove this academic progress the researchers relied on the English examinations of the National School Certificate. The students using ICT had significantly better results compared to those who did not participate in the ICT project.

How to initiate an e-mail communication project?

The first step in an e-mail communication project is finding a suitable partner school. Where do you look to find this? There are several partner finding forums on the net; here are some useful addresses:

eSchola Partners - European Schoolnet (<http://www.eun.org>)
Intercultural E-Mail Classroom Connection (<http://www.iecc.org>)
ESL Cafe's ESL E-mail Connection for students
<http://www.pacificnet.net/~sperling/student.html>
E-mail penpals club (<http://www.geocities.com>)
British Council E-Pals (<http://www.britcoun.org.hk/epals>)

It is vital that the teachers involved have a feeling of ownership towards the project. A common problem in e-mail projects is a lack of commitment from the participating schools. A sense of involvement and contact between the teachers prior to the student e-mail exchange is of vital importance. Extensive contact, and if possible, a personal meeting between the teachers involved in advance improves the chance of success. Personal involvement enhances commitment.

In our case a school trip to England led to the choice of partner school. Through the ENIS network we found a school situated close to the school trip destination. Thus we had a chance to visit the school and meet the contact teachers. There and then we decided on what classes to involve. As both schools had an art department, we decided to make it an exchange between art classes at both schools. Hereby the main framework for the e-mail exchange was constructed.

Symmetry of need in the learning context—a necessary condition for a successful outcome

According to Vygotsky (1978) and other social constructivists learning is a result of scaffolding of knowledge. This scaffolding is optimal when knowledge is developed through contact with others more knowledgeable than yourself, in the “zone of proximal development”. The more knowledgeable person might be a grown-up, for instance a teacher. Fellow students might also be at a higher level than yourself; in our case the English e-mail partners were at higher level in the English language, being native speakers. For the Norwegian students this was an advantage according to Vygotsky's theory.

How did the English students regard this situation? According to the English teachers English schools are very tied to a strict curriculum and schedule. Their students felt that spending time on our e-mail project was not given any credit in a school context:

“The students couldn’t fully appreciate the benefits accrued from communicating with your students. This project made demands on our students outside the standard routine and somehow we didn’t get it right.” (Contact teacher in England, male, 45 years old).

These observations show the importance of symmetry in learning needs for all partners involved in an e-mail communication project. One way of solving this is through engaging partner schools at an equal level languagewise. We were seeking English partners to learn about British culture as an extra benefit, as British culture is part of our foreign language curriculum. If you choose a partner school from another country where English also is the second language, the motivational factor will be equal. Another solution is to look for common topics or subjects. Any vocational course at upper secondary level will benefit from the exchange of professional ideas and skills as well as the language practice; e.g. hairdressers, carpenters, cooks etc. Trades where creativity is a vital factor for professional development will especially benefit from the ideas and inspiration from fellow craftsmen. In our project the students’ art work was the basis for the exchange.

The content of an e-mail communication project

Fabos and Young (1999) claim that there is too little focus on the topics for the exchange in communication projects. Some e-mail projects are solely based on improvised communication between the students. Most teachers will regard this type of communication as too unfocused. We have to relate to curricula and exams, and would prefer to see concrete results of what we are doing in an educational setting. “Chat” is anyway a part of many students’ leisure activities. In our e-mail project we focused on two types of learning content, one a preconstructed content where the students were to gather factual information, e.g. about British schools. The other theme was based on constructivist thinking, i.e. here the students were active constructants of their own content through mediating personal art work.

Preconstructed learning content

The national curriculum will form a natural basis for the content of a communication project. A dilemma will then be whether the learning content should be concrete and preconstructed, or whether the students themselves should contribute to the content. An example of preconstructed learning content is using the e-mail exchange to gather information about another country's school system. Here the students are looking for concrete information, and the e-mail communication might be seen as a replacement for the textbook or internet sources. Additionally the student will get to know a more personal version of, for instance, the school system from their peer partner than any text book can give. Still this learning content is 'closed', decided by the teacher and restricted through the curriculum.

In our experience this type of content was met with resistance. The students in both countries found this boring, and in their mails they emphasise that their questions were indirectly asked by their teachers, not by themselves.

Constructivist learning content

The opposite of preconstructed learning content is inspired by constructivist thinking. According to the tradition of constructivist thinkers like Piaget (1954) and Vygotsky (1978) the students should be active constructors of their own learning content. The constructivists regard learning as a result of the students' active participation in what they consider to be meaningful activities.

One of the topics for our e-mail exchange with England was in the spirit of constructivist thinking: The students were to communicate their own personal art work through describing the idea and the process of their art to the English art students. Using a digital camera they attached pictures of their art to their emails. This assignment was based on the curriculum, as in all the vocational courses, including the art course, students are to learn English linked to their vocational work. However, this assignment was based on a personal expression; the students' own individual art work. The following extracts from the e-mails show a higher degree of involvement and enthusiasm from the students:

From the Norwegian students' e-mails:

"We have just finished a project in our art classes now. We could do whatever we wanted to, which was really cool because we all

made totally different things. We picked a theme each and found out what we wanted to make.” (Girl, 17)

“At school we have all sorts of boring exercises, and I seldom like them. But a couple of weeks ago we got a very free exercise. We could do whatever we wanted — I wanted to make an expression of my self. And it was a lot of work. But I got the job done.” (Boy, 18)

Here are examples from the Norwegian students’ art mails:

“Well, as you see, I’ve sent you some picture`s of my art... It`s called “Hangover-the day after”. The name was picked by Maren in my class. The whole class had to write a name or subject on a note and put in a bowl. Then we took a note each, and then we had to make something that we felt was in common with the name. I choose to make the sculpture this way, cause it was kinda the feeling you have when you have a hangover. Not, what the apartment looks like the day after! Many has failed to see it this way, so I must tell them what I really mean about it. But anyway...I made it in cardboard, broken glas, paint, glue, plastic, candlelight stuff, etc. I painted the cardboard with a ugly and disgusting color. So I can set the right mood to it. Then I started to melt plastic and the candles on the cardboard. Glued the broken glas to it, and then I



was done! You may think it's horrible, and that's right! Because that's the mood I was looking for, and wanted people to think when they see it! This was a assignment about modern art." (Girl, 17)

"Then the other art picture is an assignment we had that we could decide whatever we wanted to make!! Mine looks bad now because I didn't take a picture when we had the exhibition! But it's suppose to be an American jacket and a bottle in a bag. Okay my idea came from superman! Because first we had to draw a note with the name for the work so you could work form that, but I couldn't get the song "Ghetto superstar" out from my head so I drew those to persons that is first on the cover of the CD and then I found out that they had change their role model so then I thought that I could draw the real USA!

That everybody wants to go there and everybody looks up to it, but in the back they have ghettos and a lot of crime! So I took the flag in clear colours in the front and then the ghetto in unclear colours in the back!! Then you have some pictures of me, they are bad because I had to take then today and they suck!! I hate to take pictures when we have to! But It's getting late and the class is soon over so I got to go now!" (Girl, 17)

The students statements after this phase of the e-mail exchange show that they found this part of the project both interesting and educational:

"Yeah, I learned a lot about art materials, how you express yourself when you paint, and all those vocabulary and words." (Girl, 17)

"We do learn from it, new words about art and such. And we get better at describing what we are doing in our classes." (Girl, 18)

Learning content and identity

Why was the art project where the students were active creators of the learning content more successful than the teacher led content?

Piaget claims that the construction of the self occurs as the child acts on its environment—as the child takes actions to understand what he or she can do (Piaget 1954). Likewise, the psychoanalysts Erik Eriksson and Laura Berk claim that the most important achievement of adolescence is the quest for identity; this quest is a critical step in becoming a productive, fulfilled and happy adult. (Eriksson 1950). In adolescence children become absorbed

by the task of forming an identity, defining who they are, what they value, their views, what they hope to pursue in life. They question, rethink, analyse, explore, and eventually create a foundation that provides a sense of sameness as they shift through different roles in life. (Berk 1997)

Don Tapscott (1997) sees the use of the internet by young people today in the perspective of these statements. He reflects on the internet as a new arena for the creation of young people's identity. "Is it possible that through the Net, children, in particular adolescents, have a new tool and a new environment for the construction of their identities?" The net generation, according to Tapscott, has certain characteristics, such as fierce independence, free expression, strong views and emotional and intellectual openness. The net offers genuine opportunities to create your own reality, in contrast to the world offline, which already has been built for you. Howard Rheingold puts it like this: "The online world is like an empty canvas". (Rheingold 1993)

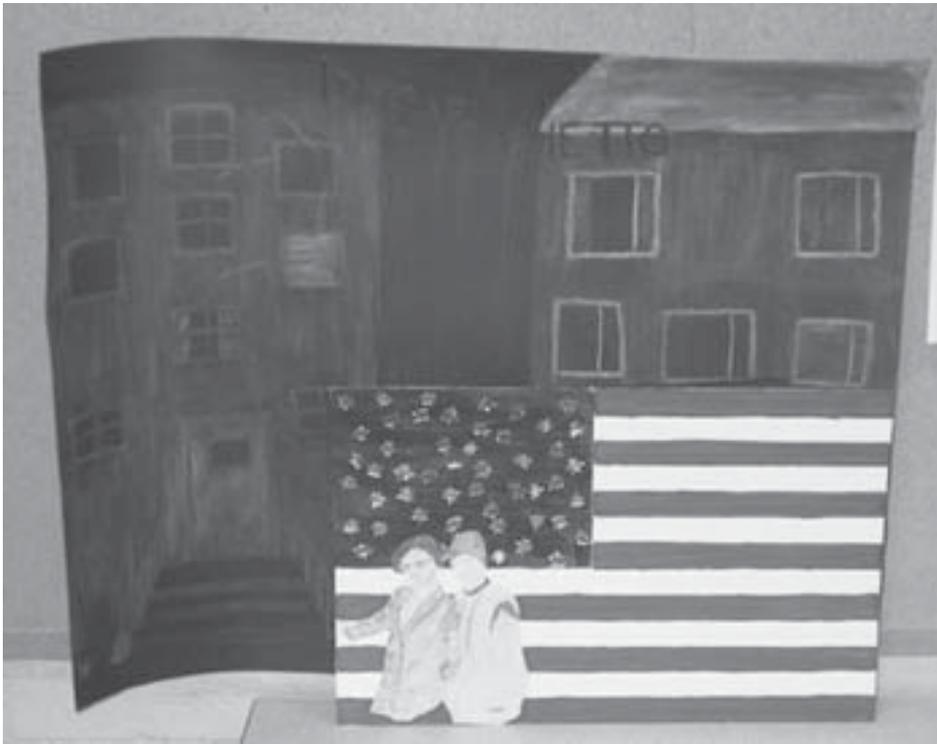
This metaphor takes us into the terminology of art. Our art exchange provided a scene for expression of self through individual artistic presentations. Tapscott claims that self-expression is a priority for those who have the means of production. The art exchange provided such a means. I would argue that this is the reason the students felt that this activity had a relevant purpose: It gave them an opportunity of creating identity in a meaningful, communicative setting.

15 year old Reanna Alder (Tapscott 1997) sums this up: "The Internet would be a REALLY boring place if no one revealed any of their personality, or their life: That's what true communication is. It involves vulnerability". The content is a determining factor for the outcome of an electronic communication project. Reanna in these few words explains why our art exchange was more successful than the cultural exchange.

Context—the classroom as a workshop

According to Leo van Lier (1988) you can compare the term "context" to ripples in a lake—ever extending concentric circles from any particular action or utterance. At some point we will have to draw a line and say: this is as far as we shall look. Van Lier includes the following in the term context: Setting, learning content, interaction between teacher and student, the participants involved, and learning methods. In this chapter I chose to focus on the setting: In what way did the transfer from an ordinary classroom to a computer room influence the learning situation?

Our project class was a vocational class (art), and therefore used to two different cultural settings in the art classes and in the theoretical classes.



In the art classes, which take place in the workshop, the students make a break when they finish a work operation. The relationship between work and pauses could therefore be characterised as organic. The desks in the workshop are facing each other, and there is no raised platform at the blackboard. In theory classes the schedule is a lot stricter. The theory teachers are used to exact timing of classes. The activities in theory classes are not necessarily led by the teacher, but they are normally organised by the teacher. The traditional classroom has a raised platform at the blackboard where the teacher's desk is placed. The students' desks are normally facing the teacher and the blackboard. Thus the setting of a traditional classroom emphasises an asymmetry in the teacher-student relation. According to Michel Foucault (1984) there is a significant connection between architecture and power. Architecture represents a "technology of power".

In our e-mail project we moved from the traditional classroom to the computer room at the art department. The computer room also has a "democratic" architecture with the students facing their computer. Dryden (1994) describes such settings: "With each group's chosen words and images projected electronically in a semi-darkened classroom, the voices of many students fill the authority position that the teacher has vacated." In this way the computer room resembles the workshop more than the theory room. In

the students' evaluation mails the students claim to work better in the computer room than in a traditional classroom. One of the students says: "*When we were in the computer room I work better than I usually do. It's much more fun doing stuff on the computer, especially on the internet.*"

Several of the students express similar views: it is more motivating to work in the computer room than in the ordinary classroom. In my teacher's log I comment upon the fact that many of the students did not take the scheduled break. The others asked to take a break at a different time when a break felt more natural to them, like they do in the workshop. In this way the gap between theory classes and art classes was reduced.

Conclusion

In our research project the use of e-mail was a motivating factor, the students especially emphasise the importance of having a peer recipient for their texts. The e-mail tool grants authenticity and meaning to their text production. The writing process becomes less restricting as the recipient is not an evaluator, according to the students.

There are contradictory research results as to whether electronic conferencing leads to better text production. (See learning content section). My conclusion is that increased motivation and enthusiasm among the students is a strong argument in itself to use electronic conferencing in foreign language classes.

In this context the Hawthorne effect should be mentioned (Dingley 1997). It can be explained by the increased motivation following increased attention paid to the participants when introducing something new. In our case the use of ICT and having peer text receivers were both new elements in class. Being part of a research project and the increased attention following might have affected the students to a certain degree.

To make an e-mail project succeed certain conditions must be present. Extensive cooperation between the teachers involved must take place prior to project start to ensure a sense of commitment among the participants. Furthermore there must be a symmetry of need in the learning situation, either on the level of language competence or in finding a common ground of interest in the learning topic, for example through sharing tools of trade in a vocational course.

The learning content ought to contain a creative element for the students to involve in the communication project. A project focusing on a constructivist learning content where the students are creators of content is more likely to succeed than a project with a predefined learning content.

The net offers a scene for creative expression of identity, and the creative aspect must be present for a successful outcome of the project.

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Sean Neill
University of Warwick, UK

Assessing reactions from teachers and practitioners

This paper explores the way in which the principles of allowing teachers flexibility for creative use the theme by their classes (Pritchard 2002), and their use of the themes, can be assessed.

Behind this paper is the assumption that, in their present form, computers are not capable of the flexibility, which is characteristic of the human mind—whatever the explanations for human creativity (e.g. McFadden 2000, Dennett 1992, Penrose 1989). It is therefore desirable to use computers for the purposes at which they excel—processing information in a determinate way as Turing machines (Penrose 1989)—presenting a range of choices to users, collecting predetermined feedback from users and analysing that predetermined feedback. It may reasonably be objected that the use of predetermined categories inhibits the expression of the individual responses, which teachers could make if they were allowed open-ended responses; However the resources available in the NEOTHEMI project mean that it is impracticable to explore the cultural meanings behind open-ended responses. This would require interviews with, and observations of, teachers and children, which would, across ten countries, be a major and expensive project in itself. Feedback is therefore handled by an on-line questionnaire linked to the themes, which are being assessed; Data from this questionnaire is to be collated and analysed at Warwick.

Analysis of the data from the feedback process

The screens for feedback first ask users to indicate which theme they have been looking at, and then to give their views on what they have gained from the theme (better understanding of their own and others' cultures and points of view, increased self-understanding, wanting to find out more about the theme topic, feeling more European, understanding difficult issues, understanding different points of view, and wanting to learn other languages). Secondly, they are asked about difficulties, both technical and to children's security, posed by using NEOTHEMI (slow computers, not enough computers, not enough time on the computers, difficulties with plugins, that the theme could not be altered to fit in with the respondent's teaching, and the risk of children accessing dangerous websites). As these are

seen as the most important questions, respondents are asked to submit this page by clicking to get onto the second page, to ensure this data is collected even if they do not decide to fill in the whole questionnaire.

On the second page respondents are asked biographical information which identifies their country, and the broad locality (rural, suburban, or urban) which can be linked to the use made of the pages, as described below. Basic biographical data about the user (age-group, status—child, teacher etc., and sex) and the reason for using the theme (education, leisure, or non-education work) are also collected, to identify whether these factors relate to theme use. If the theme is being used in an educational context, another question asks the broad subject area in which it is being used. There are also questions about school type and size; this allows identification of the types of school, which make most use of the themes. The final pages contain a range of questions covering topics related to the use of the Internet in education, which match the questionnaire distributed to participants at the NEOTHEMI conferences in Budapest and Helsinki. These questions include the appropriateness of teaching internet use to age-groups from the youngest children to school leavers, differences between boys and girls, appropriate contexts for internet use (in all lessons? in clubs?) whether internet use decreases or increases communication and social skills, whether students know more about internet use than teachers, and whether internet use wastes time or money which could be spent on ‘real’ teaching.

From the ethical view, the ‘biographical’ information will normally be collected from school email addresses, rather than personal email addresses, and much of the information collected refers only to the school and not the user personally. This would not allow identification of individual users. However the information will potentially allow us to answer questions such as whether the UK themes are used more in countries other than the UK, or whether NEOTHEMI themes in general are used more in country or remote areas—in other words, whether the ‘virtual museum’ is more used by those with less access to the real thing. A notable feature of the partnership is that it contains countries with a wide variety of ‘real’ learning environments. Some partners (Norway, Finland, and to a lesser extent Ireland) include sparsely populated areas where access to mainstream cultural artifacts may be relatively difficult, compared to densely populated areas with large numbers of cultural artifacts such as Italy. On the other hand, countries such as Hungary and Portugal have a rich heritage of artifacts, but access to IT may be more limited than in, for example, Denmark and Germany. Interpretation of patterns of response in the light of these national differences will therefore be of great interest.

As well as descriptive statistics and univariate inferential statistics, the data will lend itself to multilevel modeling (Kaplan 2000), allowing the assessment of the relative importance of different aspects of the characteristics of users. This assessment will be able to draw on previous research carried out by the European Affective Network, including members of the NEOTHEMI group, on similarities and differences in educational values across a range of European countries (Puurula et al 2001; Katz et al 2002). For example, attitudes to issues such as hunting differ across Europe, and it will be of interest to see whether differences in reactions to the NEOTHEMI themes relate to the differences in values explored during the EAN research. The combination of information should allow assessment of how the value of themes varies according to the type of user.

We can suggest some speculative answers here, based on existing knowledge about national characteristics in the partner countries, and in other countries, which may be relatively frequent users of the site. The normal procedure in multilevel modeling and the preliminary procedure, which lead up to, is it to relate opinions to biographical and other variables which can be seen as antecedent causes of those opinions. In this case the 'primary causal' variables are nationality, age, gender, school characteristics (phase and size), and geographical location (rural etc.). These variables can be termed 'primary causes' as they are pre-existing characteristics of the users, before they began to use ICT. 'Secondary causal' variables include the subject area which the theme is being used with, the work context in which the theme is being used, and the computer-related problems experienced in use of the theme. These variables are termed 'secondary causes' because they arise from the 'primary causal' variables (e.g. a theme may be seen as suitable for a particular subject or age-group, and the resources available in a national educational system will affect the number of computer-related problems experienced). The 'secondary causal variables' will interact with a third set of variables, 'generic opinions' about the use of ICT in education, covered by the questions in the last section of the questionnaire. In other words, respondents who experience frequent problems with computers, perhaps due to inadequate resources in their national educational system, are more likely to have negative feelings about the value of the Internet. Here it will be impossible, given the quality of the data available through the questionnaire, to disentangle cause and effect – are the negative feelings due to the impossibility of getting adequate operation from the available hardware, or are respondents failing to solve problems with hardware which, given a little more interest and commitment, could easily be solved? It will probably be possible, from the quantitative analysis, to do no more than pair these as related causes; but further

interpretation may be possible at a qualitative level from information about national systems provided by the partners. This may indicate, for example, that negative generic opinions held by respondents from a particular country are a rational response to the totally inadequate resources for ICT provided by the national educational system of that country, or that in another country, despite generous resourcing, the retrogressive attitudes of the teacher workforce lead to reluctance to use ICT.

These causative influences, at different levels, can be predicted to affect respondents' assessment of the usefulness of themes, as revealed in the eight questions on the first page of the questionnaire. In some cases these influences will be differential, reflecting the suitability of the theme for a particular subject or age-group; in other cases they will be generic, reflecting the IT resources available in a particular system or the inaccessibility of culture except via virtual means in the more geographically isolated areas. The data will therefore require considerable qualitative interpretation in addition to the quantitative analysis, and this will be highly reliant on the co-operation of the partners.

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PART II

INTRODUCTION TO THE NEOTHEMI PROJECT— LAUNCHING OF PARTNERS' NATIONAL PAVILIONS AND THEMES

Giovanni Cannata
Head of the university of Molise, Italy

New ways of spreading knowledge

The process of globalisation, which we are involved in, affects particularly production, employment, financial and economic markets, but also communication and acquisition of knowledge and, as a consequence, all university courses.

Thanks to technology, we have now achieved a more and more dense and well-organised network, that lets individuals and groups interact among themselves. We are also able to have a continuous flow of information, in real time and within everyday relationships.

Until the 1950's, processing and communication of knowledge involved a minority of experts. The contents were defined particularly by institutional and academic worlds. The modern technologies allow knowledge to be spread to everybody. The multimedia world, virtual reality, the Web, digital satellites and internet, change the communication processes of knowledge and the ways of approaching these. These changes turn the information society into a knowledge society.

Modern communication technologies change the relation between time and space. Thanks to the web, people can exchange every kind of message, whether among individuals or groups, can take part in a video conference, get public information through network-linked computers, or build together a virtual world.

All training activities should reach users of every age. It is no longer possible to acquire, once and for all, a high and definitive professional level. It is necessary to be able to get into a lifelong learning process, often achieved through self-learning situations, aimed at developing sector-specific skills and even advanced knowledge abilities, such as a flair for reasoning, problem solving, planning actions, or social skills (autonomy, communication, and cooperation ability). In the new context individuals should achieve the ability to manage information, to develop it into competence and make use of it in the new technology-related economic context. These abilities are necessary for workers, as a consequence of the impact of the new information and communication technologies on every kind of job. The competences of the knowledge society will have more and more influence upon production factors.

Knowledge is a strategic resource that influences increasingly both individual lives, and business development. When the quality of knowledge, turned into competence, is applied from the beginning to a production process, the result is the improvement of product quality and better placement on global markets. It is therefore necessary to develop intervention policies, in order to supply the right instruments and resources to meet the need for knowledge, that human beings have now more than in the past.

The reality of current developments makes it necessary to combine professional ability with social personality, so that a person can skilfully manage this complex situation. Educational and training systems must examine what specialism ensure that an individual will be trained to learn.

In this framework the Neothemi Project is aimed at testing new learning and teaching patterns fit to meet the new demands and to free themselves from an inflexible organizational and educational system. This is the only way to become flexible and meet appropriately the new educational needs of the knowledge society.

Project Neothemi, in acting and managing its targets, offers in particular many starting points. In fact, within the University of Molise, there is specific teaching about themes developed in the Project that help meet students' needs relating to personal abilities and *curricula vitae*.

In particular, the virtual museum that will be built within the Project, could become a kind of didactic workshop where various branches of learning have space. This work can be carried out in a interdisciplinary way in order to underline the multiethnic perspective of education, through differences and similarities in knowledge in the different countries. By involving the "Centro di Cultura del Molise" (Centre of Culture of Molise) the Project has the educational role of recovering and developing interest and respect for the cultural heritage of the past.

As well as the development of new communication instruments of knowledge the project allows a important new change: from the prevailing educational concept—The Paradigm of teaching, that focuses its attention on teacher-centred knowledge transfer to another educational concept—the Paradigm of learning, that focuses its attention on the main role of students in learning.

The didactic pattern of the project makes it necessary to give up the old teacher role, which stands for the absolute keeper of knowledge, the only transmitter of knowledge and unique leader of the educational process. The teacher must give up the role of "sage on the stage", in order to undertake the softer, but decisive role of "guide". This new role leads to a director-teacher who plans learning "sets" and then cooperates with col-

leagues and students from abroad to build together an educational method with regard for the different learning models.

Thanks to the Neothemi Network it will be possible for the respective experts in different areas to share in carrying out long-distance learning systems, thus achieving one of the main targets of the Project—to improve educational systems.

Mario Petrone
University of Molise, Italy

Cultural heritage in an information / communication-based society

Progress in Information & Communication Technology is quickly changing our standard of life, the way of working and doing business, of training, studying and carrying out research. It is true that progress and transformations brought by e-society affect people's way of interacting among them. Nevertheless they cause also a new organization of traditional frameworks, a greater flexibility, a greater participation and decentralization.

The change in communication technologies seriously affects every sector, even cultural heritage. Preservation, protection and enhancement of the value of cultural heritage cannot neglect a basic resource: availability of information to reach a new and greater population of users. Flexibility, modulation, compactness and capability of information technologies allow us to change completely the concept and traditional strategies of communication connected with cultural heritage.

In this regard it is important to underline that existing communication processes, concerning cultural heritage, are already complex enough. In detail, it is possible to exhibit a work providing an interpretative key or supplying visitors with every factor to make their own valuation. Difficulties in the communication process concerning cultural heritage are caused by the fact that the work exhibited had formerly a different historical context and was probably located in a previously inaccessible spot.

The person in charge of communication must rebuild the former context, so that it is possible to "communicate" the work with all the contextual data, which are necessary to evaluate it fairly. Information science and in particular hypermedia and computer graphics offer a great range of instruments to reach these targets. In rebuilding the real context of the work there is another important aspect of graphics rebuild through numerical models. This is the *space* ... that is the possibility to put the virtual model in the correct placement preserving its original spatial relationships.

Project Neothemi helps the cultural heritage, promoted through the network, to become usable. This is possible thanks to ICT and routes designed to allow every kind of user, including communication or knowledge science experts, to explore and get to know the artefacts presented. The different themes dealt in the project are shown from time to time through

suitable technology. Applying this technology to the cultural heritage concerned in the themes dealt with by the project in no way replaces the direct value of much that is represented nor reduces the universe to a theme park, making contents and approaches banal. But a proposed objective is an efficient cataloguing that does not replicate the historical paper catalogue in an electronic format, repeating the traditional methods and aspects, but is an irreplaceable new tool both for studios and ordinary users.

The Neothemi project provides an openly available reference for organizations and offices that want to promote the use of telecommunications and information technologies for accessing and valorization of European cultural heritage. In particular, the project wants to activate a mechanism based on experiences and studies common to all participants, stimulating cooperation between partners and the adoption and integration of positively tested solutions.

One of the main actions carried out is dedicated to stimulating the achievement and growth of a multimedia market for cultural heritage, trying to increase the development of new methods to fruition, supporting the circulation of information and cooperation between “actors”. The framework aims to promote the creation of a network of points in a “homogeneous zone” spread over the European region.

The system associated with cultural heritage is dedicated to improving skills developed in the interest groups and working party. The main tasks carried out by the individual partners are:

- To be the point of reference for a specific subject;
- To supply value added services based on their own expertise;
- To provide basic elements for setting up an European structure able to work out cultural projects;
- To be “incubators” for future small firms offering chances for jobs and specialization addressed to young people.

The operational structure of the project, based on a strong synergy between the involved partners, required individualization of a reference model for managing background information flows intended to be published on the Neothemi website.

The reference model is based on identification of the necessary steps for managing background informations flows that, respecting specific organizational and technical rules, allows the correct publication of all information, related to the cultural subjects, developed by each partner. The relation between multimedia and cultural heritage creates complex and diversified problems, which imposes a convergent method on the institutional task related to the management of heritage.

The use of multimedia digitalisation applied to Arts and Environment is to be considered as an opportunity: a chance to extend the use across geographic borders, to let local cultural treasures arrive where they previously could not arrive, the chance to let them be known around the world without moving its centre.

The Neothemi Project can represent an important contribution to creative ability, to accept the challenge that the use of new Information and Communication Technologies involves.

Anna Maria Panzera, Laura Falaschi
Istituto Tecnico per il Turismo di Stato “Livia Bottardi”, Italy

“City Images”

City images: A historical present

Anna Maria Panzera

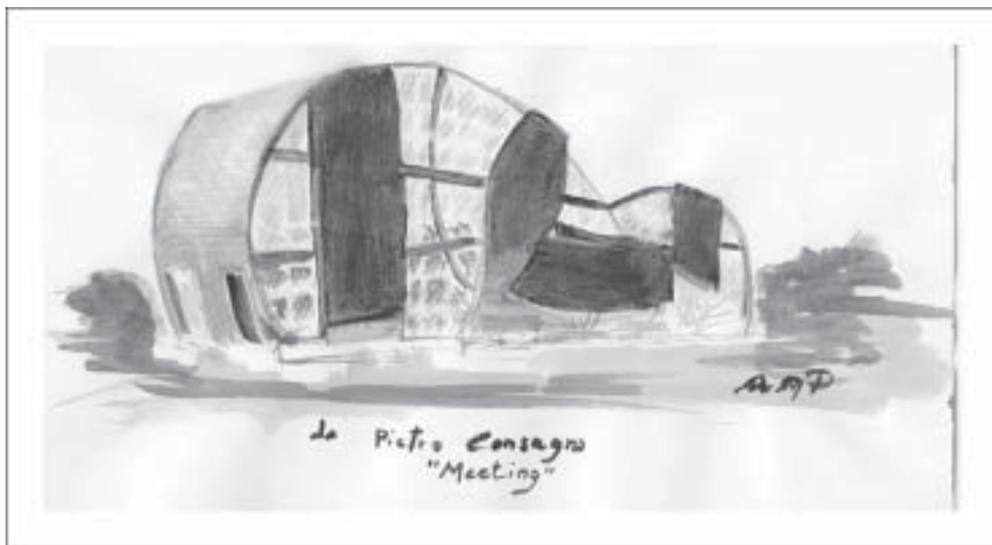
Introduction

The topic chosen by Italy within the Comenius 3 Project NEOTHEMI, has offered the opportunity to consider a great variety of issues. These reflections, on the one hand represent the basis for a richer teaching approach aimed at the birth of the Virtual Museum, while on the other hand they set themselves free from the didactic purpose to become an autonomous proposition and research project.

It will be useful therefore to explain, first of all, why this theme has been chosen as well as the reasons for the title of this paper which deals with the city images from two points of view: The first takes into account the present, the urban area interacting with modern and contemporary art, often in conflict with it, sometimes ritualistic and very seldom really open to crucial and enterprising innovations. The second will consider present day life, with urban historical stratifications and open spaces in a reciprocal relationship which is often not helped by town—planners, especially in the outskirts of urban areas.

It has been realized that in both cases the architectural works and the structures created for everyday life in a community, identify themselves with that positive functionalism which claims to know the necessary life functions of the complex human animal. Nevertheless, this belief contains too often a violent and subtle injunction which coerces people into perverting their relationship with the past or forces them to an extremely partial cultural fruition implying the essential and malign truth that culture, art, beauty, history with its teachings and attraction are not really open to everybody.

Any art theory (past or present) namely any visual work, particularly those ones intertwining with the structure of the city, is a theory on mankind. The multiplicity of implications of such a perspective lend great importance to the particular responsibilities of artists, users, scholars, and teachers. This description has some desolate implications.



1. Anna Maria Panzera: From Pietro Consagra original work "Meeting"

Obviously this situation is not necessarily be unchangeable and our contribution is introduced in this context, together with that of all those people who have been actively working to completely transform reality through words, projects and productions.

This paper aims only at accomplishing a documentary account, partial but explanatory enough, as will be shown later on, with reference to the themes mentioned above. We will deal with two contexts which best represent an Italian urban landscape that tries to reverse situations which have always been passively received: The first is the experience of Gibellina, a Sicilian village now considered part of the international artistic and cultural heritage; the second is the project carried out by the Istituto Tecnico per il Turismo "Livia Bottardi" for the restoration of a Roman archaeological park. In both cases the real protagonists have been the citizens and the students, ordinary people with no specific competences or philosophical knowledge to speculate about the meaning of "living".

We have already tried to provide a brief example of the Italian reality in the Web pages of the Virtual Museum, considering all those popular aspects of the city such as museums and meeting places, city centres and outskirts, parks and famous buildings, ruling palaces, and free thinking clubs. We would like now to go one step further by creating a link with our future projects.

We are convinced that the city is the ideal background for a unique experience of the perfect harmony between popular and elevated culture, extraordinary event and daily routine. We strongly believe that the city is the best context from which to produce, from these two realities, a third

one which we could, broadly speaking, define as a special way of thinking, so that everybody could have an “artistic thought”. The city is the community place, the heart of the land, the mirror of all the social, political, economical, and cultural forces. We would like it to become also the ideal place for great changes and freedom.

City as identity, a unique example: Gibellina

Gibellina, a village which now lies on the Sicilian plain, but was once set on a hillside, lives a double life, similar to the life of a literary or movie character. On the one hand it experiences its great and small fights with the local government, the weariness of an ingrained anti-establishment behaviour, the struggle against the ravages of time despite its youth, the weight of an historical heritage with evidences of oppressive payments: to progress, to the new economy, to speculation, to the clouds which never bear rains, to the earthquake. On the other hand, the village lives through the striving for a new identity, the trust in a new life despite the catastrophe, the sudden projection into the future without feeling afraid of it, the search and the responsibility of its inhabitants to discover within themselves that self acknowledgement and identity which had never been felt before that terrible day in 1968.

A vast documentation regarding the earthquake which destroyed the Belice Valley and the reconstruction process which has given birth to the present village is widely available on the Web for all those people wishing to acquire knowledge about the event. But people willing to find Gibellina on a map to get there and visit it, as I myself did, cannot resist telling another story. The experience is unique, the emotions are very strong, imparting a desire to learn more.

You arrive at the village from the Palermo – Mazara del Vallo motorway, it is signposted as “Ruins of Gibellina”. You follow the route towards the old town, actually its remains. The word “ruins” shows the difficult human attempt to give the tragic event an historical meaning.

You keep on travelling across the burnt countryside, where some bent farmers recall the sowers painted by Van Gogh. Little by little you catch sight of a small mountainous slope characterized by a very particular aspect: the usual gold and brown colours of the landscape are replaced by a white crust leading you to believe you are sun blinded. Soon after, a ruined house appears, followed by other ruins and, suddenly, Alberto Burri’s great Cretto: it covers the old built-up area by means of a cement flow which fills the holes in the village streets. If you have never experienced Stendhal’s syndrome before, here you will feel its astonishing and shocking effects.



2. Anna Maria Panzera: From Nino Franchina original work "Labirinto"

You feel as if at a crossroads: you can choose to be swept away by a very strong destructive image, plunged into a sorrow which makes you doubt your ability to recover or you can resist this very strong temptation, appealing to a sort of aesthetic catharsis. No, I refuse both the immediate solutions. I am going to surrender to the depressive call of the Cretto, realizing that if I raise my chin above the height of its walls, I will see the horizon, I will think about the promise of the new Gibellina, destruction and desperation will not be allowed to convey me the essence of a decided plan. The image stands for itself.

Destruction meant as the philosophical-existentialist concept stigmatised by Nietzsche's works, has been the ethical principle which has inspired most of modern and contemporary art. Picasso did not restore Las Meninas by Velasquez, but he destroyed it to impose a new figurative language. Abstractionism and the Non-Objective have demolished the mimetic

picture to represent what cannot be perceived by the senses. Nevertheless, the artistic rebellion of the present and the consequent defeat of tradition and academicism do not occur with the disappearance of the criticized objects. Artists, real artists, are always able to transform their power of sensation into a psychic movement, into a fantasy, which are always followed by the realization of the new, by the creation of original images both in opposition to the past and to the void.

Consagra, Burri, Melotti, Cascella Franchina, Schifano, and the many others appointed to work in Gibellina, have accepted quite an original challenge: destruction there was real, concrete, tragic. It is true that when the artists arrived in Gibellina twenty years had gone by since the earthquake, but the town (both the new and the old one) showed itself with all its wounds: a heap of ruins on one side, the squalid mobile homes where people had been living for fourteen years on the other side; besides there was the offer of a new town—plan whose main features were absolute abstraction, the complete deletion of its history and of its old characteristics, the total lack of a positive image, of a form which could offer at least one quality for a good lifestyle. The situation in Gibellina was dissociating, because of an existential tragedy to which only a cold and rational answer had been given. It appeared like a theatre on whose stage the clear dissembling of the existence crisis was performed.

At that problematic time, 1980, the citizens reacted, supported by the City Council and by its Mayor Ludovico Corrao: they started to modify the imposed town planning and they invited the artists to create monuments and architectures, to work with lines, colours and materials on the framework of the soul of the place in order to reassert its right to the ancient civilization for the present culture and its existential need for the superfluous.¹

Gibellina's citizens were all involved in the conception, the realization and the installation of the new works: they rediscovered their handicraft abilities rooted in their past and offered their skilful hands to the artists' imagination. Above all, art immediately spoke its universal language and communicated with everyone, namely contemporary art, considered up to then 'too intellectual' and intended for a close circle of loquacious and cerebral scholars. The civic value of this enterprise was evident. Works were not conceived in the isolation of their artists nor they did impose a propaganda or a ruling message. On the contrary they aimed at satisfying

¹ "...riaffermare il suo diritto di civiltà antica alla cultura del presente e la necessità esistenziale del superfluo." Eva Di Stefano, *La stella che guida*, in "Il tesoro dell'Isola", 64, supplemento a "Il Giornale di Sicilia", 13-1-1990.

the needs of those people who shared those places, i.e. artists and citizens who looked for their own identity in the works, in the images, in the lines.

The residents were ready to move the town eighteen kilometres away from the original site, they were ready to abandon the past that did not belong to them anymore; but Gibellina's people were not satisfied with the enlarged space provided by modern architecture: they strongly required that time could walk on those wide and useless streets, the past years had to be given back to the town not only by a simple chronology, but by human imagination, by an interior world dispensing its past and its present. The regeneration, the definitive separation from the past, the possession of a new reality did not coincide with the structures of the reconstruction; but art, the irrational mental images, the artists' feelings and their expressive spirit could confirm a common idea: namely, artistic thought as the creator of a new life.

I believe people have never been too worried about understanding the meaning or a hidden concept of those works. Some critics have asserted that the works are detached from the town-planning, they state again the inability of the modern project to produce a civic art.² It might be true, or simply that we cannot understand that these works have been created in opposition to modern planning project in its common but sad meaning. People who strongly complain about the appalling conditions suffered by many of the works in Gibellina are actually right. However, we also have to point out how some citizens take great care of the monument next to their own homes or shops. It is also true that the town seems to be desolate as if there were an attempt at a throw-back to that passivity shared by many southern places. Condemnation is an important social action, though the human and cultural value of what has happened in Gibellina cannot be denied.

A lot of works are criticized but I believe that we should criticize only those ones without much integrity. Personally I appreciated Schifano's paintings exhibited in the local Museum, as well as the wonderful creations of Consagra, Franchina, Schiavocampo, Salvatore, Cascella, Melotti: all of them are able to create space and are not simply to take it up. These artists surely have not transformed man but, through their new way of thinking about the creation and fruition of the work of art, they have represented and said that maybe, one day, something similar will be possible.

Translated by Meryl Channing – Maria Peluso

² "...incapacità del progetto moderno a produrre un'arte civica." Pierluigi Nicolini, *Il Caso Gibellina*, in M. Jodice, *Gibellina*, Milano 1982.

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The city and its past: The restoring of the Cervelleta park in Rome

Laura Falaschi

Very few suburban areas can boast such a complex historical framework within an extremely charming natural environment which is also full of old memories; also unique is the fact that this landscape is concretised in an image conveying such a great symbolic strength which has affected individuals and groups throughout the ages.

The Roman countryside was one of the most fascinating and charming legs of the Grand Tour, together with an infinite source of inspiration for a great number of Italian and foreign poets and artists throughout the centuries; today it is the subject of heated discussions about the restoration of our historical, environmental and artistic heritage.

The term ‘Roman countryside’ defines the wide stretch of land on the Tiber and Aniene rivers, which covered the area from the suburban vineyards and vegetable gardens to the border plains around Rome. This area has been inhabited since the Prehistoric Age but it became organized in the Roman Age.

In the Republican Age great aqueducts and famous tombs were built; the Roman nobility also built, in this area, country houses where agricultural, pastoral and hunting activities were carried out. The development of this area was carried out, alongside the further expansion of city with its road networks, new settlements and reclaimed cultivated lands, during the Imperial Age.

Later great social and political changes such as the large landed estates (*latifundium*) which destroyed the previous productive and settlement system, the crisis and the collapse of the Roman Empire and the continuous threat of the Barbar-



ian invasions, determined a great change in the landscape. The fields were progressively abandoned, natural vegetation replaced cultivated, they became marshy causing the spreading of malaria with a consequent decrease in population.

In the Middle Ages, gradually, the ruined Roman settlements were restored to create defensive buildings such as the lookout towers which had to control southern Rome. These towers formed the architectural nucleus for other buildings, including houses, barns and storehouses, which, between the XV and XVIII centuries, were gradually enlarged and reshaped by the noble families who took possession of them.

The impressive beauty of the Roman countryside originated in this context, it is a desolate landscape, dotted with ruins, aqueducts, villas, circuses, statues and tombs which are reminders of its past greatness, it is surrounded by wild nature, full of attraction and symbolic meanings from which scholars, poets and artists drew their own inspiration but at the same time it also represents the real land of the exploited farmers, left to live in inconceivably poor health living conditions. These appallingly inhuman conditions became a matter of interest only after the unification of Italy with the reclamation plan of the so called *Agro Romano*, which aimed to fight malaria and build health centres as well as intending to rescue the farmers from their ignorance and illiteracy by means of rural schools. This brief outline of the millenary development of the Roman countryside can only give the reader a vague idea about the numerous aspects which originate from the analysis of this land, where history, nature and art have blended and where man has always been the main character.

For this reasons, our Institute decided to take part in a project promoted by the Council of Rome in 1995, choosing to be involved in the care of the *Cervelletta Park*, an area which is included in the Natural Reserve in the *Aniene Valley*, one of the open areas protected by the regional board "*Roma Natura*".

It is an area of great naturalistic and historical interest which covers an area of 45 hectares now surrounded by modern suburban areas but which still preserves unchanged hints of the old Roman countryside. It includes an impressive 17th century architectonic centre containing a medieval tower dating back to the 13th century, built on the site of a pre-existent Roman rural villa, and a green mostly marshy area which enjoys unique botanic and faunal characteristics.

The closeness of the park to our Institute and its multiplicity of features have made it a prime research field while providing a means of confronting present problems regarding restoring, preservation and improvement of cultural and environmental heritage; it has also been a concrete

opportunity to operate directly in this specific suburban area. Our students, with the help of their teachers and other experts, have studied and analysed the historical, urban, environmental, architectural and social aspects of this area and at the same time they have produced brochures in different languages to disseminate information during organized guided tours or exchange visits by foreign schools. They have become spokespeople for the area's problems, participating in debates, conferences and meetings, and organising exhibitions, tours and demonstrations alongside other institutions. The aim was to retake possession of places which were still in private hands and therefore being incorrectly used. As a



result the Cervelletta Park has come entirely under the management of the Council of Rome and has been saved from the threat of endless degradation which would have obliterated all trace of the past.

The students have definitely become more aware of the cultural richness of the area they live in and of their own identity as citizens. They have become more sensitive to issues regarding the historical, artistic and environmental heritage to be transmitted to future generations.

Schools, both primary and secondary, Council and regional boards such as "Italia Nostra", "Insieme per l'Aniene", WWF, "Lipu", "Lega Ambiente" and museums as the Barracco Museum in Rome have been the cultural reference for this project which is linked to the theme of the Comenius 3 project.

Finally it is important to underline the validity of this project for our students' educational process, it has confirmed the necessity to confront such issues as current problems, past heritage and has presented the opportunity to interact with local, national and, even, European institutions.

Literature

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Sean Neill
University of Warwick, UK

“Symbols of Citizenship”

The general design of the British themes is a series of linked pages, which can be explored in a range of different ways; some examples are described in more detail below. The structure of the themes therefore allows users different linkages between the same materials. Some themes are presented at two levels, elementary and secondary, which differ principally in the level of text; the same pictures are used at both levels. The focus of the elementary level is on aspects of interest to this age group and more challenging information is omitted. Thus, in the reconciliation theme, the elementary level focuses on the nonverbal signals of reconciliation in the reconciliation statues, an issue that is not stressed at the secondary level. Many of the British citizenship themes include material which is potentially challenging, for example the destruction caused by wartime bombing raid in the reconciliation theme, the cruelty involved in controlling wild animals in the relations with nature theme, and the question of evil in the theme on symbols of belief. Such issues are omitted or dealt with in a more restrained way in the elementary level than in the secondary level.

The initial page in each theme is an ‘About’ page, which gives a brief description of the theme, and gives links to the teacher pages, and, where they exist, elementary and secondary versions. Themes will normally be arranged hierarchically, so that users are encouraged to explore a single path through the theme. The interconnections between paths, and connections between themes, can only be found by following a particular path. In fact, where a page contains a question, which can be clicked to display extra information, there are actually two pages in the file structure; the second is invisible to the user, and can only be accessed by clicking on the question in the first page. Comparison of the Symbols theme as displayed in Table 1 and as displayed in Figure 1 shows that the theme is divided into four main paths, as displayed to users. The other themes are arranged in a similar way, but only the theme maps are given here (Figures 2–4).

The teacher pages include a map of the theme, and a page giving suggested activities for flexible use of the theme. The selection of tasks is based on Pritchard’s paper (2002). The examples show four themes. The ‘Moonlight Sonata—symbols in Coventry Cathedral’ theme (Figure 1), which will link to the Italian pavilion, is primarily concerned with interpreting the intended symbolism of the design and artworks of the Cathe-

dral, and the connections between different ways of symbolising the same theme. There are a considerable number of potential routes through this theme, reflecting the diversity of symbols for the same meaning. The selected paths are based on the symbolism of light, the symbolism of angels, the symbolism of trees, and the symbolism of spires. However the interrelations between themes include both angels and spires as symbols of sky and heaven, links to the reconciliation theme through the charred cross, and links between the symbolic animals of the Evangelists in the tapestry and the symbolism of the fox in the 'relations with nature' theme.

The Reconciliation theme (Figure 2) involves some pages where open-ended discussion (verbal or written) is appropriate, for example interpreting what the term 'reconciliation' means, as well as potentially more controversial pages, such as the page on attitudes to British bombing raids. The structure of the theme is divided into three main paths, exploring what reconciliation is, why Coventry Cathedral became involved with reconciliation after the destruction of the old cathedral in 1940, and how work for reconciliation is done; this path also explores whether a reconciliation movement which started off under very different conditions over half a century ago is still relevant in the modern world, where threats to security largely come from outside Europe.

The Equality at Work theme (Figure 3) involves a smaller number of paths, but each containing a larger number of pages, giving two puzzles and a hub-and-spoke pattern. The first puzzle explores gender stereotyping via a conventional clue and answer format: the second, more extensive puzzle asks users to identify gender-atypical job choices from photographs; the answers give brief biographies of the actual people in the photographs. The hub-and-spoke path explores ways in which young people may encounter and overcome prejudice at work, through fictional case studies.

'The Hunt theme' (Figure 4) deals with relations between people and nature through the hotly debated subject of foxhunting. Many pages therefore cover controversial issues; teachers may want to get their children to debate these. The theme has a five-path structure, reflecting the fact that it deals with a debate, which covers the right of one group (hunters, who mostly live in the country) to carry out an activity strongly disapproved of by others, especially town dwellers (urban foxes are popular in Britain as there is no rabies). Two paths look at the arguments that hunting has a strong economic and civil liberties value to country people, and by managing the countryside for hunting they preserve other wildlife. A third path considers the contrary view that people have no right to inflict suffering on animals, especially on a widely valued cultural icon such as the fox. Two other paths look at the more scientific evidence; one raises aspects seldom

considered by the predominantly urban population of the UK—the ways in which protecting one type of animal may cause suffering to others, in this case foxes and their prey. The final path deals with the cruelty of methods of controlling animals, and whether abolishing hunting would in fact lead to more foxes being killed by more cruel means. The theme also includes links to the websites of groups on both sides of this debate. This raises issues of whether more user control should be included in these pages, as some teachers may consider these pages unsuitable for the groups they work with. Further planned themes are:

- Participation, drawing on the legend of Lady Godiva, the symbol of Coventry, who is supposed to have protected the city from an unjust tax.
- Globalisation, drawing on the experiences of a group of Coventry pupils on a trip to China.
- Financial awareness, drawing on educational materials prepared by the Centre for Education & Industry at the University of Warwick.
- Democracy, drawing on a children’s council in Coventry; and Respecting diversity, important given the multicultural population of local schools.

Structure of Moonlight Sonata web pages

About

About Moonlight Sonata

Teacher pages

Moonlight Sonata map

Suggested approaches for flexible use

Moonlight Sonata

The Phoenix Rises

Spires

The Statue of St. Michael

The Angel of Agony

The Crown of Ruins

The Charred Cross

Trees and Crosses

Windows and Light

A Candle in the Light

The Tapestry

The Symbolism of Beasts

The Font

Open to the World

Walking in the Light

The View from the Altar

Figure 1

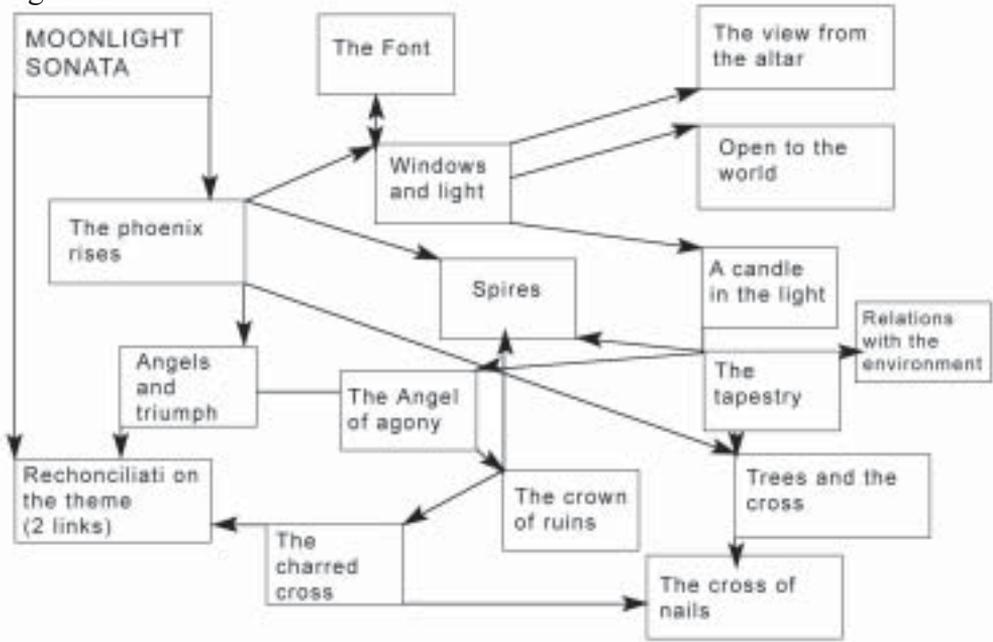


Figure 2



Figure 3

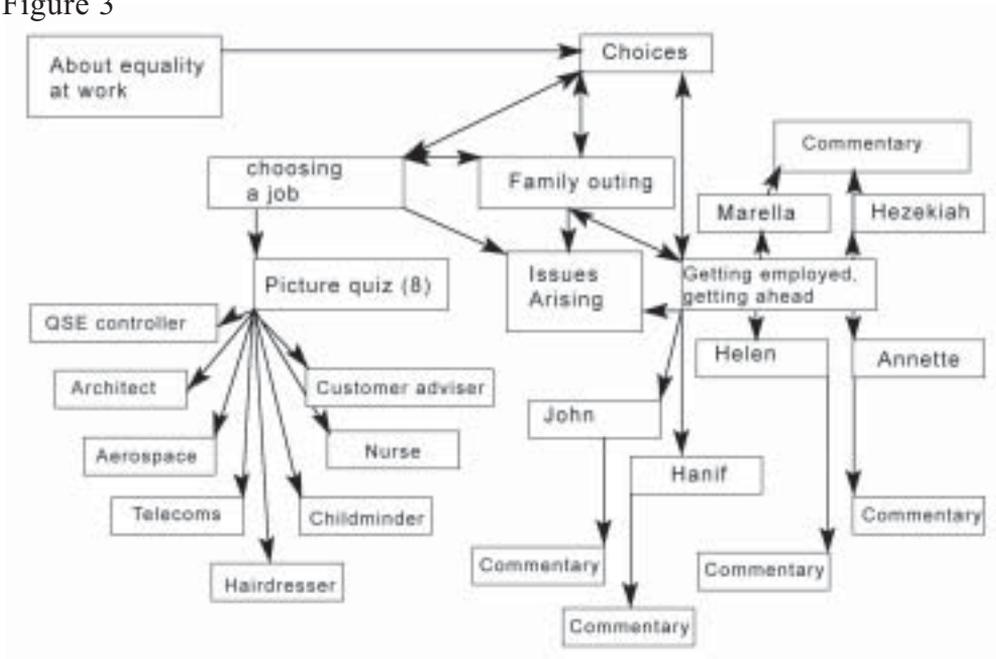
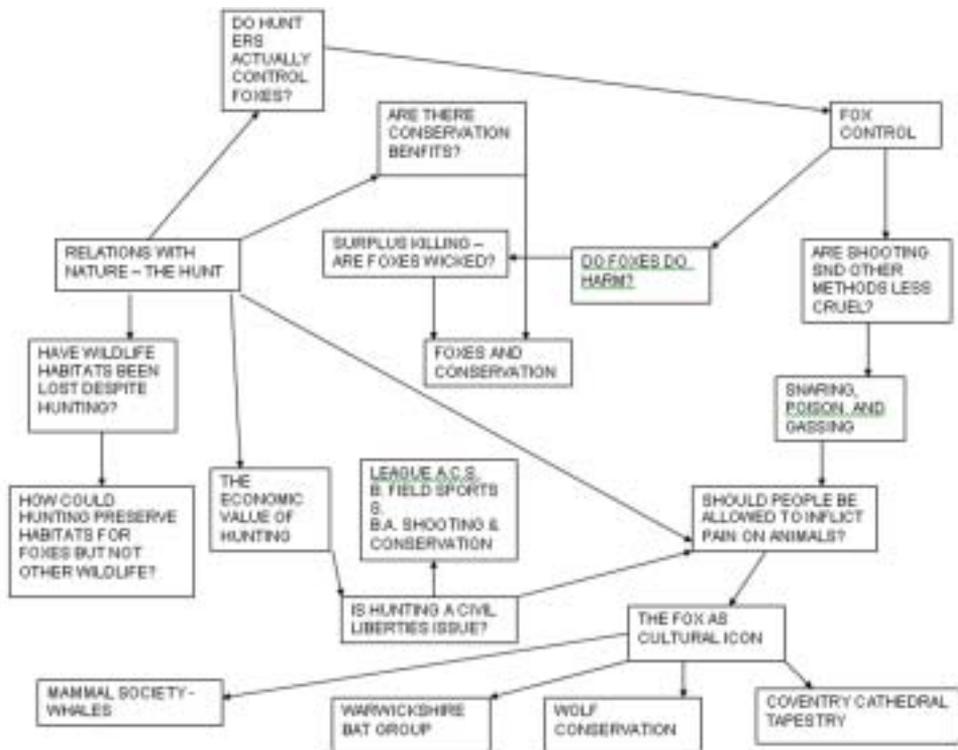


Figure 4



Seija Karppinen
University of Helsinki, Finland

“Communication and Interaction”

Introduction

In this paper, firstly, I will clarify the views of the Finnish participants and their approach in the Neothemi project to the concept Cultural Heritage and to the theme of the Finnish pavilion ‘Communication and Interaction’ (see also Karppinen 2002 in this publication). Secondly, I will outline the sub-themes of our pavilion.

Our institution, The Department of Teacher Education (University of Helsinki) focuses on the didactics of early-childhood and primary education. Therefore our main objects are children of this age-group, which leads us in the Neothemi project to an attempt to approach cultural heritage as it is seen and understood by children. That means a child centred orientation: emphasis on children’s initiative, listening to children, and encouraging them to, or letting them show us how to, see cultural values from different points of view. In the Neothemi project the Finnish perspective and method in examining cultural issues can be described as a socio-cultural animation (see e.g., Abbé 1994; Ander-Egg 1986; Kihlström 1998). The method is defined in my article ‘Communication and interaction in arts and culture’ in this publication. Summing up, our emphasis in the Neothemi project as the Finnish partner is on methods of recognising cultural heritage, redeveloping content of cultural heritage, and facilitating dialogue between cultural heritage and people, in the virtual world also.

In the wider sense, if we talk about cultural communication and interaction, we cannot omit the new communication technologies. In our country, Finland being one of the leading countries in developing and producing new communication technologies, these technical tools can be accepted as part of the new culture. They are essential parts of today’s environment and young people’s activities. These new tools also enable us to create an e-learning environment, and virtual museum, where children can observe, not only their own heritage of cultural values and artefacts, but other nations’ culture as well.

As a basis for the Finnish pavilion some fundamental elements are agreed:

- All forms of arts and culture have communicative and interactive aspects.
- Formation of culture is a two-way process.
- The focus is on examining cultural messages, heritage, beliefs, and values as seen and understood by children.
- The method in examining cultural heritage derives from socio-cultural animation.
- In the wider sense the theme Communication and Interaction covers also new communication technologies as new cultural tools.

The sub-themes of the Finnish pavilion

In addition to our main theme ‘Communication and interaction’ we have four sub-themes in our national pavilion: 1) Buildings, nature, and the environment;

2) The Kalevala—the Finnish national epic; 3) Play, games and toys; and

4) Celebrations.



Terhi Varonen

Under the theme ‘Buildings, nature, and the environment’ we want to present the built environment (architecture and other built construction) and nature as inviolable sources of cultural heritage. We want to focus on children and how they see buildings and nature and what kind of details they pay attention to. Also, narrative and artistic presentations from our student teachers with reflection on their own childhood will be displayed here.

In the section on ‘The Kalevala’ we want to present the use of the Kalevala in different ways, including in a modern and creative way. The Kalevala, the national epic of Finland, was compiled by the physician, folklorist, and philologist Elias Lönnrot in his twelve research trips (1828–1844) around Finland, Karelia, and Estonia. He collected folk songs and wove them into a long narrative poem, centred around the three ‘cultural heroes’ of Finnish mythology, the sage-and-singer Väinämöinen, the smith Ilmarinen, and the brash eroticist and adventurer Lemminkäinen (Friberg 1988). (see also <http://www.finlit.fi/kalevala/index.html>)

Soon after the Kalevala was brought out (1835–1849) it had enormous influence on the creation of a national identity and a Finnish consciousness (Friberg 1988). The Kalevala has inspired many Finnish national artists like composer Jean Sibelius and painter and illustrator Akseli Gallen-Kallela, but everyday people as well. Even still today we use some proverbs originated from the Kalevala and we play the Finnish zither mentioned in the Kalevala. (see more on web:<http://virtual.finland.fi/finfo/english/kaleva.html>)

Under the theme ‘Play, games and toys’ we aim to display some children’s and adults’ games, old and new. Games and toys have their own history. Some of them we can remember even from our own childhood while some of them have a very short life, appearing and disappearing as fashions. Some games and toys are related to the seasons. In Finland (like elsewhere in the North of Europe) we have four clearly different seasons. Winter games like sliding downhill with sledge on a snow differ essentially from summer games like ‘twist’ or some ball games. In this section we try to revive some forgotten games and toys, but to display also some contemporary children’s games.

The section ‘Celebrations’ describes the traditional Finnish celebrations around the year. This section is partly closely related to the section on ‘Games and toys’ and these could be easily linked to each other. In this section we will present some customary celebrations like Midsummer Festival, First of May, Christmas, but also some traditional local celebrations.

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Inger Langseth
Brundalen 6th form college, Trondheim, Norway

“Sense of Identity”

A European ‘Sense of Identity’

In this paper, ‘identity’ is defined by the way it is used in the Norwegian pavilion. Subsequently I will outline the aims, theory and motivation behind this alternative way of learning. Finally, I will define the different topics that will be available in the Norwegian section of the NEOTHEMI websites.

Definition

The Norwegian pavilion is called ‘a Sense of Identity’. It engages cultural awareness from a personal viewpoint in order to appeal to the younger generations as well.

The word ‘identity’ as we use it in this article conveys a sense of sameness from the point of view of belonging to or being part of, in this case, our common European cultural heritage. Cultural identity, on the other hand, relates to the common characteristics of an ethnic group, reflected in its language, religion, art and so forth, in contrast to other groups. This definition encapsulates cultural diversity within Europe.

Aim

Our aim is to stress awareness and understanding of shared identity as well as our cultural individualities, through perceptive and revealing questioning. Hence the choice of title for the work carried out in the Norwegian pavilion; an attempt at reviving fading customs, traditions and mores, as well as celebrating our diversity within the larger European culture.

Here lies the true benefit of working across national frontiers. In learning about others, you learn even more about yourself. It makes you think and question, and per se you can make a positive contribution to international understanding and interaction. And importantly, let’s not forget that this is thoroughly enjoyable as well.

We want to create a space where people, from different levels in the educational environment, can work together on the same theme, but from different points of view in order to create new ways of cooperative learning. It will be particularly interesting to include museums and universities in this work. There is definitely a lot that can be done in this respect, at least in Norway. The network also stresses the possibility of production, exchange and testing of lesson plans Europe wide.

Our major work will be on display in the Comenius 1 webrary. Other contributions from schools, universities and museums will be displayed with the sub-themes.

Motivation

We seriously believe that motivation is by far the most powerful element in successful learning. Giving the students the chance to show his/her work to a wider audience in addition to their teacher must be encouraging and exciting. It might just lead to students making an extra effort.

Moreover, the topics have been carefully chosen to appeal to children and adolescents who seem to be more excited by themes that relate directly to their everyday life rather than more general and cosmopolitan issues. The idea being that any topic can be lifted to a more academic level at a later stage, once interest in the topic has been aroused.

Finally, the use of the world wide web offers a nice change from the traditional classroom learning environment, and it provides new and exciting ways of communication; videoconferences, e-mail exchanges, chat rooms, interactive games etc. Another challenge in this case is of a technical nature, since computers are not always reliable.

The web will never totally replace real communication and genuine cultural experiences, but our hope is that working with NEOTHEMI will lead to insight and knowledge as well as a desire to experience and preserve European culture.

Background theory

By means of this website we want to provide a learning environment where students are responsible for their own work (not the teachers), and where they can use their creativity in various ways. This opens up for the use of different intelligences as they are presented in Howard Gardner's research on learning (Gardner 1998). We strongly believe that in the European educational tradition to date, we have focused too much on the logic

and linguistic ‘intelligences’. The chosen themes will hopefully make students use a broader range of intelligences according to their personal preferences.

The freedom of working method and product design, if used, will also enable students to work according to their personal learning styles, a vital factor in the learning process, according to Dr. Rita Dunn (1988).

In contrast to the lecturing teacher in the classroom, the web offers individuality in the sense that you can choose your own pace, your own source of information, and your own method: in a group or alone (Vygotsky 1978). It is probably also motivating in the sense that it offers a change to classroom learning in general.

The themes

Using everyday life as our starting point, we have chosen to concentrate our work on the following 5 sub-themes:



1. Me & school

In this rather primary school orientated section, we want small children to present their everyday life experiences in words and pictures. Something as simple as ‘my room’, ‘my hobby’, ‘my school’ or ‘my home town’, will provide a considerable amount of knowledge about European culture. We also want to display the curricular work carried out in the different European countries. A variety of lesson plans for teachers from all over Europe will also be available. We want to keep the technical level as basic as possible so that teachers and pupils will not be frightened to participate, even if

they have little or no command of computers. We are also looking for ways to assist technically.



2. My 15 minutes of fame

Every entity has its 15 minutes of fame in life, be it a nation or a human being. In this section, we want to create awareness of history particularly among adolescents at secondary school/high school level. They are invited to present historical events or characters that have made a difference to the way they live today. We are talking historical facts as a basis for explanations to present situations. (Why do we learn English at school and not Spanish or German?). We will encourage museums and universities to work with secondary schools on a selection of topics.

Using your own life as a starting point, you are invited to describe significant episodes that have made a positive change in your personal life. You are in other words encouraged to look at your own contribution to family, friends and local community. Hopefully, this will provide an original and more interesting starting point in the learning of historical facts.



3. The way we do it

All cultures have their own traditions, be they loved or loathed. This section will try to revive and maintain (fading) customs and traditions, and also display new trends.

We particularly want to cater for vocational course students, where we invite them to explore their own trade from an international point of view. Why is the use of certain techniques and materials unique to a certain area? Museums can certainly bring these traditions alive through school children. Spare time activities are also part of these traditions.



4. Making headlines

This section is dedicated to personal opinion. Topical issues that you feel strongly about will be debated from many angles on local and international levels. The emphasis will be on current affairs and controversial issues that are of common interest. We mention themes



such as whale hunting, fox hunting, bull fighting, smoking etc. This is also a place where articles will be most welcome.

5. Everybody's foreign!

This section is dedicated to cultural differences. The way we would like to present ourselves and the way others look upon us may vary considerably. It can be humorous, but also infuriating to

discover the so-called 'stereotype' assumptions that we have about fellow Europeans. This gives us the chance to dispel a few myths but also to laugh at ourselves. To appreciate the ways other nationalities see us.



6. Edutainment

This section will support the work carried out in the other sections, and aims at exploiting the potential of the new ICT technology for what it is worth.

We want message boards where students can look for partners to work with, telephone, chat and video-conferencing facilities as well as other more complex devices.

There will be no work displayed here. The only function of this section is as a forum for communication and work across cultures, hence the word edutainment. Since

most people can't afford to travel, virtual travel is a good option.

Brundalen is a secondary school, and therefore the main emphasis will be on students, but the idea is that universities, schools and museums will all work together on the same themes, but on different levels to everybody's benefit. There will also be a section devoted to lesson plans.

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virtual museum www.neothemi.net

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Anne Gallivan
 Mercy Secondary School, Mounthawk, Ireland

“Ordinary People”

From Comenius 1 to Comenius 3.



The theme of the Irish pavilion is as broad as possible. It will span centuries, centuries, which trace the development of people who inhabit an island on the West coast of Europe. People who were no strangers to the concept of integration with varied and differing cultures through the ages and who were willing to share, absorb and adapt to the customs and practices of different influences in Living, Art, Architecture and Design. It will trace the civilisation of the people of Ireland.

The Irish landscape is rich with the remains and evidence of this exchange, a testimony to the hard work, knowledge and sophistication of the ordinary crafts person. The skills were varied and diverse ranging from that of the people in the Neolithic era who went out and picked up flint from the ground in Antrim, to those in the Bronze Age who built Stone Forts for defence purposes. Then there were those who produced delicate and intricate pieces of jewellery, and carved the magnificent High Crosses. More recently another craft has brought to fruition, a dream that was to reconstruct a Famine ship as a fitting reminder of a time in the course of our history, which was one of the bleakest periods. The Jeanie Johnston is a tribute and a memorial to the courage and tenacity of millions of Irish people who



were forced to leave this Island because of the Famine. An Island nation, we have depended throughout the millennia on boats, (the Currach) both as a means of emigration and immigration.



other examples to be found in Dun Beag and Staigue Fort) but the closer you get to them the more impressive they begin to appear. This would have been the main idea—as an attacker would have to be extremely determined to succeed in attacking these fortresses. In terms of design and construction they were sophisticated and solid and an abundance of knowledge

about the skills and lifestyle is to be gained from an in-depth study of them. These Forts have captured the imaginations and a further dimension to be considered is the huge wealth of Folk Tales and Legends, which has been handed down for generations in every region of Ireland in relation to these Forts. This will connect at a later stage with another Pavilion.

All of the Images or Icons which were chosen reflect the development of craftsmanship throughout our history when the ordinary person

The selection of the Ring Fort at Cahergeal in Cahersiveen in Co. Kerry as the Virtual museum was deliberate. Tom Gallivan the Artistic Advisor thought that it fitted in with the Theme of the Irish pavilion. It was constructed by ordinary people.

The requirements were a Room i.e. walls, a roof, and a floor. The method of display was intended to reflect a gallery-museum. This ring fort with a structure representing the remains of a Clochan-Beehive hut in the centre prevents the viewer from seeing everything at the one time—walking around is a necessity.

From a distance this type of Fort may not look very impressive (there are





the Clochan was the dwelling place of the Monks of the Christian era who wished to live in solitude, it was traditionally a place of reflection, of contemplation. This is to function as the Webrary which will house contributions from interested parties and especially, existing Comenius 1 projects related to the theme. We expect that the end products based on Culture and Heritage will be a resource facility for those wishing to undertake New projects in the future and a further means of dissemination. When it reaches its full potential it should allow the Browser to exploit the theme of the Irish pavilion to its full potential. In fact the possibilities are endless.

took a piece of stone (flint) and shaped (knapped) it into a functional object; a scraper, a knife, a spearhead, or an arrowhead. This then developed into craft. It became more specialised and increasingly sophisticated until eventually the ordinary people under the guidance of master craftsmen participated in the creation of the Jeanie Johnston.

This culture of craft emerged in Larne in Antrim (having been brought into this island by our European neighbours) and concludes by incorporating our age-old tradition of travel and ship-building.

The central area of the pavilion will be a focal point. In the Real world



The first icon above is the Entrance Kerb Stone (large stone lying flat), which is to be found in Newgrange on the banks of the river Boyne. It is highly decorated with both spirals and Concentric Lozenges, all areas of this Kerb are covered and one is reminded of the Celtic distaste for the Horror Vacui-empty spaces. The Passage graves at Newgrange are World-renowned.

Apart from the ring forts The Bronze Age in Ireland saw the development of Metal Working, its decoration and its methods of working, brought to its finest “Art”. Copper and Bronze were used for the everyday implements e.g. Cooking pots, spears, and arrow heads, while gold was primarily used in the production of Ornaments. Metalworking and the methods of producing these pieces were introduced from Europe to Ireland and employed both copper and bronze. When the Celts arrived in the middle of the Iron Age they added a further dimension with the La Tene style of decoration. The Iron Age is represented by the Bronze Enamelled Pin. It consists of a Pin topped by a Semicircular Brooch. It has two enamelled circles, with one of the Celtic Sun Symbols on each of them, in black/dark blue. This Celtic Brooch could be regarded as a stepping-stone to the Pennanular Brooches of the Christian Period.



In the 10th century monastic life and Irish art were disrupted while the quality of metalwork declined sculpture in stone continued to flourish. High Crosses reached their full development. One of the best known of these splendid monuments is the Cross of the Scriptures in Clonmacnoise, which is situated in the midlands. They were called Scripture

Crosses because of the Biblical scenes, which are arranged in panels. This iconography was borrowed from continental sources.

Comenius, the Czech philosopher from the C.17th held the view that “schools must open themselves to the outside world”. His name has been associated with Action 1 and 2.

Comenius 1 has been an extremely successful initiative in schools throughout Europe. Participants learn to cooperate, integrate and share their experiences and talents. Time spent on the preparation, planning and evaluation in partner institutions provides invaluable insights into the routine and culture of ones counterparts. It allows a sense of freedom in the curriculum. Teachers and pupils expand their horizons outside the walls of the

classroom. Language learning, art, communication, and personal development are enhanced. When embarking on a project with people from the four corners of Europe one is conscious of the differences at the conclusion it is the similarities, which matter. On a practical level the amount of information, which is generated among the partner schools during a project is enormous. It has the added dimension of being immediate to the needs of the individuals concerned and is very often conveyed by a peer. It therefore has relevance, credibility and the sheer excitement of contact with other nationalities has the power to cause a stir. The young person responds unfailingly to these aspects and the learning curve is high. A former student described the experience in one such project as follows. "To us it is much more than a project. It is a unique opportunity



to develop our own talents and to work our ideas through. In its entirety it offered us the chance to develop skills that while were not entirely academic are none the less essential. With such a project we knew that we had to cooperate and we learned how to place unwavering trust in each other's abilities. This will serve us well."

One of the primary aims of the Comenius 3

Neothemi project one at a pioneering stage is to ensure that the final products of Comenius 1 will be well presented preserved and with maximum scope for dissemination hence the Webrary. The Museum and library fulfil a parallel function at present—Modern technology is going to play a valuable role in ensuring that concept will be realised with the Virtual as an accessory. Primary, Secondary and Third level institutes have a valid place in this plan. Added to that is the Museum, which nowadays is user-friendly despite the valuable contents both from a monetary perspective and Heritage viewpoint. Curators and Research people in Museums who devote their energy and expertise to encouraging the general public to visit and see for themselves the wealth of contents carefully collected and restored need have no fear that a Virtual Museum will replace the Real Thing. As preparation for the Ireland Workshop in Budapest some Comenius students in

Tralee went along to record a day at a Living Museum in Muckcross Traditional Farm in Killarney, Co. Kerry. It was a special day; in fact part of a weeks activities specially organised by the Education Officer there Ms. Patricia o Hare to celebrate one of the major folklore events in the Irish calendar Bealtaine or May. The students all teenagers were totally absorbed in the task while younger children actively participated in the Workshops, which varied from Buttermaking to Harness making storytelling and music. These were daily events in the lives of so many of their ancestors and could be considered of little consequence nowadays but nevertheless they embodied skills and talents which will not be lost to future generations because they are being handed down in a meaningful way. Later the work was transferred to a CD, and made into a Video CD as well as a Power Point Presentation. It was the first step in a process of the interaction between Institutes and will be disseminated to a very wide audience.

Teachers at all levels in every school system are aware of the power and lure of ICT. They are willing to be innovative and creative in their approach to their subject speciality. Culture and Heritage is high on their priority when selecting themes for European Education Projects. Their voluntary contribution to the building of bridges in a United Europe through Comenius cannot be over-estimated. Ni neart go chur le cheile, Unity is Strength.

Images – design – Tom Gallivan Dip. N.D.A.D., PTA.

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Ulla Sørensen

County Training and Resource Centre, Århus, Denmark

“Folklore and Traditions”

The background for participation in the Comenius 3 network “Neothemi” and the creation of the Danish pavilion is as follows. For several years there has been a tradition for working at international level in various projects at the Amtscetret for Undervisning, Århus Amt, Denmark. This is a regional centre for educational services with an international profile and through co-operation with the national Danish agency Cirius in Copenhagen we have undertaken the task of informing institutions in our county about the European programmes in education thereby encouraging schools to take part in e.g. Comenius school projects.

Consequently we found it natural to expand our activities and experiences within European co-operation by becoming one out of thirteen partners in the Neothemi network thus contributing to the promotion of Danish cultural heritage in an innovatory way in co-operation with museums, educational institutions and universities.

Further the implementation of ICT in education has had a strong emphasis in the work at our centre, internally as well as externally in our services to schools, another important reason for our participation in the development of a virtual museum like Neothemi. This will hopefully support the contemporary way of working for both teachers and pupils in schools in Denmark in line with the principles and general objectives laid down in the law on the “Folkeskole”.

As a regional in-service training centre Amtscetret for Undervisning, Århus Amt has a close contact with a wide range of educational institutions in the county as well as links to the Danish Ministry of Education in Copenhagen. We also currently co-operate with many different cultural and educational fora in Denmark. As a regional centre and a dynamic and flexible institution with a constant development process taking place, we have a number of co-ordinating tasks, and participation in a European network of cultural heritage also belongs here.

The background of the Danish pavilion

The previous and the current Comenius school projects within the common theme of European cultural heritage were a starting point for selecting the theme for the Danish pavilion. A broad and comprehensive title, “Folklore and Traditions” was chosen as it covered most of the content of these projects, and at the same time it would reflect our common cultural heritage in a varied way.



Structure and design

The Danish pavilion “Folklore and Traditions” will have five sub-themes:

- Prehistory
- Daily life
- Family parties and celebrations
- Folk songs, ballads and ditties
- Folk tales



In the Danish pavilion of the Neothemi virtual museum each of these five themes will be represented by an icon. By activating these the user will be directed to an individual homepage for every sub-theme. These will be recognizable by a clear and simple layout, which will help the user at different levels (pupils, teacher or university level) to find his or her itinerary to relevant links etc.

Through future co-operation with relevant museums we hope to initiate innovative projects where schools and museums together develop the virtual aspect of dissemination in various pilot projects within our theme so as to investigate how this can modify and support the learning process in relation to the different target groups.

To underline the dynamic aspect of this resource users are encouraged to enrich the current web-pages with inspiration, experiences and gained knowledge for the benefit of others, so the creation of the virtual museum is seen as a vivid and contemporary access to our common cultural heritage, strengthening our identity as Danes as well as Europeans. Neothemi will clarify the many similarities as well as differences in European cultural heritage.

As a starting point we have focussed on the famous Danish bog finds, which for the very first time revealed what our prehistoric ancestors looked like and simultaneously gave us information about their life and traditions. At the Neothemi Launching Conference in June 2002 in Budapest we had invited Dr. Christian Fischer, the museum director at Silkeborg Museum, Denmark as a speaker in the Danish pavilion to enlighten the audience on the life of the first Danes with special focus on the famous Tollund man and the Elling girl.

Summary of Dr. Christian Fischer's paper at the Budapest conference:

The Tollund man and the Elling girl

Denmark was covered by ice up till around 12,000 B. C. But then the interglacial period came, and the first human beings came up to Denmark from the south. They were reindeer hunters and there were probably no more than 300 or 400 in the area we know as Denmark today.

Later the climatic conditions changed and about 4000 B. C. farmers arrived in Denmark from Central Europe and the Middle East: Through archaeological findings we have been able to demonstrate that they followed a route along the Danube and in fact there are cultural patterns that connect these parts of Europe. Thus in the Bronze Age Danes had to import

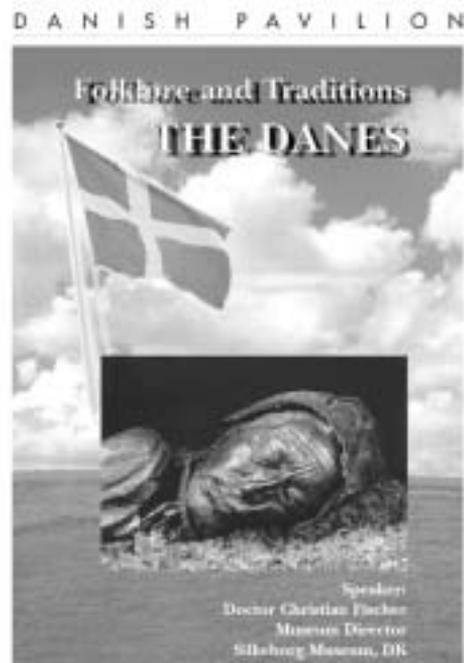
bronze from the south of Europe and were deeply dependent on that, as there were no copper or tin ores in Denmark.

You may wonder how it was possible to have such a great interdependence, commerce and communication over vast distances with the conditions available at the time. However anthropologists in New Guinea found chains of barter over hundreds of kilometres between coastal and mountain 'Stone Age' peoples where marine products were being traded for mountain products. In a burial mound I myself have found a blue glass bead that can only originate from the Alps where about 1500 B. C. they were able to produce such beads.

The two famous bog bodies, the Tollund man and the Elling girl, lived about 400 B. C. and they can tell us an incredible amount about living conditions in the Iron Age. Both were hanged, sacrificed to the gods, and they have been found at a distance of only 80 metres from each other in an area which was probably sacred. The Tollund man is so well conserved that even his beard stubble and facial expression are visible. His last meal before the hanging consisted of a porridge of seeds and grains. In all 40 different seeds and grains were found in his stomach and intestines. We can also see that prehistoric man was neat with well-kept nails and haircut.

The Tollund man and the Elling girl give a detailed picture of the earliest Danes. They are from a period of time where excavations tell us about a transition from the primitive community to the forming of an organized society as a forerunner of the development of the state.

The influence of the southern European areas has been great. When we became Christians this influence came especially from the English and the Irish monks, but that is another story.



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<http://www.silkeborgmuseum.dk>

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<http://www.uvm.dk>

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Århus Amt, Denmark

<http://www.acu-aarhus.dk>

Rainer Blasius
Medienzentrum Kaiserslautern, Germany

“Through Memory”

The Budapest conference was the first opportunity for the NEOTHEMI project to present the latest developments in its work to an interested public. Up until that time all partners had prepared the initial structures of their national pavilion in co-operation with the co-ordinating university of Molise. The presentation of the German pavilion took place together with the Hungarian pavilion.

During the project meeting in Montecatini (February 19–24th 2002) the German subject area was defined as “Through History”. The Medienzentrum Kaiserslautern has a particular affinity not only with the NEOTHEMI topic “Cultural Heritage” but also to the voyage through the history—at least concerning the history of the 20th century. In its archives the Medienzentrum has a treasure: About 5000 glass slides (6 x 9 cm) showing the history of the Palatinate between 1909 and 1956. Many of them are the only testimonies left of buildings, streets, old trades, traditions, and events. Peter Turgetto (1882–1960), the photographer and teacher, created this unique collection. During the World War II and the period after the war about 50 000 glass slides and 2000 films had been destroyed or disappeared.

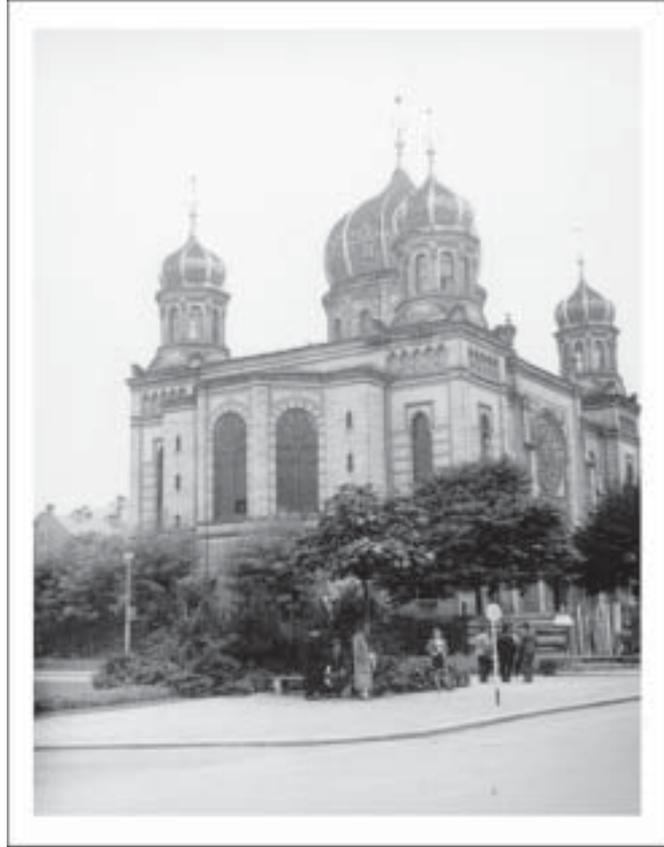
The dark times of the National Socialism in Kaiserslautern had been documented in films and photos by Peter Turgetto from their beginnings to their horrible end. The documentation “12 years and 12 days” (the exact ‘brown period’ in Kaiserslautern) shows the stages of Hitler’s seizure of power in 1933, the role of the schools and the Hitler Youth, Kaiserslautern as a “Gauhauptstadt” (district capital), the preparations for war, the homecoming of the soldiers after the war against France, the devastation of Kaiserslautern during the air raids and the demolition of the Jewish synagogue. And here we find the association to the Hungarian pavilion: “Signs of Spirituality”. The Kaiserslautern synagogue had been destroyed even some weeks before the “Reichskristallnacht”, the night when the mob set fire to the Jewish synagogues in Germany. The official reason in Kaiserslautern was that the building didn’t fit to the development of the city! The University of Darmstadt attempted a virtual reconstruction of destroyed synagogues. The problem was that no documents, photos, pictures could be found and the memories of the survivors were fragmentary after all these years. The results of this project will be part in our pavilion.

Thus three sub-topics of the German pavilion had been touched in the lines above: “Times of War”, “Buildings” and “Development of the City”. But there will be additional topics: “Means of Transport”, “Industrial Revolution” and “Agriculture”. All these topics include the questions “Where do we come from? Where will we go to?” and the discovery “The world of tomorrow can be understood only by those who have knowledge of the past”.

And what about the German pavilion?

The visitor will enter an empty factory hall; looking outside through the 6 windows (3 at each side) he can see and follow the six sub-themes described above. All images are from the Peter-Turgetto-Archives in the Medienzentrum Kaiserslautern.

In detail: the events of the 19th and 20th century in all human fields and the part of Germany are—in our opinion—leading inevitably to the chosen German topics. The consequences of World War II can still be seen not only in Germany but also in Europe and the world. The Industrial Revolution involved enormous changes for human beings, in their social systems, cities, ways of transport, and so on. The history of buildings as castles, fortresses, churches, synagogues tell us so much about our past and our identity (have a look at the Norwegian pavilion). In the region of the Palatinate and the Alsace more than 1000 castles existed in the Middle Ages, but most of them have been destroyed during the large number of wars between France and Germany. At all times ways of traffic connected people: from the small local paths to the roads of the pilgrims through Europe, to the railways, cars, ships, and planes. For Rhineland-Palatinate wine is a very important economic factor. One of the oldest agricultural products is



wine, brought to us by the Romans 2000 years ago. Really a tasty cultural heritage! And one which has led to transport links between the Palatinate and distant markets.

The primary school in Kaiserslautern-Hoheneckebn will contribute their results obtained during six years in a COMENIUS 1 project with partners in France, Spain, Estonia, Lithuania, Slovenia, and Poland. During the



project presentation in Rapla / Estonia in May 2002 contacts to the farm museum in Mahtra / Estonia were made.

In the end of our workshop in Budapest people had the opportunity to discuss about the pavilions, the topics, and possibilities to join the NEOTHEMI project with their own projects. Loose contacts were made; we wait for more tangible results. It will depend on us to maintain these contacts. At Budapest the lead time was too short and the flow of information came too late. We hope that people will join us with their ideas, projects, and opinions in the next conference in Helsinki Finland in September 2003.

Jacqueline Delclos
Universite' Blaise Pascal, France

“Art and Cultures”

The French pavilion will display students' work on the general theme “Art and Cultures”, restricting the area of interest, at least, at first, to the textile arts. The choice of this area, by the French partner, results from the interest which a project on the Web would present for the students, who are registered for a ‘professional licence’ in history of art, specialising in “Cultural and Traditional Crafts; Textiles and Tapestry”. ‘Professional licences’ are a form of diploma recently introduced in France, of three years from Baccalaureate level, which, while maintaining the normal standard of the licence, in a particular discipline, combine a professional approach with scientific knowledge. Half the teaching is done by practising professionals and the students study in 12-week modules.

The *licence* “Cultural and Traditional Crafts; Textiles and Tapestry” at the Université Blaise Pascal is the only professional licence in the area of history of art offered in France, and the only *licence* in the history of art which specialises in the textile arts. Parts of the teaching are carried out by museum conservators, by expert by textile restorers, by dealers in the international antiques trade and by gallery staff. Students learn start-of-the-art ICT (Information & Communication Technology) techniques, including constructing a web-site, so they can use their skills in a range of art institutions as well as in the art market.

Participation in NEOTHEMI will give the students a real application for their Web skills, the opportunity for interactive communication with the other partners and to widen their knowledge of textile production in the whole of the European Union.

The students will plan texts and images about textile technology, textile restoration, tapestry, carpets, silk, lace and embroidery, costumes, and textiles in the modern art market. These subjects can be approached from aesthetic, economic, and ethnographic viewpoints, thus linking them with the themes of other partners, especially “Ordinary People” (Ireland), “Through Memory” (Germany) and “Folklore and Traditions” (Denmark).

Margarida Felgueiras
University of Porto, Portugal

“Educational Heritage”

The choice of the theme “Educational Heritage” intends to display the educational patrimony in several of its aspects and contribute to the reinforcement of teacher identity and the possibility of connecting to or comparing the common reality of all European youth. From this it will be possible for visitors from other countries to compare the pavilion contents with their own heritage and to establish differences and similarities, contributing to the shared knowledge of themselves and others. The main emphasis will be on the primary school but there will also be sections on the University and Portuguese secondary education.

The development of educational buildings will structure the remaining sub-themes, since the definition of educational spaces reveals forms of thought about education and also determines differences in daily routines. There will be references to periods from medieval to modern, but the nineteenth and twentieth centuries will be dealt with in more detail.

As an example, the following sequence may be presented for primary schools:

- Pombalino period (1750–1777)—when a network of public education was established.
- Count de Ferreira schools (1866)—The first definition of school building was passed by the Government on the 20 of July of 1866. This initiative was due to the need to execute the last will and testament of the Count de Ferreira. This philanthropist offered the state 120 schools, to be built, one in each county town. This will raised the problem of creating a school network on a national scale. The Government became concerned for the first time with the inadequacy or non-existence of school buildings. The Government was confronted with a total lack of policy or guidelines for elementary education in the country. We will present a picture of a school of this type and its furniture and school material.
- Adães Bermudes project (1899)—This theme deals with a tender for school buildings which was won by the architect Adães Bermudes and which resulted in a number of school buildings

across the country. This project won a prize in the 1900 Paris world exhibition

- ‘Schools of centenaries’ (1940)—In 1940 the dictatorship of Salazar defined a new school building model called the ‘Centenaries Plan’.
- Urban project (1960–70)—Finally this theme displays school buildings from the large cities between 1960–1970.

Related to each type of school, we will include as sub-themes the related furniture, manuals and teaching materials, and playground games.

Comenius 3 project – Neothemi: Contact information

NEOTHEMI Project Web Sites:

<http://www.neothemi.net> *Virtual Museum*

<http://home.broadpark.no/~ilangset/NEOTHEMInewsletter/index.html>
Newsletter

<http://www.malux.edu.helsinki.fi/tt/helsinki2003> *Helsinki Conference 2003*

COORDINATING INSTITUTE:

University of Molise

Campobasso, Italy

<http://www.unimol.it>

rettore@unimol.it

COORDINATOR:

Claudia Saccone

University of Molise

Campobasso, Italy

<http://www.unimol.it>

api@mclink.it

PARTNERS AND CONTACT PERSONS:

Finland:

University of Helsinki, Department of Teacher Education

Research Centre for Education, Cultures, and the Arts

Helsinki, Finland

<http://www.malux.edu.helsinki.fi/okl>

Contact person: Seija Karppinen

seija.karppinen@helsinki.fi

UK:

University of Warwick, Institute of Education

Centre for New Technologies Research and Education (CeNTRE)

Coventry, UK

<http://www.warwick.ac.uk/fac/soc/wie/NEOTHEMI>

Contact person: Sean Neill

sean.neill@warwick.ac.uk

Norway:

Brundalen 6th form college
Brundalen Secondary School
Trondheim, Norway
<http://www.brundalen.vgs.no>
Contact person: Inger Langseth
inger@norwenglish.com

Ireland:

Mercy Secondary School
Mounthawk, Ireland
<http://www.comenius-mounthawk.com>
Contact person: Anne Gallivan
annegallivan@eircom.net

Denmark:

County Training and Resource Centre
Århus, Denmark
<http://www.acu-aarhus.dk>
Contact person: Ulla Sørensen
us@acu-aarhus.dk

France:

University of Blaise Pascal
Moulins, France
<http://www.univ-bpclermont.fr>
Contact person: Jacqueline Delclos
delclos.j@wanadoo.fr

Portugal:

University of Porto, Faculty of Psychology and Science of Education
Porto, Portugal
<http://www.up.pt>
Contact person: Margarida Felgueiras
FPCE@psi.up.pt

Germany:

Media Centre of Kaiserslautern

Kaiserslautern, Germany

<http://www.mzkl.de>

Contact person: Rainer Blasius

blasius@mzkl.de

Italy:

Istituto Tecnico di Stato per il Turismo “L. Bottardi” Rome, Italy

<http://www.istitutobottardi.rm.it>

Contact person: Anna Maria Panzera

a.panzera@tiscali.it

Laura Falaschi, larapap2@hotmail.com

Maria Peluso, maria.peluso@libero.it

VII Istituto Tecnico Industriale

Napoli, Italy

<http://www.vii.area.na.cnr.it>

Contact person: Luciano Molfese

lumolfe@tin.it

Istituto Tecnico Statale Comm.le e per Geometri “Alessio Tramello”

I.T.C.Tramello

Piacenza, Italy

<http://www.odisseo.pc.it/scuole/tramello/tram1.htm>

Contact person: Licia Gardella

tramello@tin.it

CONTRIBUTORS to the publication:

Alan Pritchard
University of Warwick
Warwick Institute of Education, UK
Centre for New Technologies Research and Education (CeNTRE)
a.m.pritchard@warwick.ac.uk

Arja Puurula
University of Helsinki, Department of Teacher Education
Research Centre for Education, Cultures, and the Arts
Helsinki, Finland
<http://www.malux.edu.helsinki.fi/tt/tt/english/mission.html>
arja.puurula@helsinki.fi

Astrid Myskja
Norwegian University of Technology and Science (NTNU)
Dragvoll, Norway
astrid.myskja@allforsk.ntnu.no

Zsolt Gyenes
Pécs University, Institute of Visual Arts, Pécs, Hungary
Kaposvár University, Teacher Training Institute, Kaposvár, Hungary
Zichy Mihály High School of Applied Arts, Kaposvár, Hungary
gyenes_zsolt@freemail.hu

Mario Petrone
University of Molise
Campobasso, Italy
<http://www.unimol.it>
rettore@unimol.it