EDEN 2008 ANNUAL CONFERENCE

New Learning Cultures

How Do We Learn?
Where Do We Learn?

EDEN 2008 Annual Conference

Belém Cultural Centre
Lisbon, Portugal

11-14 June, 2008

BOOK OF ABSTRACTS

EDEN 2008 Annual Conference
Lisbon, Portugal

Published by the European Distance and E-Learning Network

Principal Conference Sponsor

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Welcome and Introduction

Among the primary factors influencing the development and implementation of e-learning, those that look beyond just the aspects of technology and management are fast gaining importance. *The understanding of cultural features in communication processes and their impact on e-learning, together with the most effective positioning and interpretation of intercultural issues pose today highly relevant questions.*

Introducing and embedding learning into every human activity is high on the agenda. A holistic approach in distance and e-learning requires a deep understanding: the ability to compare, understand and integrate. Understanding the relevance of the 'cultural dimension' requires intense efforts, if we are to go beyond its abstract meaning, beyond slogans.

Cultural understanding, efficiency and quality are going go hand in hand. Bridging professional cultures is not only important for the development of human understanding but also from the e-learning perspective for adopting and facilitating the integration of tools and solutions and developing synergies. There is a challenging variability in the cultural adaptation of ICTs. A well-understood intercultural approach is instrumental in re-structuring the educational enterprise and exploring new development scenarios. The effectiveness of technology may be reduced or improved by factors such as the values and learning styles of users. The emotional and motivation aspects for learning also emerge as highly relevant.

Open thinking and building on well integrated cultural diversity can also promote help in creating a reflective learning space. *Cultural understanding in learning also means gaining knowledge from other training cultures and learning design solutions,* which have developed in different professional sectors or geographical regions, where the settings necessitate the application of different approaches. Importantly, *cultural understanding also supports diversity,* releasing aspirations for achievement, the desire for self-sufficiency and independence – essential factors of 21st century knowledge and competence development.

Learning is becoming an increasingly personalised experience. We can learn practically everywhere and it is more and more the student who finds the ways to learning. The social web has also largely extended the scope of collaboration in learning. *The new generation technology solutions and Web 2.0 tools are necessarily cultural matters.* Cultural understanding may help to raise and exploit fully the new e-learning concepts based on social web.

The intercultural approach helps to understand and better support the much quoted inclusion and access aspects of ICTs and learning. On the other hand, if we use intercultural learning as an operational concept, for understanding and exploiting different learning styles and learning methods, this may well help both to increase learning efficiency and to implement new learning systems. Cultural aspects certainly make part of the social change and inclusion scenario in e-learning, raising the 's*olidarity', 'individuality'* and '*communality'* questions. The increased mobility of both individuals and groups, but also within communities and nations, has stressed the great importance of learning to cope and to understand cultural diversity. People are communicating more than ever, but being as physically apart from each other as never before. This phenomenon is *changing the very nature of our way of learning, working and living.*

The year 2008 is the year of intercultural dialogue, offering the opportunity to put the issue of learning cultures and their impact as the focus of the EDEN Annual Conference. EDEN welcomes the European professional and academic community of e-learning, open and distance education and appreciates the many excellent submissions received. We shall continue our efforts to contribute to the professional development and successful integration of knowledge in the field ICTs, open, distance and e-learning.

Alan Tait and András Szűcs

András Szűcs
Secretary General

Alan Tait
President

TABLE OF CONTENTS

CULTURAL CONTEXTUALISATION AND ADAPTATION OF DISTANCE AND E-LEARNING

DISTANCE AND E-LEARNING METHODOLOGY: PEDAGOGICAL CHANGES AND LEARNING STRATEGIES WITH NEW LEARNING TOOLS

E-LEARNING AND PROFESSIONAL DEVELOPMENT IN THE WORKPLACE

LEARNING STYLES AND IDENTITIES

E-LEARNING POLICY AND STRATEGY

CONCEPTS AND MANAGEMENT OF QUALITY

TEACHER TRAINING FOR ELECTRONIC DISTANCE EDUCATION

TECHNOLOGICAL CULTURE: WEB 2.0 TOOLS AND SOCIAL MEDIA

RADICAL SYSTEM DEVELOPMENTS

MEASURING AND IMPROVING LEARNING EFFECTIVENESS

SELECTED INNOVATIVE CASES

EUROPEAN AND INTERNATIONAL COLLABORATION IN ICT SUPPORTED LEARNING

MODELS AND SOLUTIONS FOR COMPETENCE DEVELOPMENT

VIRTUAL MOBILITY

E-LEARNING EXPERIENCE ON REGIONAL SCALE AND IN RURAL POPULATIONS

POSTERS

FOSTERING INTERCULTURAL SKILLS THROUGH E-LEARNING IN GERMAN HIGHER EDUCATION – A CONCEPTUAL FRAMEWORK

Bernd Kleimann, Hochschul-Informations-System GmbH, Germany

The Challenge of Interculturality

From a semantic point of view, the development of a conceptual framework for fostering intercultural skills through e-learning in German higher education is a fairly bold venture – due to the polysemy of the core concepts used in the title of this paper. *Culture* is notoriously ambiguous, the concept of *interculturality* is even more so, adding the notion of *skills* to our considerations, we definitely start to leave solid conceptual ground, and eventually introducing *e-learning* makes semantic confusion complete. On the other hand, enabling intercultural learning in higher education has become an urgent task due to the multiple cultures that occur in academia: national / ethnic cultures, professional cultures, academic cultures, or disciplinary cultures. So how can we reconcile the demand for intercultural learning and the semantic vagueness of the key concepts? My answer is: firstly by introducing some stipulative definitions of the key terms, and secondly by working out a conceptual framework for intercultural e-learning that will be illustrated by some examples from German higher education. Following this path of argumentation the paper is going to answer the question: How can intercultural learning in academic contexts benefit from the use of e-learning and other web-based resources?

Methodological Approaches

Instead of the full answer that cannot be given in this abstract, I shall just point at three methodological approaches of intercultural online education that can be found in e-learning in German higher education:

- *Provision of information* means that information about other countries, cultural specialties, or academic rules etc. is provided in a web-based environment. On the left side you see the website www.study-in-germany.de launched by Deutsche Welle, a publicly run radio station. Students, professors, and scholars can find comprehensive information not only on academic life in Germany, but also on German culture, daily life, cities, art, culture, clothes, eating, flirting, languages, sports and fun etc.

- *Training* encompasses online courses allowing for the practice of intercultural skills (e.g. role games, language tests etc.). The example on the left is the "intercultural online assessment centre" having been developed by an association (www.interculture.de) in cooperation with the University of Jena. The assessment centre consists of a role game taking place at a trade fair. The player is supposed to meet a lot of people with different cultural backgrounds at their booths. In order to perform his tasks he has to interact with these people practising his intercultural skills.

- *Communication and collaboration* obviously comprise communicating or working together with students from other cultures. Here, intercultural education and practice of skills unfold as an implicit or explicit (since explicitly reflected) effect of collaboration and communication. An example in this field is the master programme "East European Studies Online" offered by the Freie Universität Berlin (www.ees-online.org). It was launched in order to meet the growing demand for experts on Eastern Europe. Students from different countries, different cultural backgrounds, and different fields of study participate in this programme in order to acquire knowledge and gain experiences about Eastern Europe. While working together or discussing issues, they use a learning management system featuring the necessary communication and cooperation tools.

Naturally, these three approaches of fostering intercultural skills can be combined – and often are combined. For example, online training systems or online collaboration platforms frequently enclose a lot of information on cultures, too.

INNOVATIVE INTERCULTURAL LEARNING IN POST-WAR ENVIRONMENTS: CONFLICT TRANSFORMATION EDUCATION IN NORTHERN IRELAND

Alan Bruce, Universal Learning Systems, Tommy McKearney, Oliver Corr, Expac, Ireland

The conclusion of armed violence in Northern Ireland following the Belfast Agreement of 1998 and the establishment of agreed political structures on a bi-communal partnership basis represent an important example of attempted peaceful transformation of conflict. The cessation of armed struggle has not produced inter-communal reconciliation and acceptance however. The two indigenous communities remain bitterly divided over issues of national identity, cultural allegiance and future aspirations. The question of identity is at the core of much Irish social re-examination at present.

Conflicts of Interests is a course and educational program designed to address the needs of ex-combatants and their communities by conflict resolution and transformation. *Conflicts of Interest* is a workshop-based series of seminars. The aim is to enable participants to reach more sympathetic understanding of all those affected by armed conflict. Given the history of Ireland, the course focuses largely on the period of the more recent conflict (1968 to 1998). It examines similar ethnic conflicts in other parts of Europe. The programme is a conflict transformation package utilizing speakers, DVD footage and facilitated workshops combined with structured conflict resolution training. The aim of the course is to enable participants to achieve a rounded picture of conflict and how it may be peacefully resolved. Each module has its own set of key aims and objectives:

- Gaining understanding of the historic legacies of conflict
- Being able to explore the key components of conflict transformation
- Being able to appreciate the key elements in restoring dialogue and mutual acceptance
- Being able to define the elements in creating trust and conflict avoidance.

Participants are encouraged to learn how they can bring these lessons back into their own communities and share them with communities with whom they have historically been in conflict. The course is designed to be interactive and founded on principles of acceptance, tolerance, non-judgment and trust. The pedagogic methodology allows external expert inputs, multimedia presentations and structured group work to examine conflict, shared histories and methods of transformation and agreement. The pedagogic model has been designed to facilitate those who have been excluded from formal educational participation for reasons of social deprivation, conflict or imprisonment. It has enabled former enemies to confront what lay at the heart of dispute – while focusing on future possibilities. It means that the learning technologies employed must support attitude change and conflict transformation in a context of acceptance and tolerance.

The barriers to equal participation in Northern Ireland are plentiful and stem from prejudice and ignorance. The removal of barriers can eventually be accomplished (at least formally) by legislation and monitoring practice. But the deeper transformation that society demands can be expedited by communities emerging from conflict seizing the opportunities offered by historical analysis and non-violent contact and incorporating them into learning processes. Advanced *training and education* can bring communities into a deeper understanding of the potential offered by equality, diversity and interculturalism.

ADDING RICHNESS TO THE INTER-CULTURAL E-LEARNING BLEND

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This paper considers good practice in teaching, learning and assessment in the internationalised curriculum, and how this good practice can be applied in an e-learning context when working across cultures. It presents a literature review, with the aim of identifying good practice and a future research agenda. The paper is in five parts, representing fairly diverse perspectives. First, consideration is given as to why intercultural communication in a university context is worthy of our consideration, and why this is particularly important in a digitally-connected (rather than digitally divided) world. Second, selected literature from the field of Human Resource Management (HRM) and international management has been considered, specifically with respect to intercultural communication and working (as opposed to say, expatriation or repatriation, which are a common preoccupation for HR professionals). Third, literature relating to curriculum design for internationalisation has been analysed, again to identify potential aspects of good practice in relation to intercultural communication. The fourth and penultimate part of the paper considers a selection of the research that has been undertaken so far in relation to intercultural aspects of e-and-distance learning. Important issues and aspects of good practice are identified and a future research agenda is proposed.

The British Council report 'Vision 2020' predicted that demand for international education in what they called the 'major English speaking destination countries' would grow from 1 million places in 2000 to 2.6 million paces in 2020. Over 500,000 of these places were predicted to be in the UK. It is not enough however to simply offer a global product or 'one-size-fits-all': to do so runs the risk of intellectual imperialism. Crucially, the impact of national culture on attitudes and behaviours in relation to online learning is an under-researched area that is likely to be more significant in future and this paper attempts to map out some of the factors to be considered and suggests a future research agenda.

There are a number of typologies of cultural styles relating to nationality including Hall (1977), Hofstede (2001), and Furnham (1990), although these are drawn from literature of Human Resource Management rather than learning per se. These typologies offer some clues as to how individuals might behave in an intercultural exchange situation, such as a moderated online discussion, and the limited extant research in this area has suggested that factors such as Hall's and Hofstede's may have an impact. Also significant may be religious/cultural influences especially where between online exchanges may conflict with strict guidelines regarding interaction between men and women, sensitivity in the use of metaphor or the customisation of learning objects for cultural contexts, and communications conventions e.g. tutor contact.

A number of important issues emerge from the literature reviewed. Most of all, universities in the UK need to balance issues of sustainability, as they cannot assume the continued demand for a premium-price educational experience in what is now a mass and less than premium system; with issues of ethical, political and religious sensitivity in a world where such concerns have become highly charged. The consensus view points towards a model of stimulating, activity-based learning, which recognizes the importance of local contextualization, induction and orientation, and individual personalization. There are opportunities for world-wide future research into how different cultures respond to blended and e-learning environments, including interpersonal dynamics in a multi-cultural classroom, from a comprehensive study only achievable by a globally-linked network to develop a new and more contemporarily relevant framework appropriate to university-level learning. The research needs to account for the fact that students, more or less irrespective of country of origin, are of the 'digital generation' who live in a rich technology-enhanced environment and expect their learning environment to integrate with this. The author wishes to propose an international research project, and is interested in hearing from colleagues who wish to collaborate with this.

MULTICULTURALISM FOR E-LEARNING IN POST-BOLOGNA HIGHER EDUCATION ENVIRONMENTS: ADDRESSING DIVERSITY IN ORDER TO CEMENT UNITY

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George Katakalos, South-East European Research Centre, Greece

The Maastricht Treaty on the European Union established an initial framework for the development and exchange of information and experiences between HE institutions (HEIs) across the Union, however there was no provision for a common educational policy or the harmonization of the different educational systems until very recently. In 2001, the Lisbon European Council established that there was a need to review and improve the quality and effectiveness of education in the EU, facilitate the access to all to the education system and open up European education to the wider world. This acknowledgement resurrected an earlier initiative that had been losing impetus up to that point in time. In fact, earlier in 1998, European ministers responsible for HE and coming from a subset of the European Union, had started what today is known by the Bologna process in response to the Sorbonne Declaration. Thus, this process aimed at facilitating a progressive convergence of the overall framework for degree provision across the Union through a common degree-level system. Most importantly, the process was intended to facilitate and enhance student and teacher mobility, as well as to create a transparent recognition of courses and modules across the different educational systems. The overall aspiration was to develop a European integrated HE zone, supported by an underlying European cultural dimension, through the creation of integrated programmes of study. Consequently, Higher Education (HE) in the European Union (EU) is changing both in terms of pedagogical models, international reach of the universities and an increasing utilization of Information and Communication Technology (ICT) for teaching and learning purposes. In fact, with the introduction of the World Wide Web (WWW) in formal educational settings, an increasingly diverse cohort of students is being asked to interact with each other in multicultural environments for which they may be ill-prepared. Computer communication tools can increase the reach of the university by providing distant access, but also add in the complexity of communication.

European HEIs see globalisation as an opportunity. On the other hand, this same phenomenon is recognised as the main force behind the rapidly increasing need for the consideration of cultural differences in communication, collaboration and education. While Computer Mediated Communication (CMC) tools, available through e learning environments, aim at enhancing the interactivity between students engaged in collaborative learning activities, this communication may be severely hindered by culturally induced conflicts, mistrust and misunderstandings. Furthermore, the success of the academic culture integration intended by the Bologna process may be undermined by the very problems it aims at resolving: the cultural diversity of students in European universities. This paper also aims at opening a debate on how to integrate and serve students coming from different cultural backgrounds, who are required to interact with each other when engaging in EU-wide e learning activities. However, politically correct attitudes in Europe suggest that all Europeans are equal and these prevalent attitudes filter to all aspects of EU policies. This is a laudable aim in itself, and surely one to aspire to in terms of civil rights, duties and responsibilities. Nonetheless, it is equally important to recognise that Europeans are also very different in terms of language, culture and ethnic backgrounds and addressing these differences needs to go deeper than just translating a few learning materials or delivering lectures in English. While the opening of the provision to students all over Europe is a desirable aim, neglecting to acknowledge European cultural diversity may lead to much frustration and anxiety, as well as exclusion of particular cultural groups. Adopting a complacent and politically correct attitude that 'all Europeans are equal' may lead to and Orwellian equivalent that 'some are more equal than others'. The risk is that education will continue to be delivered by the most influential HEIs, attracting a culturally diverse body of students without genuine adaptation for that diversity. We propose that 'Europeans are different', but that they need to be treated with equal respect for their cultural differences. We believe that respect for this multiculturalism is the one crucial factor in cementing unity in the post-Bologna EU Educational system. Finally, we propose that a great deal more research needs to be done in this area in order to help create new pedagogical designs, inclusive moderating and tutoring strategies and culturally inclusive programmes and learning materials.

INTEGRATING WEB 2.0 APPLICATIONS IN SCHOOL PROJECTS TO FOSTER INTERCULTURAL DIDACTICS AND PROMOTE SOCIAL INCLUSION OF IMMIGRANT STUDENTS

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Introduction and research background

Besides the historical minorities the linguistic and cultural Italian panorama has enriched thanks to a new developing phenomena: the constant presence of groups of immigrants coming from a wide range of foreign countries: "new minorities" speaking more than 122 different languages. Since one of the aspect to be kept in consideration, when valuating the level of integration of minorities in the society, is the representation of the so called "new minorities" in the system of social mass media, we are now facing two kinds of problems: the necessity to guarantee a true representation of immigrants through the different media in order to avoid every form of discrimination and the need to help and promote the immigrants' access to the media.

According to the latest findings of the MIUR (*Ministry of Education, University and Research*) the presence of immigrant students in Italian instructional institutes is becoming more and more relevant concerning not only primary and middle schools like the previous years of the first immigration flow, in fact, nowadays immigrant students tend to fulfil their studies getting a high school diploma and often a university degree. The first ministerial regulations introduced to promote the schooling process date back to 1989/1990 and deal with concepts like "intercultural education" and "mediation": they needed to point out how the educational task of a multicultural society had to be characterized by the mediation among different students' cultures, a process that shouldn't be orientated to an "acculturation" system but to a continuing exchange among cultural models.

The data that should most seriously worry and alert our society come from the immigrants of the second generation, that is students born, grown up and educated in Italy who still don't know how to define themselves, how to describe and interpret their cultural/linguistic identity. The exemplar case of an Italian multiblog called "Rete G2 seconde generazioni" in which guys and girls of foreign origin created a network of connections through the web choosing tools such as a blog and a forum makes educators reflect on the possible use of technology also as a support for learning/teaching to actively involve students.

Research hypothesis – Promoting students' access to "social media"

The research aims to explore the potentialities of online social tools providing the access to the proper media at school in order to guarantee a representation of minorities through a direct self expression. Students in multicultural high school classrooms will be introduced to the newest social media and their easy integration in a blog, the project will encourage the setting up of a creative writing lab whose "products" will be published in a multiblog.

Promoting students' access to online social media is a productive way to let teachers and the school environment reach the main educational and didactical goal to give voice to immigrant students; the development of such a process aims at helping both teachers and students in their reflection on the technological support for learning/teaching, the creative writing lab represents an opportunity to underline the different levels of expression available in the web and the advantages offered by a proper utilization of a blog.

Blogging appears to offer multiple opportunities for teacher and student use: writing in a multiblog for the whole classroom may increase collaboration between the teacher and the students and may strengthen the relationship among Italian students and immigrant ones also providing a unique chance of cultural exchange. This research about the students' access to online social media has to be viewed as two different domains: (a) as an opportunity of communication with students, teachers, and the community at large in order to face intercultural issues from the point of view of both Italian and immigrant students, and (b) as a form of instructional practice to facilitate the acquisition of Italian as a second language. These two domains formed the foundation for the research.

SOCIO-CULTURAL DESIGN OF E-LEARNING IN DEVELOPING COUNTRIES

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Social and cultural approaches to new technology enablement must include type of content and type of medium with type of culture. Key questions lie ahead of us: How can educators in developing countries like Iran begin to see culture as an integral part of the designing and utilizing of new technologies? What changes in mindset, instructional practices, curriculum, and policy need to take place before utilizing ICT in education in developing countries? How will the integration of culture in ICT based initiatives be a contributing factor to improving the e-learning environments? Given these questions, an important step is to identify and analyze social and cultural dimensions that may affect the design and use of e-learning environments. To accomplish this, and in an attempt to identify relevant array of dimensions and dominated paradigms in eastern educational systems, in this paper a critical review of associated literature as well as authors specific experiences in eastern contexts are furnished. Accordingly, we moved progressively from clarifying fundamental issues about social and cultural factors on globalizations of education to definitional and operational considerations, and focused on several major issues: Understanding of Culture; Cultural considerations in designing and using ICT in E-Learning; Characterizing some common social and cultural dimensions or traits in Eastern pedagogical contexts.

THE PROMOTION OF INTER-ETHNIC PERCEPTIONS AND ATTITUDES BY WAY OF A DISTANCE LEARNING PROJECT

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Israeli society includes different national, ethnic, and religious social groups. Because of the heterogeneity of Israeli society, the needs and aims of the different groups sometimes clash leading to conflict between members of the different groups. The research study reported in this paper deals with the Jewish-Arab conflict in Israeli society and describes a research-based evidence for the possible use of technology for the enhancement of positive relationships between conflict groups.

The main purpose of the year long project was to narrow the level of conflict between Jewish and Arab high school students, using Distance Learning technology based on email correspondence and internet-based chat-rooms, in order to promote more positive affective perceptions and attitudes toward each other. Students from both schools participated in intensive email correspondence and in an internet-based chat-room in which they discussed their perceptions of each other and the problems related to inter-ethnic understanding, equality, tolerance and peace. The chat-rooms were moderated by teachers specially trained in order to oversee the email correspondence and chat-room activities.

The research sample comprised four 10th grade high school classes, two attending the Jewish high school and two from the Arab high school. In each class there are approximately 35 students with a total of approximately 140 students, evenly spread between the two genders, participating in the project.

Quantitative analysis of participants' attitudes towards members of their conflict group after their participation in the project revealed that despite the deep social gap that exists between the Jewish and Arab population groups in Israeli society, a well constructed distance learning project has the ability to contribute to the development of greater affinity and closeness between the two participating groups. The major contribution of the project was to indicate that under certain circumstances the use of technology can facilitate a positive significant change in the perceptions held by Jewish students about their Arab counterparts and to shore up positive Arab attitudes maintained towards Jewish students throughout the project with new and important knowledge not available to the Arab students before their participation in the project.

Thus the year-long project contributed significantly to the creation of realistic inter-group perceptions and relations in a complicated societal situation. It is important to note that the positive change was more emphasized in the group of Jewish students who adopted more positive affective perceptions and affective attitudes towards the Arabs as a result of their participation in the project. They also perceived the Arabs as being more democratic and flexible after participating in the project and declared that their attitudes to the Arabs became more crystallized and they became more aware of Arab traditions, culture and way of life. The Arabs maintained positive affective perceptions and affective attitudes towards their Jewish counterparts throughout the duration of the project.

In sum one can point to many research projects using different methodologies that have attempted to narrow social gaps between different ethnic, cultural, and religious groups. Not all these projects managed to overcome conflicting feelings in the face-to-face configuration. The present study indicated ICT, which served as the vehicle for narrowing the social cleavage between Jewish and Arab high school students without necessitating face-to-face contact, can be used as a model for the fostering of positive inter-group contact as well as a medium through which inter-group conflict can be significantly diminished.

CONFLICTS ARISING FROM COMMUNICATION, COLLABORATION AND COOPERATION OF STUDENTS IN MULTICULTURAL GROUPS ENGAGED IN E-LEARNING ACTIVITIES

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With the introduction of the World Wide Web (WWW) in the formal education settings physical student mobility is not necessarily implied. In fact, WWW with the rapid development of Information and Communication Technologies (ICT) in Higher Education (HE) has caused changes in the way teaching and learning is viewed. ICT started to remove the traditional time and geographical space barriers of formal education that limit access to the different educational systems. Without these traditional barriers, distance learning, eLearning and remote access to learning materials are being increasingly accommodated in the formal education and are even causing the education to be viewed as an export factor between countries. The vision of student mobility, as initially established by the Maastricht Treaty and further reviewed and improved in 2001 by the Lisbon Council, implied an increasing diversity in the student cohort. Thus, students will increasingly be asked to interact with other students in multicultural environments for which they may be ill-prepared. Nevertheless, globalisation is seen as the main force that causes a rapidly increasing need for the consideration of cultural differences in communication, collaboration and education. Previous research in multicultural design Joo (1999), McLoughlin (1999a, 1999b) has shown that implementing eLearning is more than simple translation of web pages and web materials. Instead interaction is needed between learners with peers and tutors focusing on the collaboration and cooperation of the participating sides. The theoretical background of this study is based on the previous researches of Hofstede's (1980) model of measuring and identifying cultures and the multicultural group conflict theory of Applebaum et al. (1998).

This paper reports on a sub-set of findings from a study of multicultural students communicating, collaborating and cooperating in a synchronous eLearning activity by applying methodological triangulation and quasi-experiments. More specifically, the project aims to identify communication problems of students from South East Europe when they collaborate and cooperate in a synchronous chat and investigate if these problems can be related and attributed to differences arising from the diversity of students' cultural backgrounds. In order to answer the previous aim, this study adopted a mixed method approach to research by employing both quantitative and qualitative research methods of data collection and analysis. The study used Hofstede's questionnaire in order to provide a better understanding of the cultural backgrounds of each participant, quasi-experiments in order to produce the communication logs providing areas of communication conflicts and one-to-one interviews to clarify and further explain the identified communication conflicts in the log analysis and their relation to culture.

The results of this study showed that communication problems may arise between the participants from the investigated countries concerning the power distance cultural dimension presented in this paper. Thus, a sound appreciation or at least acknowledgment of the problems associated with diversity is essential for the survival of a multicultural teaching and learning activity not only for cultures with obvious differences such as between Chinese and American cultures that have already been proven (Hofstede 1980, Hall 1977), but for closer cultures of the same region (SEE Region) as well.

DEVELOPING THE INTERCULTURAL COMMUNICATOR USING WEB 2.0 TOOLS

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As new digital technologies allow people across the globe to communicate with increasing ease and as international communication and travel becomes more and more common in all sectors, intercultural learning must become an essential component of learning curricula. This need has been recognized by the European Commission, which has proposed that 2008 be the European Year of Intercultural Dialogue. What's more, according to the Lisbon Strategy, by 2010, Europe is supposed to become "the most competitive and the most dynamic knowledge-based economy in the world". In order to do so, today's learners have to develop language skills and intercultural awareness, digital literacy, and an understanding of new online discourse communities (Kern & Warshauer, 2000) and the new kinds of social practices they represent (Giger, 2006). For students to acquire these new skills, the learning must be more distributed, placing control over the experience into the learner's hands. Pedagogy based on a learner-centric, social-constructivist approach and supported by tools readily available online and part of the every-day lives of students, such as Web 2.0 tools, can help create an active learning environment.

Although technology in and of itself cannot transform learning, with an appropriate pedagogical approach, it can. The group of tools that can be categorized as Web 2.0 tools can be considered 'user-centred' in that users are no longer passive receivers of information, but rather active producers of content on the Web. Adapted to education, these tools can be used to promote learner-centred teaching and learning. They are flexible and can be personalized and as such give students an array of technologies that can be adopted to their personal learning styles. With these tools, contents can be created, shared and re-assembled in an unlimited number of different configurations, all of which are determined by learners themselves (Milligan *et al*, 2006). These tools also respond to the social nature of learning as they can, and this paper will argue *should*, be open to the global community of Web 2.0 users for interaction, exchanging of opinions and sharing of resources and materials. As they are inherently social and offer opportunities for authentic communication, these tools can be used to promote intercultural learning both within the context of planned classroom activities as well as autonomously by students exploring the Web.

This paper describes a blended English as a Foreign Language (EFL) course for graduate students in International Communications Studies. As the students are at the end of their studies, the course aims to help students acquire the skills and competences they will need to function effectively in the workplace and the autonomy to continue learning once they have graduated. To do this, the course focuses on the use of Web 2.0 tools to promote language learning, intercultural learning and learner autonomy. In the first semester, through a series of e-tivities (Salmon, 2000), students become familiar with and begin to effectively use blogging, social bookmarking, feeds and feed aggregators, and image and audio sharing websites to improve their language and intercultural learning. In the second semester, they use a wiki to carry out a telecollaboration (Belz, 2005) project with peers at a college in the United States and Skype to interact in a synchronous oral format weekly with their peers. The course is in its third iteration and has proved to be extremely motivating for students. An analysis of the empirical data gathered shows that even though there are hurdles to overcome, e.g. technological difficulties and intercultural misunderstandings, students' linguistic abilities improved and their attitudes and beliefs regarding both their own culture and 'the other' change during the course.

Although the course described in this paper is a language course, the ways the technologies have been used could easily be transferred to other educational contexts using a task-based, problem-solving approach where communication between students, personal reflection and intercultural learning are fundamental parts of the course. The paper will argue that the increased contact with other cultures made possible by today's digitally networked technologies do not inherently promote intercultural learning. Consequently, it is the responsibility of educators to raise students' awareness of cultural differences and similarities and promote discussion and reflection in the classroom (be it face to face or online). Similarly, the fact that students use Web 2.0 tools in their personal lives does not mean that they know how to exploit them for learning. Therefore, it is important that educators implement these tools in their courses in effective, motivating, learner-centred ways in order to give students the skills and competences they need to continue exploiting them, and to keep on learning throughout their lives.

CULTURAL DIVERSITY BETWEEN AND WITHIN WORLDWIDE COMMUNITIES OF DISTANCE LEARNERS

AN ANALYSIS OF DIFFERENT LEARNING STYLES AND MULTI-CULTURAL COMMUNITIES ON A TRULY INTERNATIONAL MASTERS PROGRAMME

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Setting the Context

This paper presents a case study of MBA students over a 14 year period, and their progression throughout a global on-line distance MBA programme. This research advances the ideas that understanding multi-cultural learning strategies – from a truly international perspective – is as important, if not more so, than technological developments. The paper considered international students from Asia, America, Australasia and Europe and their learning styles in terms of their culture of origin and module material. The analysis indicates significant differences both between and within continents. For example there were significant differences between Asia and N. America, however even within N. America (Canada and the US) the differences were also significant. Our analysis takes a hybrid approach drawing upon both interpretative and postmodernism outlooks. This builds on the considerations of the 'role identity' of students within on line learning environments, in particular the emotions, personality traits and responsibilities.

Case Study: An International MBA Programme

The data set for this study of distance MBA students over a 14 year period is extremely large (some 25,000 students and over 110,000 exams) and is very rich, including: geographical location, exam scores, subject matter, mode of study, gender, and language of the international students. Roughly 14% of the students were UK based, and there were significant numbers in N. America, S.E. Asia, the Middle East, as well as the Caribbean, South Africa and Australasia. The sample is quite international. The core subject materials for the programme in 2008 have since been translated into Chinese, Arabic, Spanish and Hebrew, highlighting the global nature and relevance of the programme. This MBA programme is very core course orientated (seven out of the required nine courses are undertaken by all students), and they split neatly into a qualitative and a quantitative set.

Findings

The main findings of the analysis indicate that:

- The countries are grouped into continents with significant numbers in N. America, S.E. Asia, the Middle East, as well as the Caribbean, South Africa and Australasia, significant differences are indicated below. Diversity was indicated as important both between and even within continent.

- Language used to take exams is shown as significant with English and Hebrew significant factors in MBA progression.

- Different cultures show significant changes in respect of Qualitative vs. Quantitative subjects. Cohorts of students indicated different learning styles and progression throughout the MBA programme. Statistical tests indicate that the subject component of the module is very significant.

Conclusion

There is an argument that research within e-learning needs to focus upon the different nature of the learning environment where the 'hierarchical formal and structural' view of society is not relevant – there is a focus on the multifaceted nature of the technology/educational relationship. Our research indicates that when designing technology enabled spaces there is a significant role to be played by diversity between and within continents (such as Africa, Asia, America, Europe and the Middle East) as well as the diverse nature of the groups of students within the countries (Dzuiban, Moskal, and Hartman, 2007). This paper promotes a discussion surrounding the multi-cultural nature of learning strategies where diversity is consider both between and within continents such as Africa, Asia, America, Europe and the Middle East.

TIME AND BORDERLESS DISTANCE EDUCATION

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Borderless higher education has been described as 'developments which cross … the traditional borders of higher education, whether geographical or conceptual'. Its emergence as an educational term is a reflection of the increasing dissemination of knowledge through information and communication technology, and signifies convergence between conventional face to face and distance learning approaches. This ability to use technology to offer learning provision anywhere and at anytime expands the potential market for education but assumes a high degree of border porosity and acceptance by the recipient. This has resulted in framework agreements being initiated at international level to enable smooth transfer.

The Framework for Qualifications of the European Higher Education Area, developed through the Bologna process, identifies that national frameworks need to show that they are supported by compatible credit systems. Credits and qualifications within these systems are expected to be described in terms of learning outcomes, levels and associated workloads. The definition given for workload is 'a quantitative measure of all learning activities that may feasibly be required for the achievement of the learning outcomes'. In tandem with this, time is considered to be that 'required for an average student to undertake the workload'.

This makes two important assumptions. First, that all learning activities can be identified and rated for the time they will take to complete. Secondly, that the average student and the time he or she has available for study can be defined. These are significant as the feasibility of such evaluation is dependent on an ability to identify realistic values for these variables.

This paper considers these assumptions in the context of the diversity of international adult students returning to education to complete distance taught courses for the real estate and construction professions. It reflects on the time issues that impact on their lives and considers the viability of rules of thumb used to quantify study time in contemporary society. The paper casts forwards to consider students' expectations for time use resulting from changes in technology and life practices, and the expansion of social networks.

The paper reports summary findings of research into student retention and refers to preliminary findings from a major research project aimed at investigating the time pressures on working students. It concludes that it is not currently feasible to accurately quantify time and that the notion of defining an 'average' student and their study can only be an aspiration for inter-national distance education.

FACTORS CRUCIAL IN DEVELOPING A SUCCESSFUL DESIGN FOR E-LEARNING IN A DIVERSE LEARNING COMMUNITY

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Today's multicultural student body is a positive trend in the educational institutions, provided that we are able to deal with the challenges linked to diversity and learn to cope with one another.

However, higher education today is in need of an educational approach which encourages and makes diversity and cultural and individual resources visible. We believe that e-learning can contribute to making this possible.

Our thesis is that learning outcome will increase corresponding to the mutual interest of sharing and exchanging cultural, personal and intellectual resources. An interesting question is which factors must be considered to ensure that e-learning contributes to the students' mutual benefit and progress and thereby to intercultural communication and cooperation. A successful e-learning design presupposes that the diversity among the users is taken into consideration and adapts for learning communities across different understandings, different views, different patterns of behaviour and different frames of interpretation.

This paper highlights some of the crucial elements in developing and implementing new programs. The views presented are mainly based on knowledge acquired from field research on diverse learning communities at Oslo University College (OUC).

In order to succeed it is crucial to create a digital learning environment reflecting diversity.

When using e-learning as a learning and teaching method, the linguistic minority students must be considered and their individual experiences and communicative skills taken into account. By taking advantage of e-learning as a tool of cooperation and interaction between the students, it is possible to let the students show themselves as resourceful students, equal to their fellow majority students and to value the students' individual and different contributions. Consequently the educational institution itself has to convince the students that cooperation is worthwhile, because of diversity and in spite of the challenges caused by this diversity. Furthermore there is a need to create common reference schemes as well as institutional flexibility and willingness to understand.

Building social networks is a part of a learning strategy as well as an action which leads to an including, multicultural environment by fostering social ties that reach across social, linguistic and cultural divisions. Bridging the divide in diverse groups of students, fostering social ties and relationships in a diverse environment, seems to be too complicated to overcome. The students have great difficulties when it comes to discover mutuality in the face of difference and they often fail to listen to each other, create empathy and understanding. Different frames for interpretation among the participants are seen as an essential part of this challenge. In diverse learning communities, linguistic variety will always be a part of everyday life. To succeed in creating a learning environment, promoting the success of both traditional and non-traditional students, implies managing this variety.

The objective is to develop an e-learning design contributing to the students' sense of belonging, security, well-being, acceptance and respect. This predicts a meeting point, predictable and possible to manage. By creating space for mutuality and professional dialogues between students, the students are given a possibility to get to know each other and each others' practises, attitudes and understandings. They also have a unique possibility to develop their language proficiency and communication skills in a diverse setting.

UNDERSTANDING MULTICULTURAL COMMUNICATION THROUGH NETWORKED LEARNING AND INTERNET COMMUNICATION TECHNOLOGIES: A CANADIAN PERSPECTIVE

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Language, tools, symbols, and social cues – all of which are culturally embedded – are ways we objectify and communicate our concepts in everyday life inside and outside our classrooms. The diversity of ways we communicate in multicultural countries, such as Canada, can be challenging in our face-to-face classrooms – and can (and often, does) become unmanageable in our technologically mediated distance delivered classrooms. While there is much we do not know about the impact of technologically-mediated communication within and across our multicultural classrooms, the literature on technologically-mediated communication reveals that communication, and all its complexity in social interaction, needs to be considered in terms of shaping both student and teacher cultural identities with technology. Building on this literature, as well as drawing on my own experience as a Canadian distance educator, the purpose of this paper is to share how technologically-mediated communication affects students' experiences within the social and cultural contexts of technologically-mediated distance learning. Such information can provide distance educators with better insights into designing improved instructional environments for culturally diverse classrooms.

CREATING COLLABORATIVE LEARNING CULTURES: A COMMUNITY-UNIVERSITY RESEARCH ALLIANCE IN CANADA

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In March, 2006, the **Faculty of Education** at **Memorial University** was awarded a research grant from the **Social Sciences and Humanities Council of Canada (SSHRC)**, through the **Community-University Research Alliance (CURA)** Program. Under the project title *Building Communities in the New Learning Environment*, the research was operationalized with the creation of the **Killick Centre for E-Learning Research**, with a mission to foster innovative research, training, and generation of new knowledge in the area of e-learning in the field of education, particularly as it relates to rural, isolated areas. According to SSHRC a CURA:

- is based on an equal partnership between organizations from the community and one or more postsecondary institutions; and
- provides co-ordination and core support for planning and carrying out diversified research activities that reflect the CURA program objectives, are centered on themes/areas of mutual importance to the partners, and are closely related to their existing strengths.

Recognizing the enormous challenges in nurturing and maintaining relevant partnerships between the university's academic culture and the more practical cultures of community partners, the Killick Centre conducted a research-based self-assessment, with a particular focus on how well the alliance between the university and the community has functioned. The research methodology employed for this self-study was rooted in organizational inquiry, a process which utilizes a variety of data sources to achieve reflective learning about an organization. Data was gathered through facilitated focus groups, meetings with partners, interviews, review of written submissions, and analysis of national data compiled by the Social Sciences Research Council of Canada. In examining these partnerships attention was given to various initiatives which were designed to foster partner interaction and ensure ongoing involvement of community agencies at all stages of research. Through reflective learning the research identified successes and challenges associated with Killick Centre alliances and determined suggested strategies to nurture and strengthen these interagency relationships. In the final analysis, research revealed that overcoming the boundaries of traditional practice and breaking down intersectional silos requires much discussion, reflection and strategic planning.

THE EFFECT OF PRINCIPALS' LEADERSHIP AND SCHOOL CULTURE ON TEACHERS' USE OF LAPTOP COMPUTERS IN PRIMARY SCHOOLS: SOME NEW ZEALAND OBSERVATIONS

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Introduction

Many factors affect the extent of information and communication technology (ICT) use by teachers. On an individual level, teachers' skills, confidence and beliefs with regard to ICT affect their use of classroom ICT use, as does their access to reliable ICT. At the school level leadership, planning and the overall school culture all affect teachers' ICT usage. In New Zealand teachers have been provided with subsidised laptops, in an effort to address individual level factors. What is not clear, however, is to what extent the personal and school culture factors are interdependent, and therefore whether a scheme focused on the personal factors to the exclusion of cultural factors will be effective. This paper explores whether school culture had any effect on teachers' use of the laptop computers in two Otago schools.

Leadership style, school culture, and the use of laptops

In School A, the TELA scheme added to an existing focus on ICT, and was seen by the teachers and the principal as being of great value. Although there seemed to be a large focus on computing hardware and software in this school, it was usually couched in terms related to teaching and learning. The laptops were seen as having a real impact even though teachers had previously had access to classroom computers. Use of the laptops was encouraged and modelled by this principal, who had a collaborative approach to leadership. Teachers generally agreed with the principal's assessment of the effect of laptops and ICT use in general in their school. They all felt that the principal's leadership and vision, as well as his willingness to provide professional development and technical support as and when needed, were critical to the success of the scheme. Teachers at this school felt that having the laptops had impacted on their skills, as well as on their classroom use of ICT.

The principal of School B was less sure of the value of the scheme, believing that giving teachers laptops had issues associated with it that had been thought through. In this school ICT tended to be used for administrative purposes, such as reports, although the principal did have a vision of it being integrated into teaching and learning. He felt it was very important that the school had one leader, making all school decisions, and seemed to have a business focussed approach to running the school. The teachers generally agreed with the principal's view of the school, although they had a different perspective on it, feeling that his business focus hindered teaching and learning. Currently the laptops were unable to be connected to the school network or use the school Internet connection, as the principal believed the risk of viruses infecting the administrative servers was too high, something which teachers found frustrating. They felt little professional development and technical support was available, while there was little leadership in terms of ICT. At this school, teachers felt that having laptops had improved their skills, but had little effect on classroom use of ICT.

Discussion

The leadership style and school culture were very different in these two schools, with School A appearing to be much more supportive of classroom ICT use than School B. Has this difference in school level support impacted on the extent to which the laptop scheme has addressed the personal level factors affecting ICT integration by teachers? Teachers at both schools reported that, to at least some extent, having access to a laptop had resulted in them having increased skills and confidence with regard to ICT. There appeared, however, to be school-based differences with regard to the extent that having laptops had lead to an increase in the use of ICT in teaching and learning. While all teachers at School A reported using ICT in teaching and learning, this was not the case in School B. The key difference between these schools appeared to be that the leadership provided by School's A principal was instrumental in developing a school culture that was conducive to classroom ICT use by teachers, whereas the leadership provided by School B's principal did not create such a culture, and classroom ICT use was much more limited. This would suggest that although personal factors affecting ICT use can be addressed at a personal level, the impact will not be widespread without also addressing school level factors. It should be noted, though, that this finding is based on two schools in one region of New Zealand, so although suggestive, no definitive conclusion can be drawn. Based on the experiences in these schools, however, it appears that for ICT to be successfully integrated into teaching and learning, as one school A teacher said, "there certainly has to be … a certain expectation that this is what we do and this is the way we do it" (Teacher C), which shows how important the leadership factor is.

GUIDING LEARNERS TO BECOME KNOWLEDGEABLE LEARNERS 2.0

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Lifelong Learner in the Knowledge Society

The concept and practice of lifelong learning is gaining importance as a way of developing effective strategies to face the challenges brought about by the Information and Knowledge Society: today we are constantly required to update our professional knowledge and skills by engaging in training and learning activities, both formally and informally. Acquiring Personal Knowledge Management (PKM) skills to support lifelong learning in the Knowledge Society is an essential, complex and on-going process that can be facilitated by creating enabling conditions and the internalization of suitable and effective practices and behavioural values. In this work the informal e-learning constitutes a modularization of the educational and socio-technical system towards the full enactment of a lifelong learning experience which could value the subject for his personal and professional characteristics.

A net generation learner (or a "digital native") needs a set of abilities which are multifaceted and versatile, and which should accompany him in the various re-elaborations of the knowledge and learning landscape which he constantly travels. PKM skills encompass a set of abilities which cannot be straightforwardly compared to digital and information literacy. Social and relational aspects of the knowledge construction process inevitably highlight that mastering technology is but one aspect of a far more complex set of skills. To identify such a specific set of skills, this paper reports a study built on relevant theory and literature, and on the authors' research and teaching experience. The authors' starting-point is the proposition that it is possible to develop training aimed at triggering processes such that digital and social literacy skills and competences can be learned gradually, and "made their own" by non-expert learners. Through an experimental approach, we have developed instructional design strategies suitable for supporting the digital natives in becoming effective lifelong learners: how to define and design learning paths, strategies, methods and tools to support PKM skills acquisition for life long learners in the Knowledge Society?

The objective of the research reported in this paper is twofold: first, it aims to develop learning resources and a methodology for encouraging the use and the abilities in the use of Web 2.0 tools; and second it aims to ground the acquisition of the PKM skills in the social networking activities in order to realise the enabling conditions required for the lifelong learning processes as pointed out by the European Union. Our purpose is to support and guide the planning of training sessions, targeted to learners who are non-experts in using the internet in their formal and informal learning activities. Such training session should guide the learners in acquiring the needed PKM skills to support such a process.

PKM – Personal Knowledge Management Skills Model

The PKM skills reference model hinges around a division into basic PKM competences, associated with the social software web practices of Create-Organize-Share, and Higher Order skills (HO skills), which identify enabling conditions and competences favouring the advanced management of one's personal knowledge. Create-Organize-Share PKM basic skills must therefore be developed and applied in the perspective of acquiring PKM skills "Higher Order" abilities which are still poorly addressed in the present state-of-the-art, and which we believe are basic for a personal growth oriented towards a lifelong-knowing approach: connectedness, being able to balance formal and informal contexts, critical ability and creativity in the use of network resources.

We believe that both users' attitudes and available technologies are mature to let us envisage that each Internet user could easily engage in a lifelong learning personal experience if properly guided by appropriate methodologies and sustained by pedagogically designed and developed personal learning environments. The results presented in this paper will permit us to pass onto the didactic modelling and classroom experimentation of basic and HO PKM, offering valuable results which will be available by the Summer of 2008, and which are linked to the translation of such PKM constructs into practical guidelines for the development of both basic and higher order PKM skills for the development of effective 2.0 (or higher) lifelong learners.

IN THE DISTANT FUTURE AND IN A UNIVERSE FAR AWAY…: SCIENCE FICTION'S EDUCATION FUTURES AND ITS PRESENTS

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This paper explores the parallels between science fiction narratives and developments in education over the past decade. The authors read contemporary shifts in educational strategies, materials and delivery against the futuristic fictions of authors such as Neal Stephenson, Philip K Dick, and Ursula Le Guin, finding that some of the more utopian ideas are deliverable, or almost deliverable, with current technologies, particularly those of open, distance and e-learning.

Whereas most explorations of education futures start from the resources and demands of today and extrapolate forwards, we look back on some of science fiction's earlier visions of pedagogic futures from the perspective of a present where personalised virtual learning environments and game-based immersive classrooms (consider the innovative pedagogic employment of immersive worlds such as *Second Life*, *Sims Online* and *America's Army*) co-exist with 'chalk and talk'. We speak from a point in time where current and future students evolving from the 'game-playing generation' come into education equipped with existing virtual identities, networks, and familiarity with online narrative forms not evident in previous generations. We also inhabit an educational landscape in which rapidly burgeoning student numbers create a demand for a radical re-allocation of global educational resources, and where a growing gap between the workplaces of yesterday and tomorrow results in signs of a shift towards collaborative learning and apprenticeship based mentoring schemes.

From the Dystopian science-fiction anticipations of Asimov's passive assimilation via the imprinting of knowledge and skills directly into the brain in his 1957 short story *Profession*, to Neal Stephenson's more Utopian vision of a fully networked book of knowledge, linked to a human tutor, and programmed to bond with an individual child manifested in *The Young Lady's Illustrated Primer* of his novel *The Diamond Age*, we see evidence of contemporary technologies catching up with the future visions of the past half century.

Companies such as BrainFuse.com lie at the heart of a rapidly growing new sector of the education industry joining students and tutors in conversation through a virtual blackboard, instant messaging and online audio. In 2005, the Korea Advanced Intelligent Robot Association (KAIRA) began to pilot 'live-in-house tutor robots' to teach spoken English, and provide networked information services to pupils in Seoul. In New Zealand, researcher Hossein Sarrafzadeh and his development group from the Institute of Information and Mathematical Sciences are working on a networked educational system interfaced via 'Eve', an animated avatar who can communicate with the pupil through a range of questions, answers and discussions. What makes 'Eve' different from standard avatar tutors however, is her ability to show emotion in response to her student's own physiological reactions, assimilated via webcams and the use of a bio-feedback mouse measuring heart rate and skin resistance.

Stephenson's *primer*, Bruce Sterling's cybernetic education system with a holographic interface in *Twenty Evocations* (1984) – the science fiction pedagogic futures of the past are all but with us. We will explore the implications of this for the educators and the learners of the future, networked into the infinite resources of the web, and linked to real life communities of practice. The geography of such an educational terrain is a mobile one, no longer clearly demarcated by the boundaries of institutional walls, disciplinary or national boundaries. This paper will consider the impacts of this on the ways we conceptualize, institutionalize, market, deliver and consume education in the 21st century, and will explore the implications for a political economy of education as a trans-national technological industry as yesterday's science-fiction rapidly becomes today's reality.

DEVELOPING A CULTURE FOR CHANGE: MEDIDA-PRIX 2008 IN THE CONTEXT OF THE OPEN EDUCATIONAL RESOURCES MOVEMENT

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Open Educational Resources – Setting the Scene

With the shift to the digital, remarkable opportunities for new forms of learning have emerged. High quality learning materials, until recently safely locked up behind passwords and regarded as the "crown jewels" for educational institutions are shared and can be accessed for free. Since the launch of the MIT OpenCourseWare Project, the Open Educational Resources (OER) movement has continuously gained significance. In 2007 several reports were published which investigated the impact, addressed the drivers and barriers as well as revealed potential implications for the OER movement. Awareness raising activities are given within almost all single OER initiatives, not to mention the significant PR effects the launches of the first open courseware projects had for the single organisations on the one hand and for the dissemination of the OER idea on the other hand.

Several initiatives also especially focus on the issue of building awareness for the OER idea and its goals by giving support to initiatives to spread the idea, by teaching educators, by launching websites addressing the topic or by stimulating dialogue between commercial and non commercial stakeholders. The UNESCO Forum on the impact of OpenCourseWare for Higher Education or the newly launched Cape Town Open Education Declaration (http://www.capetowndeclaration.org/) for example focus on building networks and fostering the movement. Broadening conversation was also indentified as one major step towards promoting open education at the 2007 iSummit. Community building efforts therefore have to be undertaken in order to address students, teachers, professors, self-learners, policy makers at organisational, national and international levels.

MEDIDA-PRIX

The MEDIDA-PRIX 2008 ("Mediendidaktischer Hochschulpreis") is an initiative that intends to function as a change agent for this complex transformation process. Beginning in the year 2000, the Society for Media in Science (GMW) annually announces a highly endowed contest with an award sum of Euro 100'000. Participation is limited to Germany, Austria and Switzerland. The award sum is funded by ministries of the countries mentioned and is earmarked for continuing project development.

Initiatives that function as triggers and are examples for sustainable development in higher education are honoured. The goal is to support didactically driven activities and to make known to the community outstanding contributions of embedding digital media in academic teaching. In contrast to other competitions, the MEDIA-PRIX is not primarily focused on technology or design, but instead addresses the didactic innovations of contributions. The contest fosters the dissemination of knowledge and approaches among academic institutions in German speaking countries. In the latest call for bids in 2008, the MEDIDA-PRIX will continue its role as a change agent by an intensified promotion of OER-initiatives.

Though very important, not only the provision of information and good practice about production models, business models, models for quality assurance, or on dealing with intellectual property rights and quality assurance are essential in this context. As the discussion moves further in painting a picture of OER which not only focuses on the resources or contents, a broader view in considering the educational contexts emerges. Adaptability and reuse are the key essentials in making use of the huge potential ascribed to the OER movement as an enabler of the transformation and improvement of education into the direction of enhanced, collaborative and user centred approaches to learning. Besides the humanistic goal of regarding knowledge as a common good, OER are therefore regarded to essentially contribute to didactic innovation in academia.

As a result, the MEDIDA-PRIX will solidify a sustained utilization of digital media in academia and will sensitize the community to the idea of the OER movement. Since 2000 more than 1100 projects participated in the contest for the MEDIDA-PRIX. Starting 2008 with new criteria relating to OER, the award should function as an additional mediator for cultural change in the higher educational systems of Austria, Germany and Switzerland.

A CASE STUDY OF IMPLEMENTING A COST EFFECTIVENESS ANALYZER FOR WEB-SUPPORTED ACADEMIC INSTRUCTION: AN EXAMPLE FROM LIFE SCIENCE

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During the last decade higher education has realized internet technology's great promise for instruction and learning. Web-based learning environments have been rapidly integrated into educational processes, in various forms, from websites supporting face-to-face courses to fully online courses. However, alongside the benefits associated with this process, essential questions regarding the learning quality and cost effectiveness of online courses have emerged.

In light of these issues, we developed and validated a comprehensive model. The model consists of a cost effectiveness framework that defines the cost and benefit components of Web-supported instruction in six dimensions, and a computational analyzer that translates these components into four different quantitative values. The paper first describes the cost effectiveness model and its computational analyzer. Subsequently presents one case study exemplifying analysis with the model. The findings were described, referring to students, instructors and policymakers, in terms of four different "coins": *efficiency*, *quality*, *affective*, and *knowledge management*, along with instructors' reflections. This case study is part of the validation process of the model.

In this paper we offer one case study analysis to illustrate the model and discuss its potential in a course level and campus wide level. This case study was conducted during an introductory B.Sc course in the Life Science department, taught during one semester in the academic year 2006-7 at the University (N=434 students). The course website was characterized by the Web-log files as a rich learning environment containing varied contents related to the learning issues (such as lecturer presentations, video recorded lessons, self assessment questionnaires accompanied by immediate feedback) and interpersonal interaction forums.

The case study was conducted in four phases: first, the cost effectiveness analyzer was implemented in the introductory course. The computational mechanism processed the data and produced the course output files regarding cost and benefit for a period of one semester in relation to main actors involved; second, a comparison group was chosen in order to enable the instructor to evaluate his results relatively to others. The comparison group was determined by three variables: department, academic degree and mode of teaching (lecture); Third, the analyzer was implemented in the comparison group (N=77) and assessment scales were created on the basis of descriptive statistics. The aim was to demonstrate, both graphically and numerically, the evaluation of each cost benefit component in relation to the comparison group; fourth, an interview was conducted with the instructor. He received the finding of his course, together with the assessment scale of its comparison group. The instructor was asked to evaluate his agreement with the results. The results were thus examined and validated.

The instructor got maximum coins in increasing efficiency and in knowledge management; the students got maximum coins in improving instruction quality and affective aspects; and the University received maximum "affective (prestige) coins". However, these values of coins can remain meaningless unless they are evaluated relative to a comparison group.

When considered in relation to the comparison group this course website was found very beneficial for students. Maximum coin values were found in three dimensions: improving instruction and learning quality, improving affective aspects, and facilitating knowledge management. The students' concrete financial cost was minor but compared to the comparison group the costs were high. This course website was found very beneficial for the instructor too. The received values were much higher than those of the comparison group. In four dimensions maximum values were received compared to the comparison group. The instructor cost included course development and instruction cost such as interaction time with students and assessment. The University had a very high affective benefit like prestige, since this type of course was being offered at the University. The University also saved on print costs, since the students accessed the contents on the website. The University did not have extra instruction costs and did not save time directly. Technological and operational infrastructure costs were included. Server-related cost and communication cost have been taken into account since the University invests in infrastructure and extra servers were needed. However these servers were used for over 4000 courses, so that the marginal cost for this course is low at the institutional level. Yet, this cost was found to be twice high than the average cost in the comparison group.

EXAMINING THE EFFECTIVENESS OF DISTANCE EDUCATION: RESULTS FROM MULTI-LEVEL MODELLING

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Introduction

As a result of the meteoric rise of information technology as a means of offering educational opportunities through distance education (DE), there has been considerable growth in research efforts to determine its effectiveness. In the last ten years, a number of reviews and meta-analyses have appeared in an attempt to ascertain whether or not students in DE can learn as effectively as those in classroom settings (CL). These include studies by Russell (1999), Bernad et al. (2004), Ungerleider & Burns (2003), Cavanauh et al. (2004), and Cavanaugh (2001).

The consistent finding is that of no significant difference (NSD): Students in DE achieve at levels comparable to those in CL. Overall, the effect sizes tend to be small, and on average there is no substantial difference. However, what cannot be ignored is the considerable variation in effect sizes reported in the meta-analyses. Bernard et al. (2004) reported effect sizes ranging from -1.25 to 1.25. Sometimes students in DE outperformed those in CL; sometimes students in CL outperformed those in DE; and sometimes there was no difference.

Our purpose in this study was to probe the NSD hypothesis further by examining the effectiveness of DE in a university setting. DE has acquired a considerable history at the University and a large amount of achievement data is available. In this study, we compared DE to CL in many courses, with many different instructors over several years of implementation. In effect, our design mimicked eight meta-analyses of approximately 250 two-group, post-test only quasi-experiments. Given the diverse nature of instructors, courses, pedagogies, and students, a finding of no difference with minimal variation would be an important indication of the robustness of the NSD hypothesis.

Method

Data for this study came from university records for the years 1999 to 2006. Only undergraduate records were examined, and we selected only those courses taught by DE and CL in the same semester by the same instructor. The resultant data set comprised 39,689 course registrations, 61 different instructors teaching 47 different courses. Data for each year (1999-2006) were analyzed separately as a set of multi-level models using MPlus version 5.0 (Muthén & Muthén, 2006).

Results

Although data for each year were analyzed separately, there was remarkable consistency across years. The results supported findings from previous research. On average, students in DE achieve grades comparable to those in CL (no significant difference). However, there was considerable variation in the size of the differences. For any given course, there may be a sizeable difference in students' grades.

In addition to grades, multi-level modelling was used to examine the probability of not finishing the course. Unlike the findings for achievement, there was decided DE-CL effect. Students in DE were more likely to not finish a course than those in CL, and there was little variability across courses (instructors). Overall, attrition rates were higher in DE, consistently so, and this finding was replicated across all eight years of data.

Conclusion

This study was a rigorous scrutiny of the NSD hypothesis. The effectiveness of DE relative to CL was examined across a wide range of subjects, instructors and students over a period of eight years. Consistent with previous research, overall students' grades in DE compared favourably with CL. However, there was considerable variability within courses. DE is not always comparable to CL, and visa versa. Students in DE are much more likely to not finish the course than those in CL, and the size of this effect is consistent. Consequently, these results suggest the research question is not whether DE is as effective as CL, but under what conditions is it as effective?

LABS-ON-THE-WEB – A MULTIDISCIPLINARY PROJECT TO EVALUATE THE PEDAGOGICAL EFFECTIVENESS OF ON-LINE LABS

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On-line labs and the Labs-on-the-web project

An *on-line lab* may offer remote, virtual or mixed-reality experiments in various areas of science and engineering. *Remote labs* offer web access to a workbench hosting the experiment at the campus lab, while *virtual labs* provide a simulation framework that may be hosted in the e-learning server itself, or downloadable to the client's computer. *Mixed-reality labs* offer a combination of simulation models and physical devices / equipment. The *Labs-on-the-web* project (November 1st 2006 – June 30th 2008) addresses the first type and was prepared in response to a call for proposals aiming to improve pedagogical success in higher-education degrees. The project rationale was that web access to lab workbenches will facilitate experiments and other practical assignments proposed to engineering students, enabling them to better understand and consolidate the underlying theoretical knowledge.

Teacher training and evaluation of pedagogic effectiveness

The project workplan recognised the need to offer to the teachers a sound background on pedagogical and technical aspects of on-line labs. An accompanying training programme was therefore developed, including three training actions, each comprising 5x2h sessions: *Pedagogical principles*, *E-learning via Moodle*, and *On-line labs*. Teacher training took place between February 21st and June 27th 2007, involving a total of 103 teachers. To evaluate pedagogic effectiveness, the students were asked to fill a questionnaire at the end of the semester. The grading scale comprised 7 levels and the items that were presented addressed various aspects dealing with learning in remote contexts, organised in accordance with the following 4 dimensions: **i)** *Knowledge and skills* (e.g. acquisition of new knowledge; development of Information and Communication Technologies skills; possible development of new alternatives / solutions); **ii)** *Learning process* (e.g. understanding the theoretical concepts underlying the remote experiments and the cause / consequence relationship that explains a given result); **iii)** *Peer cooperation* (assessing the importance, the existence and the possibility of collaborative interaction among students); and **iv)** *Teacher interaction* (which includes items related to the importance of collaborative work between students and teacher and to the availability of the latter).

Conclusions / future research directions

The student responses to the questionnaires were moderately positive with respect to all our evaluation dimensions and support the conclusion that they recognize the pedagogic benefits of remote labs. On the other hand, we also concluded that comprehension of the learning process is an important dimension in what concerns remote experiments, which is in itself worth to consider as a pedagogical research direction. It is important to stress that benefits regarding the learning process were the most valued. The results have shown that our evaluation dimensions are significantly correlated. Of particular significance is the very strong association between building knowledge and skills, and the comprehension of the learning process, suggesting that the students who think that remote labs promoted their knowledge and skills, also consider that there are positive effects on understanding the theoretical assumptions; and the fact that collaborative work (between students and between students and teacher) is related both to knowledge and skills, and to learning processes. The project has shown that there is still room for improvement concerning development and usage of remote labs to support practical assignments – seamless integration into e-learning platforms, scripting support for teachers, formative assessment features and accessibility are the areas where the need for further work is recognised. Accessibility in particular remains largely unsolved, even in the case of mainstream solutions that are frequently employed within a wide application spectrum. Embedded formative assessment features is an important research direction with this respect, since the experiment and equipment interface panels may gather data about student skills and make it available both to the students and to their teachers.

ECONOMIC ANALYSIS OF BLENDED LEARNING FROM THE STUDENTS' POINT OF VIEW

Zoltan Varga, Antonia Szasz, Dennis Gabor Applied University, Hungary

Introduction

Currently, the economic efficiency of e-learning, especially from the students' point of view lies on the periphery of scientific debates. However, behind the reasons of institutional developments the prospect to offer a less expensive but equivalent degree to potential students can be found, which could seriously increase the institutional competitiveness even in the short run. Also, IT-based educational programs induce serious methodological, institutional and pedagogical challenges, which are only tangentially discussed in this study. The measuring of economic efficiency is based on a financial model, which takes the relevant cost and cost-saving element into account regarding the whole studying period with a correct financial logic. The results will be demonstrated by the comparison of a blended distance course with a conventional distance and a regular course of Dennis Gabor Applied University.

Material and methods

Learning, or more precisely obtaining a degree can be defined as an investment. At the evaluation of these investments general financial rules are valid. To measure the economic efficiency of education programs the decision rule of the Net Present Value (NPV) can be applied. This is the summation of initial expenditures and the present value of future cashflows. In this article the authors measure the economic efficiency of blended courses from the students' point of view by the comparison of education programs. The economic characteristics of distance blended programs are compared first with conventional regulars, second with conventional distance programs.

Results

The economic analysis beyond the emphasis of blended distance programs' economic efficiency besides the students' advantages, indicate the competitiveness of the University as well. Certainly there are lots of preconditions to introduce IT-based educational programs such as the following factors: pioneer activities of Dennis Gabor Applied University in the field of open courses, rapid reaction of the management to the international trends and local requirements (technological innovation, first introduction and continuous development of ILIAS in Hungary, development of on-line teaching materials). The efficiency of blended-learning courses is accomplished by institutional coordination, new methodology, trained mentors and tutors, and supported by regular survey and qualitative examinations, also by tracking and evaluating feedback-answer processes.

After summarizing the different cashflows derived from the comparison of conventional regular and blended distance courses, the present value of savings is approximately 10000 €. If the blended distance course is compared with a conventional one, the present value of the savings reaches approx. 2350 €. It is important to emphasize that this extremely significant economic advantage means the redistribution of the time demand of learning. The reduction of contact lectures causes the radical growth of time required for individualized learning. On the other hand a successful methodical change is necessary on the side of the university. As a summary of the results of the economic efficiency, the following statements can be made:

- Increase of competitiveness of the University
- Through cheaper, blended-learning courses more people have a chance to take part in (higher) education
- Blended distance courses present equal chances for the rural population, disabled people, young mothers and people with a family or a job.

PRINT MATERIALS INSTRUCTIONAL DESIGN AS A RESPONSE FOR SOCIOTECHNICAL CONSTRAINTS IN A TECHNOLOGICAL DISTANCE EDUCATION SYSTEM

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A programme for initial and continued education for workers arose as a demand of Rio de Janeiro State Science and Technology Secretary, aiming to enhance employment of youngsters and adults, according to local and regional demands. Free short-term courses (260 hours), delivered via distance education, addressed different areas, mainly related to trade work occupations. A 50-hour reception module anticipated all content specific ones, simultaneously focusing on improvement of reading skills and introductory computer use techniques. A final 30-hour module was concerned with enterprising strategies and attitudes. All courses had an intense workload of practical activities, meant to be tutor assisted, in a face-to-face, weekly basis. Theoretical content was delivered via print material.

The directionality of learning materials benefited from preliminary discussions with this group of professors and was defined after the following aspects were considered: (1) The need to design print materials both to deliver theoretical knowledge and as a support for high practical workloads sometimes involving the use of complex equipments; (2) Low autonomy of students coming from a traditional system highly focused on the presence of a teacher/tutor guiding practical activities; (3) Low performance of students in basic areas such as Language (Portuguese) and Math, apart from the need of specific knowledge on Chemistry and Physics, not assured by their educational background; (4) Students' low self steam and the need for motivation strategies; (5) Poor skills referring to information technologies; (6) The need for social and digital inclusion as a bottom line.

In order to attend students' needs, a number of solutions were implemented when conceiving the instructional design of the print material used, regarding aspects such as language, in-text activities, step-by-step procedures, images and reading abilities. A questionnaire was elaborated in order to investigate students' opinion concerning the impact of course materials in their learning. Interviews were made by phone and comprehended a total number of 240 students, a 20% random sample of the total group. Although different courses prompted different uses of instructional resources, students were not case sensitive, regarding the different courses and results refer to their general impression. Nevertheless, this was not taken as a lack of criticism. When drop out students were interviewed, they would be very critical and very specific concerning the reasons leading to course abandonment. Most of the reasons had nothing to do with course structure and revealed problems related to income, dislocation, time schedule, new job, among others. Aspects as course disorganization and poor tutorial quality were clearly addressed, revealing their ability, as learners, to perceive and criticize non-satisfying contexts. Results suggest a great deal of students' satisfaction with the learning experience they had.

A GAME OF LEARNING: A B-ACTIVITY

Paula Peres, ISCAP – Polytechnic Institute of Porto, Portugal

Almost every teacher has already used in their classrooms the workgroup activities. It is based on the theory that interaction among students can improve the learning process. In this article we describe an online collaborative game which uses an inside and outside collaboration in order to promote the motivation and effective learning. Two classes, from the first year course, participated on this online activity. The subject was lectured at ISCAP in a traditional classroom complemented with a distance development collaborative work. ISCAP created a Project of On-line Support which provides pedagogical and technical support to all teachers and students of the institution that intend to use the Internet as support to the traditional in-class teaching practices. This project intends to prompt teachers to adopt new learning models based on knowledge construction processes, on personal experiences acquired in different contexts continuously. Pedagogical strategies, that use technologies appropriately, in higher education, can promote active learning, centered on students and thus valuing their personal experiences and participation. The pedagogical innovation and temporal flexibility of the support provided to, both, individual and collaborative study constitutes one of the main aims of the project, in order to improve the quality of the educational offer. In the activities design process we tried to align all tasks with learning objectives and evaluation method. In this subject matter, students would be able to use the Microsoft Access and would be evaluated by building an Access application project. Thus, in the activity described in this article, we tried to prepare students for this kind of evaluation and to reach same soft skills, namely "learn how to learn" and "To search and analyse the internet data". With this activity we tried to build a Microsoft Access exercise in a collaborative way. The activity started with an instructor's question on a basic database given. Only one student could answer. The first who did it would include a new question. The instructor checked the answer and if it was correct, he would allow the activity progress. If not he would allow the other student to answer the question. The student who answered the first question correctly would send to the discussion forum, the original Microsoft access file, added with his or her resolution. After that, anyone could answer the question made by the colleague. If one question did not have any answer during a period of 24 hours, it would be assumed that no one knew the answer. Thus, the student who made the question should give the correct answer. If the solution was correct, the student would win the game, but if not the student would be excluded. Without a body communication and a visual contact, in a written online discussion, students can feel isolated and concerned about what the others think. People can receive the same communication and reach different conclusions about the meaning, caused by different backgrounds. It is important to keep a continuous follow-up and analyse all the reactions along the entire process. It is helpful to build standard answers in order to reduce the time spent on interaction follow-up. Instructors should be aware that there are same students who need more time to participate. Students who show difficulties in writing clearly or easily could demonstrate bigger problems to participate actively. All participants must develop the respect regarding differences. If the instructor or the students were not acquainted with the forum discussion mechanism they would need to spend more time resolving technical problems and consequently, staying off the discussion matter. Thus, it is important that everyone has technical orientation necessary to the online participation. Games can operate as a means of motivation and consequently of learning. The activity described was efficient to promote students engagement who were aware about their knowledge on matter and could compare it with the rest of the class. The activities helped the formative evaluation and at the same time the self-evaluation. Beyond foreseeable objectives we reached others namely general culture about Portuguese monuments. It would be useful if the Moodle forum could be setup to allow only one answer to the last post made and at the same time if it turned to be a better interface for the reading process. The checkpoints and constantly follow-up done by the instructor help students to be aware of what they are learning with the activity and understand the importance of the process. Technical problems that may appear in this kind of activities are very important, it stimulates students to find out the solutions and, thus their preparation to face future real work environment. Considering a b-activity as a blended activity, that is a semi-online process which includes face-to-face and online tasks, it is important, more and more to define and share the good practices which could help the integration process of technologies in the teaching-learning process. In a collaborative learning, learners assume a critical role in their own learning and in the learning of their peers. In online discussions students do not only learn with the instructor, who provides the resources and gives feedback during the process, but also with others' comments and feedbacks. A well designed e-learning environment discussion can stimulate an active, interactive and participated learning. The participation in a public forum discussion multiplies the perspectives on subject and encourages students to analyze and appreciate different ways of thinking. In a collaborative environment students can work and learn together to reach a specific goal. In this way students can develop social and communication skills, higher thinking, leadership, negotiation, interpersonal qualities and collaboration with different perspectives.

INQUIRY IN DISTRIBUTED LEARNING ENVIRONMENTS

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Authentic inquiry-based problem solving is a complex collaborative process of searching for solutions to ill structured and open-ended problems by applying (scientific) research methods. Apart from factual knowledge and procedural skills a set of disposition needs to be acquired to perform scientific inquiry in many life and work settings. Ambiguity, inconsistencies and a lack of transparency regularly force individuals and groups to act under uncertainty and to engage in elaborating inquiry processes. As inquiry-based problem solving promotes a multi-faceted process with a focus on formulating questions and finding appropriate solutions, it seems likely that it could benefit from being mediated by technological tools that can assist the gradual transformation of data and information into applicable knowledge. In the literature a variety of software applications for supporting inquiry are reported. These applications have been developed for particular contexts and domains to support and guide the inquiry process. Thus, they only allow for the performance of a particular, pre-defined set of activity patterns within closed and rather static systems that are entirely controlled by software designers and instructors who administer them. Participants have to act within these systems under the constraints and limitations dictated by the application. They do not really get a chance to make choices and to go beyond the in-built barriers. Being accessible only participants of a particular course or organisational setting, the possibility to engage and interact with the outside, networked world is rather limited. While software with built-in support functionalities may facilitate the acquisition of procedural skills and mental strategies of inquiry in a particular domain, it does not seem to facilitate the acquisition of dispositions that are needed to cope with challenges outside of this realm.

A versatile and expanding landscape of open-source and open-access tools and services is emerging that can be employed to facilitate the process of active knowledge construction and inquiry. The terms of social software or social media are often used to refer to this class of tools and services, which support authoring, publishing, aggregating, monitoring, manipulating, and sharing of all kinds of digital artefacts on the Web. In combination they can provide quite powerful means for managing, re-purposing and remixing information. Thus they can also support various regulation, coordination and operation processes. In their increasingly networked work- and life contexts people need to get prepared for selecting and combining appropriate software tools and services for supporting and mediating collaborative problem exploration and the negotiation and establishment of shared procedures and meanings. Thus, we suggest that in higher education we need to go beyond this single application approach in general, and in the area of progressive inquiry in particular. Furthermore, we suggest to construct opportunities for students and facilitators to acquire some expertise regarding the selection and meaningful combination of a diverse set of networked software tools and services.

In this context we present the notion of distributed learning environments that are mediated by technological landscapes composed of loosely coupled, mainly web-based social media services that permit distributed information or content flows and basic interoperability between the chosen tools and services. According to their needs, individuals and groups can bring together a variety of such tools and services to mediate their activities. However, the mere combination of these technological instruments does not form a learning environment. In addition to the technological infrastructure, a learning environment also incorporates all accessible material and human resources that are accessible to participating actors. The success of the distributed learning environments for both individuals and groups is dependent on communication and data linkages that allow a useful, open and timely flow of information. These environments are not static in terms of structure. They are continuously adapted to the developing understandings and expectations among the participating actors. Inquiry, being a continuously changing process, in which the locus of initiative changes from moment to moment, requires the participants to adapt to emerging situations of distributed control. Current social software and social media offer a new level of openness, flexibility, and customization possibilities allowing participants to modify them according to their evolving needs and preferences. This is largely due to the loosely-coupled nature of these networked applications. The freedom to select and combine appropriate tools for supporting and mediating activities, requires participants not only to deal with the content or the problem but also the enabling technological infrastructure. This paper and presentation demonstrates an example scenario of how inquiry can be supported with distributed learning environments mediated by loosely-coupled social software tools and services. Furthermore, we argue that distributed learning environments of that kind can be used to construct educational challenges that support the acquisition and advancement of dispositions that are necessary to successfully carry out inquiry outside formal educational settings.

WELL-DESIGNED E-LEARNING COURSES CAN MAKE TACIT KNOWLEDGE VISIBLE, VALUABLE, COMMUNICATIONAL AND INDUCE REFLEXIVE CAPACITY A STUDY AMONG "UNTRADITIONAL STUDENTS"

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The network organization SNH (www.snh.se) – Cooperation for Academic Net-based Learning – is a forum for cooperation among four universities and UR, the Swedish Educational Broadcasting Company. A concrete illustration of working together with programmes, learning objects and courses can be seen in this partnership that includes UR, the universities but also the Swedish Municipal Workers' Union and the Swedish Association of Local Authorities and Regions. The target group was employees working in care of the elderly and who had no previous experience of higher education. They were offered skill development and improvement of their qualifications at university level in their occupational capacities, without having to become registered nurses, which was previously their only option.

In addition to the traditional course syllabus, the courses included radio and TV programmes produced by UR, along with lectures. The programmes were broadcasted nationally when the courses were run for the first time. Learning objects were developed and included in the course Learning Management Systems (LMS). After the scheduled broadcasts, the radio and TV programmes were stored and made accessible on line to those who have UR access. The radio and TV programmes together with a website played an important role in stimulating the students´ urge to learn, as well as encouraging them to become involved in net-based group discussions.

After completing the first two net-based courses; "The Healthy Aging" and "When the Health of the Elderly Fails," the SNH network requested a course dealing with themes related to threats and violence in elderly care.

The content in the course "Exposure to Threats, Violence and Abuse in Elderly Care" was based on nursing research. The prevalence of violence in the health care sector is between 9 and 16 percent on a daily basis. Research has mainly focused on violence toward elderly persons or violence toward personnel working in elderly care. Very little focus has been on the dynamic process of violence, where perpetrators and victims can, depending on the circumstances, change places.

The aim of this qualitative study was to investigate the possibility of inducing a reflexive process in an e-learning context, and to study the students' reflections on their own role in a violent situation, when caring for elderly persons. It was based on the assumption that it is possible to gain a deeper understanding of human life and learning, by interviewing students or by analysing their statements of written products. We talked to and read all the students' (n=18) written assignments. We analysed their assignments using latent content analysis.

The students' learned to make their tacit knowledge visible as they communicated it to others. Reading the literature, listening to the radio programmes, doing the assignments, getting support both from the lectures as well as the co-students, seemed to build the foundation for an induced or increased reflexive process. The students said, that they had gained valuable knowledge and that the e-learning mode made it even easier for them to reflect. In one assignment the students were presented with a given caring situation where violence occurred both from the sides of the caregiver and the client. They were asked to think about, select and analyse a similar situation from their own workplace experiences. The students were able to identify their own roles in the violence spiral in the process of describing it in writing. The students were no longer able to have a picture of themselves only as "victims of client violence". Their experiences became visible and communicational. They became aware that they were also, to some extent, "perpetrators of violence toward the clients". Four themes were seen, two of them were: "Becoming aware of my own role as a care provider in a spiral of violence", "Having difficulties identifying one's caring self as a perpetrator". By dealing with one's own work experience in the frame of a well-designed e-learning course that supports communication of tacit knowledge visible, involving an opportunity to increase the degree of empathy, it is possible to induce a reflexive process that make the students more sensitive in their interactions with the elderly benefit the care takers.

A CASE FOR THE UNIVERSITY PRESS?

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Many Higher Education Institutions (in the UK at least) have spent significant sums of money on their learning platforms (their VLEs) but the production of high quality, fit for purpose academic content – to support distance and on-line learning, and even the overall on-campus learning experience – has generally been seen as of secondary importance. This paper argues that there are distinct advantages, if not requirements, to taking a strategic approach to the production of good academic content and learning materials, but that this production must take place within an institutional approach to knowledge management.

The value proposition of content with respect to learning platforms is generally that of ease of distribution and access, i.e. simply productivity gains. While this is one benefit, the real value should be in fundamentally changing the nature of instruction or learning. This brings real benefit to students but it also allows designers and educationalists alike to be able to rigorously test the adopted instructional designs, to conduct meaningful evaluations of student performance, to address thorny issues such as student retention, and to embrace and support the cross-cultural diversity of the student bases that we now see on our campuses. These are essential issues to address as they are a natural aspect of on-line and distance programmes.

The case study in this paper discusses the need for, and the advantages of, an organizational focus on streamlining publishing processes to facilitate the creation and delivery of new educational products for on-line distance learning, though the principles are highly relevant for improving quality in all areas of learning and teaching support.

When the advantages that can be derived from a well-designed and produced DL programme are seen in their full light, it is natural to ask, "If there are such obvious advantages, why don't we do that for all our students?" The disciplined approach required for the development of DL programmes is equally valuable for all learning modes, and institutions that recognise this are able to improve the quality of all their programmes and save money at the same time.

Most Higher Education Institutions treat each new distance and on-line project afresh. That is the nature of universities. Developing an institutional-wide knowledge management strategy, and subsequently building a common standards-based publishing platform allows a university to quickly produce new products in much less time and to re-use work from previous projects.

Today, the focus must be on Institutional Knowledge Management – and standards-based work flows – not on the transient technologies of the VLE. Many Higher Education Institutions still seem to be content to fall into the 'VLE Trap'.

ENHANCING INFORMAL LEARNING THROUGH VIDEOCONFERENCING AND KNOWLEDGE MAPS

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The development of new technologies and the open content movement have been opening up new opportunities for online informal learning, but the simple access to information does not necessarily result in acquisition of knowledge and development of skills (Rogers, 1995; Nonaka & Takeuchi, 1995; Salwen & Sacks, 1997). In order to learn effectively, students need to be engaged in higher order thinking which operates beyond mere exposure to factual or theoretical information (Jonassen, Beissner and Yacci, 1993). In recent years several researches raised important issues around the uses of technology to support informal, non-formal or self-directed learning. However, most work on development and evaluation of online tools has been done in higher education, mainly in formal education contexts and there is still not enough evidence for how to use effectively the technology outside this context (Thorpe,1999). How could technology be used to facilitate online informal learning?

This initial work presents the uses of knowledge maps and web videoconferencing to enhance informal learning. We analyse the role of such maps created in Compendium and web videoconferencing through FlashMeeting for learning communities.

CoLearn – "*Mapeando conhecimentos com aprendizagem aberta*" is a Community of OpenLearn users from Portuguese-Speaking Countries (*http:colearn.open.ac.uk)*. Most of its participants are from Brazil and Portugal whose interests focus on exploring knowledge media tools to facilitate collaborative informal learning. Based in several universities located in different countries, they use FlashMeeting to meet online, learn together and create new educational resources. They use Compendium to map learning material, share references, add new information from the web and include their own comments. Some of their Compendium maps show web videoconferences and their reflections about what they are studying.

The period of data collection in this study took place from July 2007 to December 2007. During six months this open learning community with 123 members and 65 active participants published 44 maps in Compendium and 10 web conferences in FlashMeeting.

Knowledge Maps and Web videoconference mark a profound shift in our relationship to develop new strategies for learning, constructing and sharing knowledge. We move from simply following information, instructions and laws to discussing them, making sense of them, reconstructing and sharing meanings collectively. Through these free tools learners and educators can develop an environment for active learning and self-organising communities.

Our future research focuses on how students and educators can use these tools to foster social learning networks and contribute to the open learning resources movement by developing their own learning materials and new pedagogical strategies.

A FUTURE LEARNING SPACE: THE CLASSROOM?

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The nature of learning in Swedish schools is today questioned for many reasons. One reason is connected with the use of computers and the idea that children's learning rather takes place out of the classroom than inside. Children use the ICT tools frequently when playing, communicating and they acquire new competencies which may not be supported or guided by their teachers. For many years now computers have been a part of the tools in Swedish schools, but teachers in the school system are still struggling to make good pedagogical use of ICT. They often lack proper competence and the physical spaces are rarely adequately designed to stimulate learning. To introduce adequate ways of teaching and learning with ICT tools is a challenge for teacher education. At Lärum/Stockholm University we have designed a Classroom of the Future, a physical and virtual learning and teaching environment.

The Learning Resource Centre and its mission

At Stockholm Institute of Education (2008 merged with Stockholm University) a Learning Resource Centre (LRC) was established in 2002 as means to introduce and support the use of ICT in education and research. The goal was to provide tools and spaces for learning and teaching and thus develop the competences of future teachers. One of our spaces is a special physical training environment set up for dynamic and flexible school-work called "the Classroom of the Future". All our environments are supported technically as well as pedagogically.

The key ideas when creating our learning spaces are an understanding of learning as: situated; a social practice; of the learner as actively involved in using tools/ICT; and of the learner as a part of collective. The environment which developed into the Classroom of the Future emanated originally from an ambition at the LRC to start working with business partners to stimulate technological and other kind of development. There were major difficulties to agree on the idea within the teacher education community and execute decisions on several levels. Furthermore there were inconsistencies in what the businesses could provide or not. The lesson learned was above all how to find ways of balancing the key ideas of the organization, the LRC, with sometimes very definite market concepts. Finally and most importantly the physical and pedagogical environment concept which Microsoft originally had launched could not be accommodated by the teacher education institution. As by that point negotiations broke down a failure seamed inevitable, but since so much effort was put into this cooperative idea the remaining partners stayed on and delivered.

The outcome provided an ideal starting point for pedagogical work. Today the classroom is developed and together with our other locations it constitutes a flexible meeting point for schools, higher education and companies as well as teacher educators, teachers in the field, students and researchers. This meeting point enables the use of the most modern information and communication technology. The Future classroom is a meeting place for all those using ICT in their professional role. It is a creative meeting place in continuous development where focus is on learning rather than teaching.

The Classroom of the Future as a resource in teacher education

This flexible working environment makes it possible to meet different needs. The furnishing of the room and how the activities are organized in time and place reflects the view of knowledge of the teachers who use it. In a flexible classroom it is easy to gather students together or let them work in smaller or larger groups or to find a calm place for themselves. All material and all the tools are easily accessible whenever needed. In the Classroom of the Future you can try new things in the fields of ICT and movement, games and learning, animation, video recording, digital tools for all media, software for school subjects and laboratory experiments. We also arrange several workshops to increase the ICT competence among the students and staff in different pedagogical methods like Digital portfolio, Digital storytelling, Storyline etc. The classroom has been booked 70% of the time available this term, mostly by distance and campus courses but also by external visitors. The distance courses have among other things used the room to learn how to use our LMS and videoconferencing systems. Many campus courses have wanted to integrate more ICT in their study plan. The room has also been an inspiration for several students when writing their dissertations of the effects of interactive blackboards in learning processes.

"SYNCHRONOUS" IN SCIENCE EDUCATION – THE NEED, THE OPPORTUNITY AND THE PRACTICE

Vitor Cardoso, Jorge Valadares, Universidade Aberta, Portugal

The problem

Asynchronous methods have been dominating the Distance Learning (DL) panorama for many years and even now, despite the widespread of more interactive technologies and the need for better and more interactive tools, asynchronous interaction, mostly via forum/message boards and Web content, is frequently the "solo" formula adopted in eLearning courses and *content* quality is still the big issue.

The need

Far from being a perfect form of communication, the "all asynchronous" practice is often a consequence of inadequate synchronous solutions and a poor integration in the course goals; therefore new approaches for asynchronous/ synchronous integration are needed.

In science education we have experienced that communicating through forum is too slow, inaccurate and largely insufficient, especially when problem solving and the modern investigative strategies are adopted.

Either in face-to-face teaching or in distance teaching is important to create constructivist learning environments, if our intention is the meaningful learning of the students, and synchronous methods contribute to promote those kind of learning environments.

The opportunity

Benefiting from a new philosophy of asynchronous and synchronous integration, available in the Odisseia Platform, we had the opportunity to adopt a more interactive DL approach including synchronous and multiuser tools (2D and 3D) in the mix strategy of our courses.

The practice: from content to pedagogical communication

We illustrate examples of such integration in our courses using the Odisseia platform that show how, although *content* materials remain important, we are moving the focus more and more from content to *communication* in DL educative practice.

IMPLEMENTING LAPTOPS AS LEARNING TOOLS IN THE TRADITIONAL CLASSROOM: WHO CARES ABOUT THE EMPIRICAL EVIDENCE ANYWAY?

Bruce Sheppard, Tim Seifert, Darron Kelly, Memorial University, Canada

While e-learning has had unquestionable impact on how we learn, work, and live, the extent to which it has resulted in ubiquitous change in the pedagogy of high school classrooms is less certain. In this study, we took an in-depth look at the process of implementation of a 1:1 laptop initiative in advanced placement high school classes in mathematics, physics, chemistry, English, and biology in an urban high school in Canada. Our goal was to assess the extent to which the acquired laptops were used by students and teachers, how the laptops were used, the extent to which they led to pedagogical changes and more student-centered learning strategies, the impact on student achievement, and the extent to which the empirical evidence related to leadership and change influenced the implementation process.

Our methodological approach was mixed-method including case study and quasi-experimental design. The study school introduced laptops in one of two grade 10 classes of 25-30 students who were studying advanced placement courses in five subject areas noted above. One group used "regular" in-class instruction and the other group used laptops on a 1:1 ratio. Students in both groups self-selected an advanced placement program with the option of being either in a laptop class or non-laptop class. Our analysis of grade 9 criterion reference tests in English, mathematics, and science revealed no significant differences between groups (laptop and non-laptop) in students' achievement levels. Data collection included structured and open-ended ethnographic classroom observations; interviews with students, teachers, and school administrators; surveys; and student year-end grades in all subject areas. These observations occurred in three two-week blocks in a total of 59 class sessions, 19 classes in November and 20 classes in each of March and May, that ranged from 36 to 56 minutes.

At the outset of this study, we had anticipated that we would observe a progressive shift toward more student centeredness in the laptop classes as the implementation process progressed. Our analysis of the data from all sources revealed that this was not the case, and that there were few substantive differences between activities in laptop classes and non-laptop classes as both students and teachers struggled with the use of laptops as a learning tool. While the laptop initiative increased students' and teachers' use of technology, student use of the laptop was not always directed at course learning objectives, and students were more frequently off task. As well, we were surprised to observe, contrary to that which we anticipated, a slight tendency toward more student-centeredness in non-laptop classes. As for students' academic performance as reported at the end of the school year, we found no statistical differences between laptop and non-laptop students in either subject area.

Because this study was part of a community-university research alliance project, the researchers' role was to provide feedback to the community partners (school and district personnel) as part of our knowledge mobilization role. In spite of several interim reports by the research team that highlighted the relevant empirical evidence related to implementation, it appears that the school project team paid little attention to the implementation process or the empirical evidence related to leadership and change. It appears that they approached implementation primarily as an event. Individual teachers remained focused on their own responsibilities, and no individual or group was recognized as being responsible for leading the implementation process. The school district was essentially disengaged from the project and there was very little professional development for the project teachers. It appears that while team members remained committed to the laptop project, they were unconvinced that the empirical evidence related to leadership and implementation had any relevance for their circumstances or they perceived it to be too demanding of their time and efforts.

We are hopeful that during the second year of implementation the school team and the school district leaders will embrace the empirical evidence as a means of moving forward. Beyond that, however, we are drawn to question the extent to which the phenomenon of ignoring the empirical evidence related to implementation exists elsewhere. Even though the evidence related to implementation is well established, if practitioners ignore it and researchers avoid it because it is not the latest currency, it will be of little value to those who dream of bringing about pedagogical changes and new learning strategies with the new e-learning tools.

KNOWLEDGE WITHOUT BOUNDARIES

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The Portuguese banking sector and trends in human resource development

The International Monetary Fund says in its 2006 report – Portugal: Financial System, Stability, Assessment Country – "The Portuguese financial services sector (FSS) is solid, well managed, and competitive. Its comparison with other EU countries FSS's shows a good ranking in terms of efficiency, asset quality and solvency".

In Portugal, as in other developed countries, the banking sector is highly competitive. Consequently, organisations and people working for them cannot perform below standard. In line with this, the increase and consolidation of a company's competences and therefore its employees' competences and knowledge are a central management goal.

The banking sector comprises a diverse set of jobs, with specificities that require lifelong learning, both to update professional practices and to develop new competences. We have selected one job, **private banker**, to illustrate this situation.

The everyday job of a private banker requires a wide range of competences, ranging from a deep knowledge of financial domestic and international investments to the ability to communicate effectively with investors and deal with evolving technology.

The training for this job profile requires learning results that include knowledge, skills and professional and personal competences.

In order to meet the training demands of the private banker profile, the Portuguese Bank Training Institute (IFB) has created a blended learning programme involving formal and informal learning.

This programme promotes the acquisition of specialised know-how, the development of tools that are essential to optimised performance, a deep knowledge of fundamental subjects and networking with peers and experts.

In order to fulfil the participants' initial training needs, a diagnosis is first conducted. This diagnosis uses a questionnaire assessing the different requirements of the private banker profile. After the assessment phase, each trainee receives a report within the findings on each of the requirements. In light of these results a personalised training proposal is designed to fill the gaps initially mentioned and satisfy personal learning needs. This stage guarantees that each trainee has the necessary background for a solid training process.

The training offered includes three different, complementary phases. First we have a socialisation phase in which the training objectives are presented and the training group interacts. Then knowledge and skills are developed. Finally we have a follow-up phase to reinforce training and maintain a high standard of up-to-date specialised knowledge.

Parallel to this program, refresher courses are developed for certified professionals to update the knowledge and skills and ensure continued effectiveness of certification. Alternatively, professionals who choose not to enrol in refresher courses may be required to take an exam to revalidate certification, when appropriate.

Conclusion

We believe that, through this training programme based on training that focuses on the development of knowledge, know-how and social and relational skills we are able to offer a solid training process which can help produce highly skilled employees and, strengthen the banking sector's competitiveness.

HR MEETS E-LEARNING: AN ONTOLOGY BASED, ADAPTIVE SELECTION AND RECRUITMENT PROCESS SUPPORT

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Introduction

Human Resource Management (HRM) and Information Technology (IT) supported education and training have never been so close to one another as nowadays. In this paper we show that implementing HRM theory with the help of Knowledge Management (KM) supported eLearning tools is a possible way to exploit synergies of these two different disciplines. The focus is on personnel selection and assessment, which has well elaborated literature in the field of HRM, with only a few practical IT deployment examples (e.g. CommOn). We want to show that it is possible to bridge the different terminologies between these fields and create a powerful tool for tackling the challenges of selection and recruitment. This ontology supported selection and training system is being built according to relevant HRM and KM theories, employing educational technology such as Content Management systems and adaptive testing.

There are three main hypotheses what we intend to investigate in detail.

Hypothesis 1: It is possible to build up an Ontology based personnel decision making system which can be employed to provide support for the inferences pertaining to the construct-, content- and criterion- related validity approaches that are described by Binning and Barrett (1989).

Hypothesis 2: Job roles can be described by a Job-Role Ontology and applied by Organisations.

Hypothesis 3: A mapping process between Domain Ontology and a Job – role ontology is capable to measure the validity of the construction of a job role.

In the first section of the paper we describe the underlying HRM model, showing valid measures that evaluate an employee or an applicant according to the job relevant performance criteria (domain).The following section details the research questions which evolve from the theory, suggesting a pathway towards the deployment. The third part shows how an educational KM tool – Educational Ontology – provides structured building blocks for the forecasted HRM-eLearning system and at the end we give an overview about the future work we have incorporate into the first existing modules of this system.

INTERACT – INTERNET-BASED PROBLEM SOLVING ROLE-PLAY IN WORKING LIFE

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Tool for improving basic skills in working life

New Basic Skills, as described in the EU's Memorandum on Lifelong Learning and in the Commission's Communication "MAKING A EUROPEAN AREA OF LIFELONG LEARNING A REALITY" comprise traditional basic skills including literacy and numeracy and also new skills (IT skills, foreign languages, entrepreneurship and social skills: communication, team-working, negotiation, etc). Workers, particularly those with low to medium levels of formal education, need to develop these new basic skills at the working place in a frame they can see as relevant to their work situation through tools that are user-friendly, interesting and motivational.

Internet-based Problem Solving Role-play is a short term activity which has been used in formal academic education and which may provide an innovative and stimulating way of fulfilling these specific educational needs at the work place. In 2007 Vox invited enterprises and educational providers to cooperate on trying out a model for Internet-based Problem Solving Role-play, the InterAct Model, for the purpose of improving basic skills in the enterprises.

A motivational instrument

Many of the workers in the need for training basic skills may not be motivated for traditional courses in, for example, the use of ICT. The reasons for this can be that they have not been in a formal learning situation for many years, that they have bad experiences from their previous encounter with formal education or that they feel alienated from a traditional teaching and learning situation. The idea of attending a course may also seem frightening for some and even lead to fear of performing badly, which will of course reduce the learning outcome. There is also the risk that some workers may be assigned to a course in ICT and/or other basic skills by their superiors without being motivated for it themselves.

The InterAct project has a holistic approach to basic skills. It aims at developing a model for learning that is motivating also for workers who may feel alienated by traditional, formal learning situations. The model has a playful approach and shows that it is possible to learn in an informal and secure atmosphere, in the company of fellow workers, and in an enjoyable way.

The InterAct model

There are several ways of implementing InterAct role-plays but there are certain basic phases which are present in most simulations. There must be a problem that is presented to all the participants and that cannot be solved unless all the participants are collaborative in solving it. The model can be described like this: Small groups of workers at each work place or department are given a "role". This role will be related to their work but will also include certain fictitious characteristics which enhance the theatrical aspect of the activity.

One of our objectives when offering funding to InterAct projects in Norway was to see if the model would be a good way to increase motivation and give training to groups of workers from the same workplace. We have also done a simulation with groups from three enterprises. We found the model suitable for motivating adults to train basic skills using their own language and thereby also improving their basic reading and writing skills. The response from the participants has been very positive. They are having fun and they get carried away with solving tasks, so that they almost forget that they're actually learning.

What is great about the InterAct model is that it is flexible and it will probably also work for training other skills. This is however a matter for further discussions.

MODEL OF SAFETY CULTURE DEVELOPMENT THROUGH THE USE OF E-LEARNING

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Introduction

The term of safety as an integral part of work culture was first mentioned in 1986 after the Chernobyl nuclear plant disaster. Irregularities in the working procedure, which have caused enormous consequences, have been described as insufficient safety culture at the work place. Advisory Committee for Safety in Nuclear Installations describes the safety culture as a product of individual and group values, attitudes, perceptions, competences, expertise and behaviour, which determine the safety management (ACSNI, 1993). The safety culture can be measured only according to the attitude towards the safety (CBI, 1990). While it is difficult to influence the personal attitudes of adults, those of young people can still be modified during the course of their education.

The culture begins developing in the family. The first attitudes towards safety and safe work are the result of the family upbringing and reflect on the future working methods of each individual. The children that are brought up by parents who have developed safety culture are more likely to accept such way of thinking as well as safety norms in their future work. However, children whose fundamental attitudes incorporate their parents' negative attitudes towards safety are likely to show future risk behaviour in terms of safety culture.

The next step towards shaping safety culture is formal education through primary and secondary education. Due to differences between educational programs for various vocations, the education output is also different.

In addition, most students do not find safety at work an interesting topic, as their foreknowledge of the field is relatively small. The development of an interesting and interactive educational program that would be of interest for the majority of students could influence the development of positive attitudes towards safety at work as well as of socially acceptable safety culture. Such education could be developed using e-learning.

The authors think that the use of ICT could contribute to the quality of safety at work education, due to the benefits of e-learning the traditional classroom instruction cannot ensure equally effectively. As a result, the level of safety culture of the future employees on the Croatian work force market would be set to a higher level.

Model of introduction of e-learning into the education on safety at work in vocational schools

This paper suggests a model for the introduction of e-learning in the field of safety at work, which consists of four development phases.

- Phase one includes the development of e-learning materials which would cover basic learning matter on safety at work and which would be offered to test groups of students in several different vocational high schools. Students included in the testing would be asked to participate in self- study e-learning instruction and assess their experiences through developed evaluation forms and interviews.

- The second phase includes further development of materials for basic education about safety at work, including all terms and topics defined by the syllabi of vocational schools. Materials will be published online in an LMS so that they are available to all students of vocational high schools in Croatia.

- In the third phase, the instruction on safety at work would be delivered in a blended mode, by introducing the online materials into the regular classroom instruction and providing that the online activities be guided by a tutor/teacher.

- The fourth phase will include a gradual development of materials for different specialised fields, following the development phases of the basic materials on safety at work – from self-study materials to the introduction of blended instruction.

PSYCHOLOGICAL WELL-BEING AND ATTITUDES TOWARD E-LEARNING

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This paper investigates the correlation between students' attitudes toward e-learning and their perceived self-esteem and loneliness at the last stage of their online learning experience. For this study one hundred and twenty Israeli students were asked to complete a questionnaire. The students were enrolled in three fully online academic courses, which were similar in their instructional design approach although different in content. The results find that there is a correlation between high self-esteem and positive attitudes toward e-learning in general and toward online interaction with the instructor in particular. The findings further suggest that there is no correlation between loneliness and student attitudes toward e-learning. Building on these results, we hope to contribute to students' related research by further exploring the correlation between student personality traits and the student's e-learning preferences.

LEARNING STYLES AND COMMUNITY SHAPING: NEWCOMERS AND ITALIAN AS A SECOND LANGUAGE IN ONLINE LEARNING ENVIRONMENTS

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This paper investigates the planning of a theoretical framework devised to implement online Italian as a Second Language (ISL) courses catering to migrant workers' learning styles within an intercultural and crosscultural framework. Learning styles, that is sensory preferences and cognitive styles, were analysed in order to identify the most suitable tasks delivered with Web 2.0 tools within a collaborative interactionist framework. The results show that a wide range of tasks furnished in online hyper-context learning environments using Web 2.0 tools appears to suit most learning styles and thus foster effective second language acquisition as well as intercultural and crosscultural awareness. In conclusion, ISL task-oriented learning through 2.0 technologies seems likely to promote effective individualised learning, catering to newcomers' learning styles and thereby highly enhancing migrant workers' proficiency in ISL.

E-LEARNING STUDENTS REASONS FOR DROPOUT: THE CASE OF VIRCLASS (THE VIRTUAL CLASS OF SOCIAL WORK IN EUROPE)

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Introduction

The VirClass project was established in 2003 under the leadership of Bergen University College (Norway), in cooperation with universities from 11 European countries, which participated in the development of the curriculum plan and the running of the course. Since then a 15 ECTS credit online course in European Social Work and a Virtual book, which integrates virtual lessons, triggers, and a case study (Larsen, Hole & Fahlvik, 2007), have been developed, and more than 150 students from 15 countries have taken part in the programme (see http://www.virclass.net for a detailed view of the project). Working under ItsLearning VLE, students and teachers collaboration in comparative studies are encourage by using task-centred approach to learning, learning by dialogue, portfolio assessment, reflection on learning, and transparency (Hole & Larsen, 2007).

Students who finished the course tend to express a high degree of satisfaction when they are asked for different aspects of their e-learning experiences. Notwithstanding, a high rate of early dropouts has been a problematic fact from the beginning, because it is an important threat with a negative consequence facing the academic investment, personal effort, and money invested on these courses.

But whatever reasons we can anticipate to explain these dropouts, it will always be necessary to compare them with the perception of the real protagonists of Virclass. That is, e-students. This is precisely the objective of this paper: to analyze from the point of view of the students some of the factors and reasons that can explain the high rates of dropout that have characterized Virclass courses in its first years of live.

Method

Participants

14 students (3 males and 11 females) of a total of 35 participants who quitted the 2006 edition of the Virclass course took part in the study. Half of the sample was between 18 and 25 years old, 35,7% between 25 and 32 years old, and 14,3% more than 33 years old. Students from Sweden were 3, from Norway, Portugal and German 2 for each country, and from Poland, Estonia, Netherlands and Spain 1 for each country.

Instruments

The address of an anonymous online-questionnaire was sent to those Virclass participants who quit the course before the start of the second of its two modules. The e-questionnaire comprised socio-demographic questions (sex, age, & country), several open ended questions, and a number of dichotomous (yes, no) close questions and 5 point Likert scale questions which will be the main focus of our analyse here.

Discussion

Results obtained seems to show that reasons for dropout from the e-students perspective can be ordered in a relatively clear patter, being on the top those related with the lack of information about what is expected from them from the very beginning of the course. No main reasons related to the internal operation, the content and the quality of the course seem to have importance for the students when they dropout Virclass. The same applies when they refer to their e-competences and English language skills.

The lack of credits official recognition does not seem to affect students' motivation to enter the course. Moreover, the decision to start the course may be reinforced by its free cost, its attractive thematic, and the possibility to study online without a fixed schedule. But when the students realize the actual workload 15 ECTS imply, or they are confronted with personal problems, Virclass is left behind other academic responsibilities that do have official recognition.

THE IMPROVEMENT OF AUTONOMY IN ONLINE LEARNING ENVIRONMENTS

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The use of Information and Communication Technologies (ICT) in education provides a wide range of learning possibilities and is at the forefront of educational change. They represent a change in emphasis from 'teaching' to 'learning' typified by what is known as the adoption of a student-centred approach in contrast to traditional teacher-centred viewpoint. Student-centred learning produces a focus on the teaching-learning assessment relationship and the fundamental links between the design, delivery and measurement of learning. The student takes a proactive and autonomous role. As a result, the syllabus will not be designed around learning objectives but around competences that have to be acquired by students based on their curricula profile.

At the Universitat Oberta de Catalunya (UOC), learning and teaching processes take place in an asynchronous and on-line environment. The scenario where this process takes place is a virtual campus, a proprietary tool developed on purpose for the UOC. The basic cell for students is the classroom, which is associated to one subject. There they have a place to share knowledge, communicate with teacher and other students, and for getting some resources, too.

Therefore, we believe that learners need to develop a series of strategies and skills that will enable them to work individually or collectively in a virtual environment. This development becomes a benefit to the maturity of their learning process. It means, improving both the teachers and students learning experience and the relationship between teachers and students in the virtual environment (for instance, how to motivate the students, how to identify the common problems that the students will face during the course, which kind of assessment they need along the learning process, etc.). Consequently, we can say: "The new educational context, supported by the use of computers, imposes a distance and interposes its law in the communication process. As an example, a simple e-mail interchanges can degenerate into an open quarrel when strong differences appear in a controversy. Apart from other circumstances excluded by this new context as touch, gesture, tone, silence, look, etc."

In our teaching practice, we understand that autonomy is the way to make individual decisions within the learning process. It means, the student has an independent way of working, identifying problems on their own, exploring by themselves not being told what things to test out. It is a way to get to choose their identity in the new context. Therefore, people are encouraged to make choices during the semester and this is one of the methods used to provide autonomy. The opposite result is, any action which restrains someone's behaviours has a negative impact on someone's sense of autonomy, which results in lowering their motivation to follow the course.

Recent work of our research group shows an approach of environment that could reinforce an autonomous behaviour. It is a Geographical Information System (GIS) adapted to the requirements of a teaching-learning virtual environment. A GIS gives the possibility to draw up learning itineraries or routes to facilitate the access to the information and the navigation. It is a powerful tool that has the advantages of a database and a visualization system. It also uses a conceptual map to show information. Another important feature is that a GIS allows students and teachers to configure their own view. Everyone can see, from the beginning, what is more interesting for him or her. The tool is adapted to the user, and not the user to the tool. The student makes the decisions throughout their learning process. This kind of environment allows to the student an easier and more flexible access to information, designing learning itineraries to promote a useful and effective learning and teaching on-line and to continually choosing what to do within the learning process. These tools help students feel like they are actually conducting their learning process and gives them the possibility of creating their own customized course.

FOREIGN LANGUAGE DISTANCE LEARNING AND ICALL: A CRITICAL ANALYSIS

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This article analyses the role that ICALL can currently play in improving foreign language distance learning. While such a modality is far from perfect, it is selected by very large numbers of adult students because they cannot make use of face-to-face courses. However, there are two fundamental problems with distance learning: firstly, the separation between teacher and students, and within the student group, which respectively limits academic interaction and mutual reinforcement. Such separation depends upon transactional distance, which is determined by the balance of structure (course content) and dialogue (academic interaction), something difficult to achieve. Secondly, it should be noted that the very popularity of these courses makes them less effective, because the available options to facilitate learning are inversely proportional to the number of students (as the number of students grows, it becomes progressively harder for the teacher to maintain control of the overall learning process of the group). Furthermore, effective language learning would require the practice of interactive skills in communicative contexts, something that is obviously greatly limited in distance learning.

Networked computer technology and CALL have been argued to be fundamental for the solution to these problems, despite the fact that the majority of the research in this field has been intended for use in the classroom. Computers became popular in education because they permit data driven learning, flexibility of access and usage in terms of time, space and progress, and the integration of multiple sources (something which has increased as technology advanced). Furthermore, since language learning is different from other subject areas (because it is skill-based as well as knowledge-based), computers were seen to be useful in that they offered a way to reinforce both aspects, given the relevant programs, etc. The use of online computer environments helped the students in a general sense, offering a way to achieve a balanced transactional distance and enabling access to multiple online resources for this language. However, the limited frame-based nature of CALL and the computational intractability of language mean that such technology has not currently lived up to its potential (and, in the case of classroom-based learning, it is typically seen as being epiphenomenal). CMC reflects the communicative / social constructivist views of language use and learning in that students move away from interacting with the computer to interacting with other people via the computer. Accordingly, the activities used are typically more oriented to functional aspects than to formal aspects of language. CMC in general produces an exponential multiplication of the speed and volume of communication, although it does so at the price of information overload. In the context of language learning, such overload can inhibit learning rather than promote it. Furthermore, while CMC is arguably not appropriate as a language learning technology in itself (since students may finish less literate, less humanistic and less critical in their thinking after long term indiscriminate use), it has lead to CSCL. It enables collaborative language activities to be undertaken between students where face-to-face interaction is not an available option. One of the aims of AI is to give CALL software the ability to analyse student language production and undertake automatic language generation. However, NLP is currently unable to produce acceptable results beyond the basic morphosyntactic and lexical-semantic levels. Over the years, ICALL systems have been produced for more than fourteen languages, although the results have been limited and lead to certain scepticism about its potential. However, continued research and advances in the field of AI (and its relation to other areas like Cognitive Science) have made the discipline of ICALL popular once again. The authors of this paper argue that certain ICALL techniques such as Bayesian diagnosis and adaptive material selection can be used to complement constructivist pedagogic and functionalist linguistic aspects of language learning giving rise to a framework within which effective foreign distance learning can actually take place.

DIVERSE LEARNERS: A CASE FOR MULTI MODAL LEARNING AND PROFESSIONAL DEVELOPMENT

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This paper and related presentation considers how ITC mediated learning provision within a multimodal context have been utilised to develop Professional Degree Courses and Continuing Professional Development within Children, Community and Family Services. The paper considers barriers to multimodal provision drawing from data from: student evaluations of course provision; evaluation of students IT experience and statistical surveys of their training and learning aspirations.

This paper considers the translatability of academic provision that is underpinned by notions of community development and work-based learning. It discusses the notion that non-traditional students constitute an important element of the next generation of learners and that such students in higher education are not a homogeneous group in terms of their experiences, skills, or goals. Within this context the paper explores how web-based tools and technologies can help and hinder HE institutions who are attempting to meet the needs of this next generation (Daniel, 1998). In so doing it also considers issues of blended provision in relation to fluid, iterative, asynchronous, synchronous and multimodal learning approaches (Oliver & Conole 2002, Whitelock and Jeffs 2003, Laster 2005, Whitelock and Jeffs, 2003). The paper draws upon international research that has considered the relationship between technology and socio-economic learning environments (Dzuiban, Lorenzo and Oblinger 2006). In particular, it compares and contrasts technological and pedagogical perspectives (e.g. Bonk 2006, Friedman 2006, Schank 2002, Brown 2001, Garrison 2004, Salmon 2002) and relates these issues to post-structural and post-modern theories of social inclusion, participatory course development and notions of meta-learning (Etzioni 1969, Friedson 1994, Austin 2002, Costley 2007, Nixon et al., 2006). The comparison enables the paper to develop an innovative analysis of student learning via differing and innovative learning environments. Which include technology enhanced learning and personalisation, equity, inclusion, human rights and social justice, multi-disciplinary and integrated working, user and stakeholder engagement and capacity building through teaching and learning.

TOOLS AND PEDAGOGIES THAT FIT THE NE(X)T GENERATION OF STUDENTS

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Introduction

According to the literature, the generation of students that comes to our universities is changing. They are in an 'ICT-default' mode and learn in a different way. This 'new' generation is described as the so-called net-generation, millennials, Google generation, digital natives or homo zappiens (respectively Tapscott, 1998, 1999; Oblinger & Oblinger, 2005; Howe and Strauss, 2000; JISC, 2008; Prensky, 2001, and Veen, 2002). Characteristics of this net-generation as described in the literature are: fast and impatient, learning by doing, result-oriented, social and interactive, multi-tasking, visually oriented, and connected and mobile.

Research

Do the characteristics of current 1st year students at the universities match the characteristics as presented in the literature? Do universities need to take these characteristics into account regarding its teaching and learning processes? If so, in what way? These questions were answered in a research performed within the European eLene-TLC project (www.elene-tlc.net). In the research not only students were questioned but also teachers.

The main research question was:

What do first year students in higher education need and expect from ICT in their learning process?

A sub question was: Which tools and pedagogies fit these needs and expectations of first year students in higher education in Europe?

Results and conclusions

In this research 96 students and 30 teachers from six European countries were interviewed or filled in an online questionnaire. The small samples, the uneven distribution of students among the countries and the different way of using the questionnaires (interview or online) make it hard to draw solid conclusions. This means that the results should be regarded as indications rather than facts. Furthermore, the results cannot be generalized.

Having said this, what conclusions can be drawn for the intercultural learning environment based on the results? Students and teachers see mobile phones as a very important tool for students' personal use. Nevertheless, when it comes to the teaching and learning process teachers should be careful with introducing the mobile phone as a tool since some of the students object to the usage of this tool. They prefer to keep it for private matters and not for formal education. These students also have difficulties with the use of MSN and games in the teaching and learning process.

Being social and interactive and result oriented are indicated as the most important characteristic of nowadays youth according to most of the students and teachers. These results indicate that teachers should design the teaching and learning process in such a way that it supports and makes use of these characteristics to a great extent. It fits the social constructivist, active and authentic learning theories. Concrete examples are integrating collaborative activities and peer feedback in the learning process. Or introducing workplace learning and inviting experts into the teaching and learning process. When it comes to tools, one can think of making use of a virtual learning environment (as most teachers already do), a discussion forum, an annotation tool, a blog or a wiki into the teaching and learning process. Important is to choose the right tool for the right task.

Another interesting finding is that students rate the quality of information as the most important characteristic of ICT (internet). This is consistent with the emphasis we seen in Europe on information literacy (define, access, manage, integrate, evaluate, create, communicate and collaborate) which is related to 'life long learning' and critical thinking skills.

DISTANCE LEARNING AND UK PROFESSIONAL ASSOCIATIONS – AN OPINION SURVEY 2007

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Introduction

During 2007, CAPDM Limited carried out an opinion survey among people with an interest in the fields of distance learning, blended learning and e-learning, within UK Professional Associations. The e-mailed questionnaire asked for opinions on various aspects of distance learning and the implications for professional training and development. Responses were received from 48 of the 80 associations surveyed – a 60% response.

The main part of the survey consisted of questions with tick-boxes. The results were presented as a percentage of the total respondents to each question and the figures were highlighted in different colours to indicate different response levels.

Conclusions

92% of UK professional associations who responded to the survey, provide professional qualifications and status as a key offering to their members – and back it up with CPD programmes and supporting information. 71% already provide formal syllabi for courses leading to qualifications, and 62% provide guidance and accrediting services to third party course providers.

94% believe that associations should play a major role in developing and maintaining competency frameworks for their profession, and 90% believe they should develop a repository of expert knowledge for their profession. 77% believe that developing distance-learning programmes can help associations build such repositories, and 71% believe they should use academic partners to develop it, demonstrating a willingness to encourage inter-sectorial collaboration. 69% believe that offering distance-learning programmes boosts the reputation and appeal of the associations involved, and 98% agree that such programmes help members to integrate their learning with other activities such as work.

65% of survey respondents feel that UK professional associations have a major role to play in providing distance learning programmes for worldwide consumption – but only 44% develop and produce their own distance learning programme materials and only 25% deliver such programmes online. Of the many reasons offered as to why most associations do not offer distance-learning programmes today, a lack of available funds for programme development was the main reason surveyed. This was closely followed by a general lack of understanding of how to go about developing a distance learning programme and then concern that the magnitude of the task is too great for the association to take on.

The results from this survey have highlighted a number of issues associated with the implementation of DL and/or blended learning programmes within Professional Associations. However, there is a general recognition that distance learning and e-learning in some form can offer attractive opportunities for Professional Associations.

SOCIAL:LEARN – WIDENING PARTICIPATION AND SUSTAINABILITY OF HIGHER EDUCATION

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What would a new university look like if we started with a blank sheet of paper, capitalising on the very best of what we know about good pedagogy coupled with harnessing the potential of new technologies? The paper will consider the challenges Higher Education faces in the light of new technologies and in particular the potential of Web 2.0 technologies as a means to transform education. It will describe a project, Social:Learn, which is attempting to develop a sustainable educational framework to harnessing the best in new technologies in an educational context; to create a new, dynamic and engaging learning environment for tomorrow's students.

Higher Education institutions face a challenge and opportunity presently, which can be summarised as 'how to respond to the new social, web 2.0 technologies and approaches?' At the UK Open University (OU) a project termed 'social:learn' has been established which seeks to address this question and the related issues for the OU itself and for higher education in general. We believe that despite the exponential growth in web 2.0 applications and the use of social networking tools, there is a gap, i.e. that there is little in the way of large-scale application of social networking to learning. The Social:Learn project is a proposal to explore how web 2.0 technologies can be harnessed for learning. Social:Learn expresses the University's aspiration to develop a new web-based educational offering with the potential to achieve significant business growth globally in ways which are consistent with OU values, which is responsive to future conditions, and which is cost-effective and scaleable.

The paper will critique the apparent dichotomy between the philosophical values inherent in web 2.0 against current practices and approaches in Higher Education. It will outline an ambitious project at the Open University, which aims to harness and apply the best in web 2.0 to an educational context. The overarching vision for Social:Learn is to apply the best in current patterns of behaviour in technology developments (and in particular social networking) to a learning context – to provide a flexible and innovative, technology-enabled framework for learning. The paper will describe the approach we are adopting, work to date and planned activities. The conference is timely as it will provide us with an opportunity to demonstrate progress to date and to discuss with delegates the implications of adopting such an approach and the potential of a wider expansion of a more "open" cross-sector web 2.0 driven approach to education.

UNDERSTANDING QUALITY CULTURE

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In this article it is argued that quality development in higher education needs to go beyond the implementation of rules and processes for quality management purposes in order to improve the educational quality. Quality development rather has to focus on promoting a quality culture which is enabling individual actors to continuously improve their profession. While this understanding of quality as part of the organisational culture gains more importance there is still a lack of fundamental research and conceptual understanding of the phenomenon in itself. This article aims to lay the foundations for a comprehensive understanding of quality culture in organisations, focussing on higher education. For this purpose, the state-of-the-art in research about organisational culture is discussed and a model of quality culture is presented.

The article starts by outlining the main challenges which current practices of quality management for education, especially higher education, have posed. It concludes that concepts like quality control and quality management are often perceived as technocratic top-down approaches which frequently fail in higher education. It is suggested that in recent time the field of quality management in higher education is changing. The new generation – or era – focuses on different and more holistic quality approaches. Here change is in the foreground instead of control, development rather than assurance and innovation more than standards compliance. In this understanding quality management systems and instruments, competencies, and individual and organisational values are not seen as separate entities of a quality development process but are combined in a holistic concept – the concept of quality culture.

Quality culture for as a concept higher education has not yet received a lot of attention from research or management literature. The concept of quality culture is developed as one particular concept based on organisational culture. Through analysing the specific particularities of different culture concepts from literature the basis for a concept of quality culture has been laid. Quality culture has been constructed as a concept with four basic components: A structural component which represents the quality management system in itself, covering instruments, rules, regulations. A second component is representing the enabling factors. These are generic and specific quality competences, and commitment and the concept of negotiation as a basic concept for any quality development. The third component is representing the cultural factors, like values, rituals, symbols and alike. All three components are linked through communication and participation of individuals and groups in social interaction with the aim to build trust. It is important to emphasize that viewing quality in the light of an organisational cultural perspective means to take on a holistic view: Quality culture combines cultural elements, structural dimensions and competences into one holistic framework, supporting stakeholders to develop visions, shared values and beliefs. Communication, participation and the combination of top-down and bottom-up interaction is of key importance to the success of a quality culture.

The development of a quality culture, and its implementation into organisational contexts, as a part of the overall organisations culture, has not yet developed a strong tradition in research and theory. Although there seems to be ample evidence that quality development demands for a broader view of developing the organisations culture, incorporating new values and negotiations of future directions with the aim to root them in rituals, symbols and activities of the organisation, up to now only little work has been published in this very field. It is with this intent that we want to close this article by suggesting to now move on to the field of empirical research and try to find evidence, good practices and methodologies to stimulate quality development and root them in holistic approaches of organisational culture.

INTERCULTURAL ASPECTS OF QUALITY MANAGEMENT AND THEIR RELEVANCE FOR THE QUALITY ACCREDITATION EFMD CEL

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Globalisation of higher education seems to be a current trend (e.g. Welch, 2002). Universities form global alliances, joint-ventures, and cross-national partnerships, attract students and faculty from all over the world, and try to establish international programmes. This internationalisation of the higher education landscape affects universities of all sizes since they want to compete on the global market (Siakas & Georgiadou, 2002). Thus, the management of inter-cultural aspects is becoming a significant issue for universities as well. Higher education institutions face cross-cultural issues on different levels:

- students with different cultural backgrounds,

- faculty and staff from culturally diverse backgrounds,

- different intra- and inter-organisational cultures (e.g. faculties, other institutions/universities),

- inter-cultural aspects as new demands for the competencies of students (e.g. future employers, society).

In the face of growing global competition, it will become more and more crucial for higher education institutions to establish strong relationships with students, employees, and other stakeholders from various cultural backgrounds (Harvey & Griffith, 2002). When looking at global educational programmes (such as Master programmes in Business Education), it is clear that such relations are often managed through eLearning. At the same time, it is necessary to install an appropriate quality management approach to maintain these relationships and to make sure that the quality of the educational processes behind the interpersonal relations is according to common standards.

EFMD CEL is designed as a quality accreditation scheme that focuses on technology-enhanced programmes. A programme is to be regarded as "technology-enhanced learning" if a minimum of 20 % of its overall duration is delivered by teaching and learning methods within the range of eLearning. This is the case if one of the following two requirements are fulfilled: interactive multimedia, i.e. the programme utilises one or more media types other than printed text or recorded lecture material, or network interaction, i.e. the programme requires the use of a network to provide interactivity between a student and standalone content, or to connect different students to an eTutor / eModerator or to each other.

Due to these preconditions of EFMD CEL, the accreditation scheme is of particular interest for institutions with diverse cultural backgrounds, programmes jointly established at two or more universities as well as for programmes addressing students and faculty from around the world. Thus, the inter-cultural question is of specific interest for the EFMD CEL accreditation.

This presentation will outline major issues of intercultural quality management. It aims at selecting relevant aspects of the classical literature on intercultural and international management in order to build a sound basis for the further development of the quality accreditation EFMD CEL. Accordingly, the main research questions of the paper are:

- What is the state of the art of intercultural management?

- Which aspects of intercultural management are of relevance for the accreditation scheme CEL?

- Which are next steps for the further development of EFMD CEL?

The paper will be mainly based on a literature analysis, however, is partly informed by the experience with the seven up-to-now accredited technology-enhanced programmes.

PLAR (RPL) IN ADULT EDUCATION PROGRAMS IN CANADIAN UNIVERSITIES

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RPL (Recognition of Prior Learning), commonly known as PLAR (Prior Learning Assessment & Recognition) in Canada, has blossomed internationally, driven by demographic factors, concern for diversity and equity, technological changes in the workplaces, and increasing globalization (Keaton, 2000). Thomas (2000) argued that the use of PLAR in post-secondary education rests on theoretical foundations in adult learning. In Canada and the United States, PLAR is considered a central element of an "adult-focussed" postsecondary institution (Council on Adult and Experiential Learning, 2000). Despite the strong links between PLAR and the field of adult education, however, a recent survey of Canadian university websites found scant evidence of the practice being used in Adult Education departments (Wong & Wihak, 2007; Wihak, 2007). Given that paradoxical finding, the current study was intended to probe more deeply into the use of PLAR for students in university-based Adult Education programs.

Following an initial e-mail contact, an electronic questionnaire was sent to Adult Education program representatives at 18 accredited Canadian universities offering Adult Education at the university certificate, diploma or degree level. The questionnaire covered: use of PLAR for admission and/or advanced credits; information provided about PLAR to program applicants; support provided to applicants in having their learning assessed; methods used to assess prior learning; use of course-specific or program-based PLAR; fee structures for PLAR assessments; faculty compensation; number of PLAR applications per year; challenges in offering PLAR; supports and barriers from central institutional administration; and theoretical basis of their PLAR practice. A total of 11 questionnaires were returned, 5 of which were from universities offering Adult Education programs through electronic technology.

Eight of the 11 responding universities reported making use of PLAR in their Adult Education programs for admissions (i.e. allowing students who do not meet usual educational requirements to enter the program) and/or for advanced standing (i.e. acknowledging learning from experience in the form of academic credits). All eight of the universities using PLAR indicated that they make considerable effort to inform students about its availability. Considerable variability existed, however, in the amount and nature of support offered to students to prepare to have their learning assessed. The predominant method used to assess learning was the paper-based portfolio, reported by seven of the eight universities. Responses concerning administrative aspects of PLAR (fees, faculty compensation, record-keeping, institutional support) were mixed, indicating that Canada-wide practices in this regard were not yet developed. Interestingly, respondents had very little specific to say about the theoretical base that informed their PLAR practice.

The results showed a higher level of PLAR availability than was evident from the authors' earlier survey of websites (Wong & Wihak, 2007; Wihak, 2007). Nevertheless, Adult Education programs apparently still faced considerable institutional barriers in "walking the talk" with regard to PLAR. Findings are discussed in terms of the status of the Adult Education field within Canadian universities and institutional responses to PLAR implementation in general. The discussion also considers the need for a strong theoretical base for PLAR in the university context.

TRAINING OF VIRTUAL TRAINING PERSONNEL

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One of the most rewarding experiences in education is the training of future training personnel. At the Polytechnical University of Valencia (UPV), and especially from the Centre for Continuing Education (CCE) we aim to invigorate the university community, offering innovative and quality Permanent Learning services to promote the development of our socioeconomic environment. Hence, one of the challenges that particularly concern us due to its direct implications in society is how to train teachers at our schools of today and for the future in the new teaching of technologies and the various technical approaches using virtual environments.

After years of experience in online teaching, we are proud to emphasize the agreement between the UPV and the Valencian Government for the training of 200 future e-learning **tutors**. This agreement takes place as a result of the legal obligation to annually train 3,000 career civil servants or newly entrants in the educational sector in the field of risks-at-work.

Consequently, an "Online Course Production and Teaching" course was developed, stressing the four paramount areas of online training: pedagogical area, social area, organizational area, and technical area. Their objective was to boost skills within the virtual teaching environment and to promote technical and teaching procedures in the management, design, production and the teaching of an online course using the CCE-designed platform. The course took place in three centers, one in each of the three provinces that make up the Valencian Autonomous Community during a period of three months.

One of the compelling features of the course consisted on the development of simulation rolplaying, where a real **online course** is temporarily adjusted to group dynamics: the different participants adopted different roles to develop the key aspects of Tutoring and Mentoring from different perspectives. Empathy and the understanding of the different roles were given priority, allowing the acceptance of different attitudes from other participants and solving the conflicts that were generated. These dynamics allowed us to analyze the key points for a person to develop tutor skills, improving the motivation of the agents implied in e-learning and thus making the learning exercise a success.

Once rolplaying finalized, the participants began a debate and drew conclusions, of which we highlight: *e-learning must be considered as a tool in the hands of training personnel and tutors, and not a tool for the student to learn; tutors must personalize the learning as much as possible; the use of intercommunication tools in an online course is paramount to mitigate the feeling of loneliness inherent to studying an online course.*

THE MENTORED INNOVATION MODEL IN E-LEARNING COURSES FOR TEACHER EDUCATION

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Online mentoring or facilitation can significantly raise the quality of professional motivation (epistemic agency) of teacher trainees. A successful collaboration with the facilitator in a distance education course models collaborative work place behavior and teaching at the same time. It can greatly promote the process of becoming a reflective practitioner who is able to work in a team and identify new professional challenges and realise innovative teaching programs, which is in the focus of both the modernisation of teacher education in Hungary and the EU-funded KP-Lab – Knowledge Practice Laboratories Project (www.kp-lab.org), where information and communication technology (ICT) tools are employed to catalyze paradigm change from individual to collective knowledge creation practices.

ICT-based retooling of mentoring scenarios entail teacher trainees' collaborative knowledge advancement (Paavola and Hakkarainen, 2006), the development of epistemic agency (Scardamalia, 2002) and at the same time, as a loop input, they provide for a role model for classroom application. In order to create a shared understanding of current knowledge practices and to envision the integrative design and evaluation of novel technological tools and pedagogical methods, at the Eötvös University of Budapest (ELTE) the mentored innovation model (scaffolding the knowledge creation of teachers/trainees by peers and facilitators in an e-learning environment to support innovative practices) is employed for mediating good practice. The concept of trialogical learning served as the theoretical foundation of the co-design approach of two pedagogical settings: the teacher training course for pre-service teachers of English as a Foreign Language (EFL) (n=20) and the domain-specific communities of in-service teachers (n=17). Pedagogical scenarios were hosted in a Moodle environment and FLE3 was used for sharing knowledge practices, adapted or self-developed tools.

In the studies reported here, online and face-to-face discussions and negotiation regarding the design of teaching and learning activities aim at developing the epistemic agency of in-service and pre-service teachers through their involvement in professional processes of knowledge creation. In a blended learning environment, where virtual and real learning spaces are organised to create a synergy of experiences, trialogicality refers to "how shared objects of activity are collaboratively formulated and developed by using mediating tools, signs, and (conceptual and material) artefacts" (Paavola and Hakkarainen, 2004, p. 4.).

According to our hypothesis in the mentored innovation model developed at ELTE and used in various e-learning settings, (Kárpáti, 2003, 2004) online communication – knowledge-building discourse facilitated by the e-moderators connected to creative collaborative activities – results in evolving epistemic agency that is characterised by experience-based social participation. Thus, an explanatory model that defines the position of online communication in the mentoring processes can contribute to the analysis of the complex process of developing epistemic agency.

By applying the Participant Satisfaction and Communication Questionnaire (Dorner, 2007), a quantitative research tool besides semi-structured interviews and qualitative content analysis scheme we intended to employ triangulation in our methodology so that more than one approach is used in the investigation of the research focus (Bryman, 2004). In the mentored innovation model in which developing participants' epistemic agency was encouraged, data on their perceived development and satisfaction with the model was a relevant source of data provision, and an indicator of agency.

In the presented mentored innovation model the online communication around shared objects constituent had a direct and significant impact on the participant's overall satisfaction. Statistical analysis supported the assumption that interacting with peers and the facilitator in creative collaboration, which aims at developing epistemic agency, plays a crucial role. The mentoring model was designed so that facilitators in their position as online instructors can act more like consultants and resource providers (Berge, 1995; Hootstein, 2002) rather than the exclusive source of knowledge and evaluator as in a more traditional pedagogical setting. According to our hypothesis developing and utilising this mentoring method and "instructor attitude" allow for a more creative collaboration and collaborative knowledge building through interaction around shared objects within the micro communities and reduce the rigid forms (one-directional flow) of knowledge creation that centres on the instructor. Perceptions regarding the social or affective dimension of the mentored innovation model provided support for the hypothesis that the facilitators managed to act as effective "social directors" whose responsibilities include program managing and offering technical assistance as well (Hootstein, 2002).

CONCEPTUAL AND TECHNOLOGICAL ARTEFACTS TO IMPROVE TEACHERS' PROFESSIONAL COMPETENCES IN AN ONLINE COMMUNITY

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In the academic year 2005-2006 the University of Macerata carried out a blended explorative research in order to understand the teachers' thinking on design; results obtained from this experimentation were taken as basis for the deployment phase that took place the following academic year. From the former investigation emerged a wide heterogeneity in design practices and became clear the different relevance felt about own competences, needed skills, motivation of students and relations between these components. The research has led to a new experimentation in the following year within the master degree in Didactic Models and Strategies that was attended by 116 teachers, from primary and secondary schools, in 2006-2007 and by 164 in 2007-2008.

Most of the experiences previously observed were related to communities working locally and strictly in traditional face-to-face contexts; the case that we hereby present relates to a group of teachers that, although working in different contexts, constitute an online community reflecting about its own professional identity. This paper intends to look into the following research questions: how an online community of educators can develop a self-reflection on its teaching practices and own professional identity, how this reflection impacts on the working situation, which conceptual and technological artefacts can be used, and how the learning environment can be organised to facilitate these processes.

Conceptual and technological artefacts play a central role for the design and reflection; the dynamic artefacts described herein represent working tools and descriptors for the analysis of practices that are needed in order to build a know-how that is placed in-between theoretical knowledge and practical knowledge. Artefacts facilitating group work and personal reflections are all contained within one single learning environment and include Project Work Diary and Teacher Portfolio.

In order to verify the impact the online environment and the employed artefacts had on the achievement of a higher professional awareness we have analysed writings from a sample of 30 teachers; writings analysis has been carried out by using the methodology suggested by Miles and Huberman (1994) and completed in four steps.

Given the results of this research it is possible to assert that the online group activities and the use of conceptual artefacts for individual reflections allowed our practitioners to gain awareness of the process employed in the design. On the basis of the consultations had with the teachers and from the reading of the online writings we perceived that this awareness has indeed improved the design and, consequently, class results. The key implication of this research is to be found in the ultimate effect that the employed methods had on our group of teachers: the focus shift towards meta-competences that provide a platform for the further development of professional competences.

PORTUGUESE SCHOOL LIBRARIES – E-LEARNING, A TRAINING EXPERIENCE

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The School Libraries Network Program (SLNP) was created in 1996. Its aim was to install school libraries, conceived as multimedia resource centres in basic and secondary schools of all levels. This Program is co-ordinated by the School Libraries Network Office (SLNO) which operates in articulation with other services of the Ministry of Education, Regional Administration Services and with local authorities, in particular through Public Libraries.

From the beginning, this Program has designed its policy based on the concept of a Network, articulating policies and procedures with local institutions, which have been playing a key role in the process of establishing and developing school libraries in state schools.

School libraries play a key role in the development of the knowledge society at aiming to achieve the 21st century school goals, where the demand of new literacies and skills is increasingly high to match new and different ways of learning based on a constructivist approach to knowledge.

Within this context, a new level of commitment is required from the younger generations but also from teachers and teacher librarians, who must adapt and adopt training and learning strategies well-matched with these changes.

Facing the challenge of training field agents whose mission is to guide and monitor the development of school libraries, and the need to give future trainers adequate knowledge and skills, School Library Network Office launched an ambitious e-learning program, covering important and emergent themes related to school libraries development.

E-learning proved to be a successful solution to mobilize field agents spread across different regions, where they provide specialized local assistance, and where they act as capacity builders and multiplying agents.

This training enabled compliance with the objectives set up by the Ministry Training Plan for School Libraries, defined as priority. The virtues of e-learning allowed a national wide training strategy, from which emerged working groups who started to explore and create new possibilities of continuous learning. Then, learning communities and communities of practice were set up, through the sharing of interests and through the integration and dissemination of ICT learning tools.

COLLABORATIVE LEARNING USING SOCIAL TOOLS FOR ENQUIRY, REFLECTION AND SHARING

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The CLUSTERS (Collaborative learning using social tools for enquiry, reflection and sharing) project

The CLUSTERS project, funded by the Professional Practice Based Learning Centre of Excellence for Teaching and Learning at The Open University, investigated the use of a variety of social networking tools and approaches to inform professional development. During this six month project, a group of Associate Lecturers trialled the use of a small selection of Web 2.0 tools (Ning, Facebook, Del.ici.ous and fOUndit) and reflected on their utility to support both their own professional development and as aids to student learning. The key aims and objectives for the project required "hands on" investigation of these tools and an evaluation of

- the relevance of the concept of "user generated content" for practitioners developing and sharing knowledge;
- how practitioners can work collaboratively to advance practice knowledge using freely available social networking tools;
- an 'empty box' model of learning in which participants negotiate a topic of interest and build their own collaborative learning.

Methodology

A small control group of five Associate Lecturers were recruited for the investigation. An additional focus group of librarians were also convened as non academic stakeholders with a remit to support learning and teaching, and who had a direct interest in the use of Web 2.0 tools to influence their own professional practice.

The core project team were recruited to give participants additional help and technical support in using specific tools. Project meetings were held virtually using the KMi's open source tool 'Flashmeeting' and feedback and ideas were captured collaboratively using the project wiki. Evaluation data was captured from a range of sources including online questionnaire responses, wiki contributions, 'Flashmeeting' transcripts and evidence generated from the use of the social tools themselves.

Key issues which emerged

Several key issues emerged from the project. These centred around the need for increased professional development relating to managing knowledge and identity online; technical limitations which directly affect user experience and expectation; the need for shared commitment and groupwork to secure effective engagement; the need to balance physical and virtual presence and the need to allow sufficient time for developing competence and confidence not only in using the technology but reflecting on its value in supporting the learning experience.

THE MENTORBLOG PROJECT: CONNECTING STUDENT TEACHERS AND THEIR MENTORS THROUGH SOCIAL SOFTWARE

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The MentorBlog Project

In this paper we describe *MentorBlog* – a project where student teachers training in the post-compulsory education sector used blogs to communicate with their geographically separated mentors. Web logs (blogs) have already enjoyed a short but successful history in education. They have been heralded as a transformational tool for teaching and learning (Williams & Jacobs, 2004) and as a disruptive technology (Kop, 2007). Blogs have been used for a variety of purposes in teacher education, including as a way to generate work based electronic portfolios (Chuang, 2008 in press), and as a means of promoting peer support and peer learning (Hall & Davison, 2007). Their use has been evaluated favourably in both clinical education (Kamel Boulos, Maramba & Wheeler, 2006) and higher education in general (Lankshear & Knobel, 2006) and as well as in more informal learning settings (Stefanone & Jang, 2008). As a form of social software, blogs extend their function beyond mere online reflective diaries, affording the opportunity for readers to interact with the writer through the posting of comments directly to the blog. Blogs reflect personal opinions but have communication with others at the centre of their purpose (Kop, 2007). They thus promote learning through collaboration, and the sharing of knowledge and best practice (Ojala, 2005). Finally, blogs encourage deep and continuous learning through regular reflection and knowledge management (O'Donnell, 2006).

The Research

An experimental method was chosen to compare the experiences of conventional mentoring on campus (control group), against the use of online shared blogs for distance learners (experimental group) to mediate the process between the mentors and their students. Three students in the distance blogging group and three in the on campus face-to-face group, together with their mentors (n=12) participated in the study for a period of at least one full term, and in most cases, for the entire academic year. A qualitative exploration of the reflective diaries and blogs was periodically conducted using content and thematic analysis. Student and mentor names have been changed and assigned initials to protect identities, and all students and their mentors participated on the understanding that they could withdraw from the project at anytime without any penalty.

Conclusions

MentorBlog has already yielded some useful findings that will inform future deployment of blogs and we expect further useful data to emerge as it progresses. We plan to extend this project to encompass more students throughout the post-compulsory teacher education sector. There is also an option to include students in compulsory education sectors. Face-to-face and blogging methods of mentoring each have advantages and disadvantages, but both appear to equally fulfil their aims within their specific contexts. If blogging is implemented as a mentoring tool, it must be seen as non-threatening (Ojala, 2005), not imposed upon students by lecturing staff (Farmer et al, 2007), and as having a real pedagogical purpose (Kop, 2007). Ultimately, students should be given control over what is written and made accessible to their mentors for blogging to be successfully implemented. The mentor's responsibility is then to respond with supportive and instructive comments in a timely fashion. Ultimately, as has been indicated in previous studies, blogging will only be successful if students have the choice to participate, and can see a utility in its use, and where no other method is available or possible (Kamel Boulos et al, 2006; Farmer et al, 2007).

We also aim to extend *MentorBlog* to include nomadic students, such as military personnel, health workers (e.g. nurses and health visitors) and those working in the prison service (prison officers and trainers), who tend to work in several contexts and locations (Wheeler, 2007). These students will write to their online blogs by text using mobile devices such as cell phones. Known as mobile blogging (or moblogging), we plan to test this method for its reliability, usability and utility to ascertain whether it can be a viable method of connection for this special group of teaching students. We intend to report our findings on this project extension in future papers either at this conference, or elsewhere.

THE NATIVES ARE RESTLESS – HIGHER EDUCATION AND THE CULTURE OF THE DIGITAL NATIVES

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In 10 to 15 years several new information and communication technologies have conquered offices and homes: the PC, the Internet and the mobile phone. Now the turn has come to the classrooms. When these technologies started to become important parts of our lives many adults were baffled by the pace of these changes, by the new skills they had to acquire to stay on top, and by the amount of information suddenly available at their fingertips. They were also surprised and humbled to see that many teenagers seemed to master and enjoy the new technology in record time.

Apparently, here was a set of important skills that the pupils mastered better and faster than their teachers. Recent research shows that this phenomenon was in fact mostly appearance, but it was convincing enough to inspire the term *digital natives*. The assumption was that the teenagers who were adept in the new technologies had formed a separate culture defined by the language of digital communication and the immediacy and interconnectedness of the Internet. The development of this new culture had changed their preferred strategies for learning.

Marc Prensky coined the term digital native. Prensky writes that those who were grownups when the Internet was invented and introduced learn to adapt to this new environment, but remain identifiable as "digital immigrants" because of what he calls their "accent" in digital matters. It seems the world has moved on since he wrote this. Numbers from the Citizen Media Project suggest that not all who are parents or teachers have a thick enough accent to be identified as digital immigrants and that not all youngsters are advanced users.

Despite the fact that not all teenagers are digital wizards and not every parent or teacher is left behind by the rapid pace of technological change, the way most young people learn is quite different from what our universities and colleges were built for and our lecturers trained for. We present three examples, which will show just how radical this difference can be.

We go on to predict that these digitally proficient lecturers and professors in higher education will team up with their students to transform their teaching, allowing networking and multi-tasking, implementing the teenagers' tools of choice: Instant messaging, video sharing, gaming and so on. Working together they can develop a learning environment that makes use of the strategies of both digitally augmented lecturers and students. Combining their skills and learning, they can also achieve what the younger users often fail to accomplish: Choosing the right media for the job and finding the content best suited for the task at hand.

MODELLING THE LEARNING AND TEACHING PROCESS IN WEB 2.0 ENVIRONMENT WITH A WORKFLOW LANGUAGE

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Once a year Estonian E-University (e-learning consortium of Estonian Universities) is gathering an amount of e-courses to participate on their open competition for the title of the best Estonian e-course. Requirements are defining e-course as a course which will be held only or partly web-based, is using some kind of learning management system (WebCT, Moodle etc.), is motivating, innovating and pedagogically well-designed. The latter is certainly the most difficult aspect to evaluate, because there is actually no common way to define the criteria of an ideal e-course across all domains and learning environments. Our purpose is to define a visual vocabulary which could be used for modelling the learning and teaching process and, at the same time could be used as a 'common language' for describing learning and teaching activities in past courses. We compiled studies that compared different e-courses, design of e-courses, vagueness an irrelevance of the meta-language of pedagogical (instructional) design. A common way of describing the learning and teaching activities is also necessary for partial automation of analysis and design of e-courses.

The need for tool-independent meta-language for e-course analysis and design becomes even more urgent when we move towards distributed and personalised e-learning environments characteristic to Web 2.0. On the one hand distributed solution gives students much more freedom to choose his or her tools and methods for study process but on the other hand teacher role is becoming more challenging – by composing a course, teacher should follow every student and course as an individual and tools should support semantic solutions that are definitely part of the future of the Internet. Our research problem is how to describe or model learning and teaching activities in a distributed e-learning environment so that every step on it could be shown on the workflow and it would be clearly understandable for facilitators and learners as well.

As we did not want to create a new language from scratch, we decided to adapt for e-learning context a well-known business modelling language newYAWL. YAWL (or Yet Another Workflow Language) was originally aimed to show that with a small amount of constructs it is possible to illustrate most of the workflow patterns. NewYAWL is actually a modification and an improvement of the original YAWL – a range of workflows has been enlarged, a new need of the additional patterns has been appeared.

Our research was the funded by FP6 IST research project iCamp. The first trial of iCamp focused on collaborative learning. Communication and interaction in such a setting was technologically mediated, which took place in diverse landscape of tools and services: blogs, wikis, different media repositories etc.

In our research we found that newYAWL has been a good starting point for creating a new, visual learning activity pattern language. Its capabilities and vocabulary is clearly understandable and can be easily modified and adopted after it into new systems. Our aim was to try how does newYAWL works without any modifications and the results were better than we expected, which gives us a lead to continue our research with other similar languages and finally helps us to compile a new visual vocabulary that is based on a semantical model for E-learning 2.0.

Acknowledgements

DISRUPTING THE TECHNOLOGICAL CULTURE: A FACULTY PERSPECTIVE ON THE IMPACT OF WEB 2.0 IN ONLINE EDUCATION PRACTICES

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For the last 10 years, the growth of online education in the higher education sector has relied heavily in the enhancement of the functionalities offered with current Learning Management Systems (LMS's)[1]. Those functionalities have outgrown the mere course delivery to include more sophisticated course development tools. With the advancement of the so-called "web 2.0" technologies, which entail services and tools offered over the web, through which the user is empowered and becomes a preeminent actor in the generation of new content and managing of information, online educators and students have slowly started to adopt such tools and are found drifting away from the functionalities offered within traditional LMS's.

Institutions, however, are placed in a conundrum, tied up with long term investment in proprietary or third party learning systems. The possibility of having institutions embrace these new tools/services, and finally empower students and faculty in a new role of creators and active participants in the shaping of the web is still an open-ended and unanswered question. Interestingly enough, the move towards such tools does not depend on institutions' decisions; it occurs as a natural evolution of ongoing technological culture change. The focus of this paper rests upon the understanding of this process and the possibilities that lie ahead.

The paper starts out with a summarized description of web 2.0 technologies and controversies on the use of such technologies in learning. Further, at its core, the paper dives into a fresh perspective of an online educator in the process of changing online methods of teaching/learning within the virtual classroom. This process is an authentic example and is inherently tied to the technological culture change, currently taking place in society. The paper finalizes with a discussion of the possible re-shaping and compromise that will need to take place within institutions in order to embrace innovation, while keeping the necessary roots in formal education.

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[1] Also referred to as a VLE – Virtual Learning Environment

A WIKI AS AN INTERCULTURAL LEARNING ENVIRONMENT FOR STUDENTS OF COMPUTER SCIENCE IN AUSTRALIA AND SPAIN

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Can intercultural learning be brought to a Computer Science class? The answer is positive, the authors think, so long as different profiles of students could be brought together in a common pedagogical activity: Spanish students of Computer Science English and Australian students of Computer Science embarked in a joint activity, where both classes could interact and be faced in situations where non-native and native speakers of English would use this language to communicate using web tools. What follows next is the summary of the prototyfication of the asynchronous and collaborative three-week activity designed and implemented by the authors.

The authors opted for a wiki space, as the common space where our students would develop their learning process, given its institution-free nature. The Australian partner's former expertise in using wikis in class also helped to decide on the tool. In terms of group-dynamics, we decided for a whole-class task instead of small mixed teams, given the fact we the authors did not know in advance the number of students willing to be involved in it. This decision influenced the design of the communication and interaction tools in the wiki, acknowledging further developments and insights in the future. The wiki package selected for use was MediaWiki, given its customisable nature to our needs. The package was developed on the Australian partner's server. The task we designed was as simple as a description of the components inside the students' computers. To carry out the task, students had to login to the wiki, and upload the information in a chart format. In fact, students had at their disposal some instructions and hints on what was expected from them, and how their contribution was to be assessed. The implementation of the activity did not suffer from connectivity problems, and all students involved in the activity succeeded in writing their computer component descriptions in time. However, there were complaints, mostly on the Spanish side, about the MediaWiki visual editor and the syntax of the wiki.

In evaluating the activity, we observed a lack of interaction between both kinds of students, mostly because of the group-dynamics, the type of learning outcome, and the absence of a communication space. A general inexperience in using the wiki tool for the students' learning process was also detected, as percentages demonstrate. To overcome these problems and foster a fruitful intercultural learning between all partners, further improvements and developments of the wiki-based joint activity should include (1) the design of small teams' tasks on the basis of Computer Supported Communicate Learning; (2) the implementation of means of interaction and communication between the teams' partners; (3) practising with wikis prior the final task, because the resulting learning outcome is part of the students' continuous assessment, and some degree of expertise in wiki-usage is needed.

DESIGNING E-LEARNING ACTIVITIES WITH A WIKI FOR STUDENTS OF ENGLISH AS A FOREIGN LANGUAGE

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E-tivities with a wiki

The term "learning strategies" denotes various types of small-scale pedagogical designs and teacher interventions aimed at achieving specific types of outcomes related to the learning process. A similar term, "e-tivitiy", denotes educational activities designed by e-moderators for learners in various computer-mediated communication environments. Several collections of all-purpose e-learning activities or pedagogical strategies have been published by various authors and specific online activities were designed for teaching English as a second language.

The use of wiki technology enables the use of constructivism paradigms and collective knowledge building in designing activities like collaborative writing of texts. Its simplicity of use and potential for interaction between the content creators and users makes the wiki an efficient tool for collaborative writing and also creates a social dimension in the online learning process, with a potential to facilitate group creativity and critical thinking. The use of a wiki also enables personal web publishing, development of vocabulary and concepts, peer-to-peer learning, empowerment of learners, and development of a sense of responsibility in learners. The use of a wiki is relatively novel in second language learning. Using a wiki for web-based collaborative language project activities could encourage student interaction, discovery and creativity while helping them acquire the (linguistic) course content combining it with (non-linguistic) computing skills.

The Engwiki project is an ongoing educational activity which started in November 2006 and is conducted at the Department of Foreign Languages, Faculty of Organization and Informatics, University of Zagreb, Croatia. The goals of this project were to test the applicability of wiki technology in teaching English for special purposes (ESP) and English as a foreign language (EFL) at the university level, and also to innovatively use a wiki by engaging the students in various types of individual and collaborative online learning activities (e-tivities). In addition, each e-tivity conducted with the students was evaluated to enable other second language teachers to choose the most suitable e-tivities for use in computer-aided language learning with wiki or other internet-based technologies.

E-tivities designed for an English for special purposes (ESP) university course

The e-tivities that were selected or specially designed for the Engwiki project fall into the following three categories:

- predominantly extensive (free) input and output e-tivities, with motivation sustained through content and non-linguistic challenge; tasks are apparently non-linguistic and tend to have a prominent communicative profile; suitable for content revision;

- e-tivities based on predominantly intensive (controlled) input and output, characterized by insisting on accuracy and are less open-ended; the subcategories of such analytical e-tivities are: vocabulary-related e-tivities and structure-related e-tivities, both of them suitable for structure revision; in some of them, ICT skills and language practice are blended by an emphasis put on visualization of language content;

- halfway between extensive and intensive e-tivities, yet another group of e-tivities can be identified – information-gap based e-tivities relying on visual input/output; simple to do, such e-tivities are ideally used as 'session openers' – through them students both get to know each other and get familiar with using wiki as a tool.

Descriptions of nine e-tivities which fall into the former categories are presented in the paper as well as the results of empirical evaluation of fifteen e-tivities which were used in the Engwiki project. The results of our study of the use of various e-tivities for two ESP/EFL university courses indicate that language teachers should evaluate the e-learning activities with a wiki and choose those e-tivities which performed best when tested by other language teachers. It must be noted that in the Engwiki project the use of wiki on the whole was evaluated favourably when compared with other traditional in-class exercises and out-of-class activities and it did not present a technical problem for the students.

EMPOWERING DISTANCE TEACHERS – TRAINING TEACHERS TO TEACH ONLINE

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Universidade Aberta is going through a profound change with a new leadership and a new strategy for the institution. Central to this strategy is the innovation plan in distance education that involves the virtualization of teaching and learning supported by a new pedagogical model for online education. One of the most challenging tasks in this migration to online learning is to give the proper training and support to the teachers who are going to embody this change and put Universidade Aberta's new pedagogical model into practice. Part of the difficulty of this process was due to a significant number of teachers involved.

In designing this teacher's training program in e-learning our perspective was that to train teachers efficiently in a short time we needed to operate on different levels: first, teachers had to experience in a very real way the role of an online student and the type of difficulties and constraints that may appear; second, they also had to think about that experience from a teacher's perspective, so that they could take advantage of it in their future role as teachers and finally, they needed not only to "know about" online learning, but also to "know how to" do it effectively. In other words, the training experience and the conceptual framework of the first level of the training program had to be **immersive** and **practical** and, at the same time, **reflexive** and **critical**. In this context, the principles that guided our design of the course were based in: *Experiential learning, Conceptual and reflexive learning, Know how to* and a *Pedagogical isomorphism*.

The teacher training programme in online higher education was devised in Universidade Aberta based on the new pedagogical model to be implemented in the University. This program – "*Formação de Docentes em E-Learning*" -, totally realised online, aims to make teachers understand distance education students; how distance education differs from face-to-face instruction or traditional distance education; understand the new learning model of the university; and to make participants gain the skills they need to design, develop and deliver online courses. The program also included guidelines for clear communication and netiquette.

In this paper we present the architecture, the ecology and the dynamics of the first level of a twelve weeks fully virtual e-teacher training program, specially designed to promote the acquisition of online teaching skills as well as provide an "immersive" experience of what it is to be a virtual student. We will present also the first results of course's satisfaction and the implications for what we have called the process of *re-socialization* of teachers entering in a virtual world.

STARTING AN ONLINE UNDERGRADUATE PROGRAM: THE STUDENT'S PERCEPTIONS

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The Universidade Aberta learning model is based on four cornerstones: student-centered learning, flexibility, interaction and digital inclusion. This last one, that we intend to emphasize in this paper, defends the role of the University as a promoter of the development of digital literacy amongst adults. Distance adult education should contribute to the shortening of the gap between those digitally info-included and those info-excluded. In this context, the Universidade Aberta supports has essential to its mission the construction of a Knowledge Society, investing on the preparation of its adult students to be knowledge in modern communication media and networking. Therefore, it is one of its main educational goals to promote educational strategies that contribute to familiarizing its students with modern technological tools.

To effectively promote Digital Inclusion and taking into consideration that online learning demands a specific set of competencies, from the student, all certified learning programs by the Universidade Aberta are preceded by a familiarization module. This module is free of charge, and intends to provide the students with the development of such competencies, before the beginning of their degree or training program in which they have enrolled.

Based on the presented framework and assumptions, the Universidade Aberta pedagogical model calls for the staging of an online familiarization module, before the beginning of the semester. This module must be attended by all students who are enrolled for the first time in any degree or training program. It has the duration of at least 2 weeks, with the students being organized into virtual classes, each being monitored by qualified tutors who are in turn supervised directly by the degree coordinators.

The conception and organization for the familiarization module was guided by a context centered training program philosophy. This translated into a design that was characterized by several activities and modes of interacting very similar to the ones that the students themselves would experience later in their respective degree programs. For that reason it was used a pedagogical vision very close to the one determined by the Pedagogical Model of the Universidade Aberta for undergraduate programs.

The students, totaling 674, were organized into virtual classes with 40 to 50 students per class. The module, identical for all classes, was organized and implemented in the Moodle platform that is currently used for all courses at the University.

After the course had finished, the students were asked to complete an anonymous questionnaire, where we intended to learn about their perception concerning the importance of this module given the competencies that they needed to acquire, and its utility towards the development of those same competencies.

More than the positive perception that the students report about the utility of this module for their future, in terms of technological competencies, technological mediated communication competencies, and the knowledge about the pedagogical model, what stands up the most from this study is the importance given by the students to the interaction and collaboration that they have experienced.

In effect, if we take into consideration the large number of students who had no previous experience in distance learning courses, it should be emphasized the fast perception that they have acquired about the possibility to nurture socially affective relationships and developing collaborative practices in this new environment. On the one hand, this fact reaffirms that virtual learning communities, energized with the gains of network communication and nurtured with collaborative learning principles benefit from strong socio-affective, cognitive and motivational attributes (Harassim, 2000). On the other hand, it indicates that more than establishing pre-requisites, particularly technical, for the students to enrol on fully online courses, it is important to create the necessary conditions to enable a gradual immersion on a virtual environment with collaborative features, and at the same time promote their digital literacy.

A STUDY ON MOODLE'S PERFORMANCE

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Learning Management Systems (LMS) are essential tools to the modern teaching institutions. Moodle is an open source LMS, widely used by open and distance teaching universities, as well as support to face to face courses. There are almost 40,000 registered Moodle sites, all over the world. Moodle can be installed in a wide range of environments: operating systems (Linux, Windows), supporting databases (MySQL, PostgreSQL, ...), and hardware.

This paper addresses the issue of Moodle's performance within different environments, and under different loads. What is worth changing and what isn't to improve performance? When load increases, what should be changed in order to obtain the largest performance gain?

To answer these questions, it is important to subject the application, in a test environment, to the real conditions of use. In order to do it, we use historical data on the use of Moodle in Universidade Aberta (UAb). Several Moodle instances were subject to different load levels and the resulting performance was measured. It is difficult to estimate instantaneous load, even in a working site, where users' habits are known. The number of users is an easier question to address and may be estimated by the number of teachers and students that will be using the LMS. So, in order to estimate future load, we present a conversion method according to the present level of use in this university.

We concluded that high-end hardware and small database size are the most important factors that contribute to performance. Since data tends to increase, systems administrators are advised to consider periodical archival of old data and database optimization. As future work we point in several directions: test clusters with more servers; study the database growth with site usage; consider more database types, more operating systems, more web server types.

AN EXPERIENCE ON E-LEARNING PLATFORM

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Introduction

The Universidade Aberta in Lisbon, apart from the application of the Bologna accords, has shown great changes in its short and medium term strategic approach, in defining and achieving its objectives and in carrying out its plans of action. The most basic objective is to offer completely online courses based on specific pedagogical models, while at the same time affording required, continued and high quality training to educators.

The aim statement

The principal aim of the paper is to create a feedforward system and to analyse the results of the university's experience in teaching *e*-Commerce and *e*-Marketing as part of an accredited Master's Degree in *e*-Commerce and Internet online using the Moodle platform.

The empiric methodology

The *e*-Commerce and *e*-Marketing webpage made available to students was conceived using the Moodle platform in accordance with the principals of the Universidade Aberta's pedagogical model.

During the first week of the course the Learning Contract (virtual class) was presented, which was discussed with the students and accepted by them in a specific forum. The Learning Contract specifies the objectives, the competencies to be developed, the contents guide, online working methodology, learning resources, learning environment, the sequence of learning activities, valuation and the contract guide.

The different phases of individual and group work were distributed by activities that corresponded to different themes. The study materials, tasks to be completed, work set, online tests and corresponding valuations were detailed in the instructions for each activity and were available on the platform.

Feedback (written and/or interactive) was also given to the students for each activity, in order to follow their progress.

Conclusions

During the first semester of the 2007/2008 academic year, the Universidade Aberta started the first Master's Degree in *e*-Commerce and Internet that was completely online and within the framework of the Bologna accords.

The withdrawal rate for this course reached 30%, with 20% of students withdrawing right at the start of the academic year. In terms of *e*-learning courses, 71.4% of the students referred to this as their first course.

Regarding their preferences in terms of the type of learning, 85.7% chose the *e*-learning model while 14.3 % preferred mixed-mode model.

About 42.9% of the students indicated a preference for team work while 57.7% prefer individual work.

With regard to the technology tools used throughout the course, respondents had used forums and email whose average use reached high levels.

As major hindrances found during the *e*-learning course, participants indicated understanding contents, mastering technologies and team work difficulties.

In relation to the Moodle platform 57.1% of students replied that it was very easy to use. As teacher, the major difficulty I encountered initially was implementing the use of discussion forums on behalf of the students.

PROCESSES OF GROUP WORK COLLABORATION ONLINE

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Based on the recent developments on open and distance learning (ODL), the Universidade Aberta has assumed a student centered pedagogical model (Pereira et al, 2007) founded on flexibility – where asynchronous technology is preferred and students and instructors can participate on the Courses from wherever they are located – and supported on three types of interaction: student-content; student-instructor; and student-student. Moreover, on the principle of Digital Inclusion, giving access to a higher education institution to an adult population that had no previous competences on instructional and communication technologies (ICT).

During the last 2 years, the research project MEDEIA on which these authors participate, has been developing work related to creation of learning environments supported by virtual classroom systems (VCS). The task of developing online Courses, and more specifically, designing Curricular Unit plans is one of the Professors' tasks. In this research we aim to understand how do more and less successful groups, in terms of their final product – a project related with the participants professional practice requiring the creation of a learning situation mediated by technological tools – have been influenced in their work process by their online collaborative interactions. This is supported by Barron (2003) when she says that the "quality of interaction had implications for learning". Moreover, our own teaching experience taught us that all students do not equally benefit from collaborative work. It is, therefore, necessary to further increase our understanding about the processes associated with online collaboration and discussion and their impacts on collaborative learning and the participants' knowledge construction. Collaborative learning research (Matusov et al, 2003) suggests the need to give greater emphasis to interactional practices in order to render them more productive. Only by doing that can we build on the knowledge that we have about the development of Curricular Units, and based on it can responsible Professors continually and consistently improve the quality of their Courses. This study was guided by three research questions: 1) What type of cognitive processes are associated with more and less successful groups?; 2) What cognitive and social aspects contribute to make collaborative work more productive?; and 3) How do the individual contributions, in terms of shared knowledge, contribute for the development of the group itself? To answer the proposed questions, firstly, the assessment and classification of the groups' final products was made based on the following criteria: developing understanding about the proposed topic, critical reflection about technologies on learning environments, ability to synthesize, and originality in the presentation of the final product taking into consideration the used technological tool. This allowed us to distinguish the most and less successful groups. After that, we went back and analyzed each group's processes of collaboration, with particular emphasis to the interaction between the participants, during the discussion that led to the construction of their final project. From the 8 groups that were analyzed, two representative ones where chosen to illustrate a more and a less successful case. From the analysis of the group interactions emerged two distinct types of patterns from the more and less successful groups. This analysis was guided by the two main types of categories that we initially defined: knowledge stages and social modes of co-construction. For the analysis, the participants discourse in each group was segmented in order to enable us to identify the way in which they operated, debated their questions and related each others' contributions. This segmentation allowed us to analyze multiple references, and at the same time, made it possible to differentiate individual contributions to the knowledge construction related to the discussion theme "creating a learning situation mediated by technological tools". After, we coded the segmented discourse contributions, having adjusted the categories created by Weinberger, Stegmann and Fischer (2007) for the social modes of co-construction. Two main findings should be accentuated: a) in different groups, previous knowledge was shared differently, and the presented proposals were not tackled by the group participants in the same way; b) in some groups, despite the fact that ideas and resources are presented by some of the participants, these proposals are not picked up by the other group members.

This research reiterates the results of previous studies (Barron, 2003; Salomon & Globerson, 1989) conclusions related to the differences on the quality of collaboration in group work, and how this will influence the participants' results on a group project. In the same way that Weinberger, Stegmann and Fischer (2007) emphasize that "learners may differentially benefit from learning together" (p. 416) and that "knowledge convergence/divergence can be conceptualised differently at varying stages of collaborative learning" (p. 417), we identified similar patterns in our case. As Barron (2003) points out in her research, there is a need to broaden the understanding of collaborative learning to integrate cognitive, social, and relational aspects. In the present study, we aimed to understand the different social modes of co-construction, differentiating them from the contributions related to individual knowledge and how they adjusted towards the construction of a consensus.

A SUCCESSFUL DISTANCE LEARNING PROJECT DEMONSTRATED WITH BOTH CHEMISTRY AND PHYSICS CONCEPTS IN A SCIENCE EDUCATION PROGRAMME

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The desire to increase and improve access, at all levels, to educational opportunities has lead in the latter half of the 20th century to the development of correspondence courses. This form of delivery evolved to incorporate the use of telephones tutorials and became known as distance education so as to identify the students learning off-campus. The development of radio, television and video conferencing gave rise to further variations in the titles given and these included open learning, flexible learning, tele learning and distributed learning. The advent of the Internet and the ability to provide *on-line* delivery has enabled synchronous and asynchronous interactivity and hitherto unforeseen opportunities. Education over the internet may be called virtual education, on-line learning and e-learning but all ultimately describe educational activities that utilize Information and Communication Technologies known by the acronym ICT.

Indeed, it appears little is known about the mechanism of learning and teaching and the role ICT has on the process even though there are significant expectations for automation in education. The method of course delivery determines the re-usability and accessibility of the course content and it is obvious the WEB can be used as a delivery medium for learning material. Thus, the relevant question is: *can the use of technology make learning and the instructional processes more efficient?* A good technology platform for distance learning is seldom based on one single medium or technology. It is rather a combination of different tools that are used to fulfil the requirements of the learning processes in what is often termed blended learning.

The work presented here describes a distance learning experiment conducted between the Universidade Aberta, Portugal, and East Timor specific for primary school teachers in Science Teaching. The target group, primary school teachers, had the following characteristics: (1), mid-career professionals; (2), computer illiterate individuals that also lack access to computers and the Internet outside the designated learning centres; (3), people educated by traditionally means without experience of the concept of self-directed learning; and, (4), people whom also have commitments to both family and work as well as these professional development activities. Of the plausible ICTs that could be applied to these classes, the selection of Video Conferencing (VC) allowed synchronous communication between students and teachers and also imposed other constraints and considerations on the methods used to present the course.

The main purpose of the course was to revive a few scientific concepts and above all to provide the school teachers with hands-on material that would enhance their ability to explain and also motivate young students in science and scientific matters. On that basis, the activities carried out were required to be easy to reproduce in a children's classroom and should use materials to which all had access. Owing to the special characteristics of the target audience we chose two well known and universal themes – air and water – that were then used to explain several common and yet important topics involving the concept of matter, from the atom to the molecules, the difference of pure substances and mixtures as well as the physical states. Two of the activities presented in the course will be described to illustrate the experiments as well as procedures used to assemble the activities.

The course methodology has, despite the initial *fears*, overcome the absence of physical presence of the teacher in the classroom but yet been able through the use of experiments to instil interest and acquire attention from the students thus facilitating their understanding of the world.

This course was a positive experience for all involved and encourages the authors to develop a more detailed and extended course focused essentially on the concepts of chemistry and physics that are so ubiquitously part of our daily lives.

LEARNING COMMUNITIES IN "@LEARN.COM"

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Supported by a project research, this paper tries to frame the virtual learning communities showing a small piece of its empirical work. This intention conducts us to organize the paper through a conductor file: from community to virtual learning community; we will reach some examples between differences and similarities in two kinds of communities. Meanwhile we have organized the paper into four sections:

(1) Thinking about 'community-concept and types', we define *community* as the social context where interactions are produced and maintained, meanings and identities are negotiated and knowledge is acquired. Therefore, it is necessary, on the one hand, to research the context that gives coherence to the *community* and, on the other hand, the users' participation identity in their interactions and in meanings negotiation. Among existent communities typologies, we distinguish the ones that are better adapted to the educational field and are designated as 'communities of practice' and 'communities of learning'. Each of those types of communities can coexist in different teaching regimes and modalities. In the present case, it is an interest of ours to consider learning communities in distance education regime and on online modality, which we refer to as '*virtual learning communities*'. A great part of learning communities develop themselves around a theme, previously set, sustained by pre-established objectives. The empirical data that were collected distinguish that the sociability in the net is beyond virtual interactions, projecting, among others, in the physical affective environment of lovely friendship relations.

(2) Referring to 'learning: concept and modalities', we verify that *learning concept* assumption implies that one shall clarify its *meaning* and its *result*. Learning might be considered as a social process through which apprentices build meanings resulting among other factors, from the interaction between knowledge previously acquired and new experiences. To learn requires relation and, side by side with the unidirectional relation process, emerges the new educational matrix which promotes the multidirectional relation process, community essence. In this new matrix, the confront between the two teaching regimes – face to face and distance – is getting stronger and stronger as well as more meaningful. In this paper, even based on the research done for the project "@learn.com", two teaching regimes are confronted, bringing into prominence the distance regime, the online modality (also designated by e-learning).

(3) Pointing 'learning virtual communities', we accept that social groups built in cyberspace with their own cultures and developed around scientific and educational objectives shape the virtual learning communities. Considering the historical-cultural perspective, the virtual learning community is organized according to two fundamental principles: dialogy and mediation. We present a part of a larger research of the project "@learn.com" (POCI/CED/59736/2004). It consists of a comparative study with two communities of students attending a master – a face-to-face one and an online one. Considering this study we point out the following similarities and differences found in the comparative analysis of interviews to students of those communities.

(4) From students' narratives of face-to-face and virtual masters about their experiences during the course, in general, and learning, in particular, it is important to privilege some dimensions that should be taken into account in future reflections: **a)** the basic attributes of Life Long Learning are frequently referred to in the analysed narratives. The decision processes that led to the choice of masters are based on well defined, professional and personal necessities, and are projected in the different dimensions of Adults' life, namely, in the management of family, professional and leisure times; **b)** the dynamics of collaborative learning, strongly considered in social constructivism, need a suitable integration in Adult's life. Case study shows that in master courses in which there is a social constructivist pattern, students tend to adopt cooperative strategies that enable them a more efficient management of time and investment required to these activities; **c)** Professors and 'course coordinators' profiles identified in students' narratives are supported by two dimensions: a strong scientific formation and a strong regulation of learning. Social interaction between professors-students and students is present and is importantly considered in students' speeches. However, it is necessary to define, clearly, the abilities demanded to these actors in learning communities scenarios; **d)** Students on face-to-face master who participated in this research organize their learning not only from organizational, relational and traditional instrumental structures, but also from the use of the Internet and free tools, mediating their learning with those artefacts. On the other hand, students of virtual master are moving away from the romantic ideal that learning is only managed by the subject incorporate and intensify shared activity in learning. In both situations, face-to-face and virtual education participate in a process of pedagogical and communicative interbreeding that introduces flexibility in the ways of learning that is required in adults' lives without losing typical features of their identity.

NET, TRUTH AND DIGITAL IDENTITY: TOWARDS A HERMENEUTICS OF ONLINE COMMUNICATION

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In this paper we examine how the philosophical legacy of Ricoeur (1990) and Bakhtin (1979), the sociological work of Latour (1993), and the educational writings of Shaffer and Clinton (2006) make possible a better and clear understanding of the fundamentally hermeneutical nature of identity in Virtual Learning Communities. We submit the notion that someone's identity is what remains from the discourse one can create about oneself, particularly in a strictly discursive kind of community as the digital one. In support of this argument we make use of interpretative elements of a given virtual learning community resulting from the research carried out in the @prende.com (le@rn.com) project (2005/07).

The paper is structured into four sections: **(1)** *Truth on the Net.* The recent phenomenon of virtual communities has confronted us with new fundamental questions about the net, and particularly about the real truth beneath online relationships. Constructs like trustworthy that apply to the judgement on the content of communication suggest an interesting synthesis between loyalty and dignity. The former reminds us that the information should be verifiable and therefore likely. The latter applies to a piece of information that must respect the integrity of the one who produces it and who receives it. It must be reliable. Coming to this point, it becomes clear that we must consider the concept of authorship. Indeed, the author, central player in modern written culture, can no longer remain as the main source of authority, which evaluates the fidelity of information. Rather, the figure of the interpreter, always present in oral traditions, returns to its former importance, playing the important role of updating or modulating an external authority. **(2)** *The Truth of the Net.* In order to fully understand the net as a community phenomenon, we have explored Paul Ricoeur's notion of narrative identity. Although the net as such is a diversity of polyphonic texts, a big narrative, it is not a meta-narrative. The challenge presented by Ricoeur's philosophical reflection is to reintegrate fiction, the possible stories, not as fables, but as the narrative unfolding of reality in a way one can understand it. And to face the illusive nature of the shortcut of immediacy, we rediscover the need for mediation. Fiction is just one of the ways to perform that mediation. This mediational process coexists with the idea of the primacy of the Other. *Ipseity* and its particular kind of unchanging through time is really an answer to an Other, to the call of the Other, to the need of the Other and to the desire of the Other to count on me. **(3)** *Net Mediations.* Philosophy of alterity in Bakhtin's thought is strongly connected not only to the cultural and historical dimension of discourse, but also to the great diversity of mediating instruments associated to it. From the analysis of socio-cultural and actor-network theories, Shaffer & Clinton (2006) surpass classical dualisms and enhance the necessity of expanding pedagogical matrixes, in order to facilitate a better comprehension about ways to construct thought and learning, in the simulation processes of digital culture. Miettinen (1999) goes beyond the symmetry of actor-network theory and proposes a dialogic approach of cultural instruments and languages of thought on different communities. The potential of concepts such as mediated action, activity theory and distributed cognition facilitate the emergency of a new analytical category – *toolforthoughts* – that enables a better understanding of simulation processes related to the new cognitive tools. In action settings, the traditional relation between an individual and the mediating instruments is changed. Subjects and objects are actants in a relation with symbiosis, reciprocity and mediation. **(4)** *Ipseity and identity in virtual learning communities.* The project @prende.com [le@rn.com] (POCI/CED/59736/2004) enabled us to access a set of interpretative dimensions of virtual learning communities that converge with the concepts previously presented: (a) Community: a network of actors and relations (b) Narrative and identity: the excellence of the Other, innovation and equality, reciprocity and mediation, difference settings, sharing, thinking about oneself and about the uses of tools in digital scenarios.

We argue that communicational relationship established by cybernauts when they share a community is part of the immersion in the world language and its equivocal nature. This immersion requests the acquisition of a significance excess and an ontological vehemence that is inherent to the *equivocity* of virtual communication. In virtual communities the role of space-time mediations is recreated. The actor appropriates the other actors' voices and acts in multiple nets and simulations. The philosophical legacy of Ricoeur's hermeneutic anthropology, Latour's sociological theory and Miettinen, Shaffer and Clinton's perspectives help us to understand that the phenomenon of virtual communities is an expression of truth. According to Gadamer (2006), our sense of belonging to communities is connected to well defined situations and stories. These experiences, also aesthetic experiences, are not depleted in our subjectivity, or in objectivity of things, but in communicability. The encountering is always *in* and *like* an experience. In this sense, it is possible to talk about truth. Our truth is our mask and virtual learning communities, in which everyone is what one says to be, are a space to share all the masks we could have.

STUDENT INTERACTIONS IN FORMAL AND INFORMAL VIRTUAL SPACES: SIMILARITIES AND DIFFERENCES

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Changes in society today have lead to an increasing need for long-life learning for which training and educational solutions must be provided. On-line learning has been adopted by educational institutions; however, little attention has been devoted to the pedagogical issues. Distance education methodologies must be adapted to best use multiple forms of interaction afforded by the Internet and combine these with the accumulated experience in distance education that permit the creation of new teaching and learning concepts.

This article is concerned with the interaction between students: these are considered valuable both in formal, albeit virtual classes, and informal social spaces. It is our belief that these interactions enrich and complement existing methods of distance education, in which the main interactions were between either student and content or student-teacher.

Educational psychologists have brought attention to the social dimensions required for the learning processes. Indeed, a person's relationship with the world is a mediated one where symbolic systems are intermediate elements between the subject and the world. In this case, the individual is, simultaneously, active and interactive: the built-in knowledge is the result of the gadgets and symbols that are inherent to the cultural environment.

The results presented here are from a study of the first enrolment of a graduate program on Environmental Sciences and included a sample of 113 students. The purpose of this program is to promote and develop the skills and competencies to yield knowledgeable professionals in the topic of environmental studies. The whole programme is offered on line by using Moodle as the learning management system. For each course, the following virtual spaces were created for the students: (i), a website for the course coordination; (ii), a website for the learning materials; and (iii), a website for social interactions mainly between the students.

The present work is dedicated to the analysis of the content of the interventions and interactions that occurred in the virtual spaces (informal and formal communication). The adopted classifications and corresponding analyses were based on the content, subject and objective defined in the initial message placed on each of the threads. Of course, it is not always possible to keep the lines of discussion within the subject initially defined. Nevertheless, these were the parameters defined for the study presented and other selections would have different results.

The study presented here suggests there was a substantial increase with time in both the number and frequency of the interactions. Furthermore, the type of interaction also changed from a simple request for help to a cognitive process where the debates and conversations were deeper and, consequently, more productive at least with regard to the process of learning that is in question here.

It was our expectation that the students would realise that the scientific discussions were most appropriately held within the website of the curricular unit rather than transposing those discussions to a socializing space. However, reality was different and both websites were used but with different purposes. Further work is being carried out and a more detailed analysis on the types of interactions will be performed. It is our intention to have a closer look at the types of interactions that take place within each discussion thread and on the roles that are played by the students in both formal and informal virtual spaces.

REDESIGN OF STATISTICS COURSE – A COMPARATIVE STUDY OF FULLY ONLINE, HYBRID AND FACE-TO-FACE MODES

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An online introductory course in statistics was developed at Tel Aviv University by experts from the Statistics Department, together with online instruction experts. The purpose of this study is to evaluate the effectiveness of a redesigned fully online course "Introduction to Statistics for Economists" by a controlled experiment comparing it to hybrid and face-to-face versions of the same course. An additional purpose is to evaluate the usefulness of web based technological components integrated into the redesigned fully online course.

A variety of statistics courses is available on the Internet, including those that are fully and partially online, as well as ones that have been pedagogically redesigned. Studies that assessed the level of achievement and the attitudes of students who had taken such courses have produced inconclusive findings. In recent years, the term "course redesign" has entered discussions. This term relates to pedagogical and technological changes in large-scale enrolment of online academic courses. Both pedagogical and technological changes in fully online learning environments aim to create a supportive learning environment which will structure the knowledge of the independent online learner from the stage of learning the basic terms through the stage of application and problem solving. The choice to redesign statistics courses stems from the current belief that a change in the instruction of statistics is necessary. Instead of teaching statistics through computations and problem solving on the basis of formulas, more emphasis should be put on understanding the underlying concepts. The aim in statistic teaching is to develop a strategy which emphasizes the understanding of statistical literacy, reasoning, and thinking, which should eventually lead to application in statistic research. Parallel to the need for pedagogical change, there is also a need to use accessible technological components to improve the instruction of statistics.

A controlled experiment was conducted with 151 students who volunteered for the study. They were randomly allocated to three groups. The first group took a fully online course – both lecture and practice. The second group took a hybrid course – practice and drill were done online but the lecture was given in the classroom. The third group, designated as the control group, took a traditional face-to-face course. The study was accompanied by both formative assessment - assessing the efficiency of the web-based tools, and summative assessment – so as to compare the levels of achievement and satisfaction between the two experimental groups and the control group.

The findings indicate that the achievements and attitudes of students in the redesigned fully online course are similar to those of students in the face-to-face course. It also indicates that the online students invested fewer weekly hours studying course materials compared with students from the control group. In regard to the usefulness of the technological components, it reveals that students make extensive use of some components that are mandatory, but do not take as much advantage of optional components such as applets or discussion groups.

INTERACTION IN DISTANCE EDUCATION: A COMPARISON OF TWO ONLINE COURSES

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Purpose

The purpose of this study is to explore the interaction process of two online courses in Turkey and the Netherlands and to make a comparison in order to have a further understanding of educational practices and to discover alternative approaches to learning and teaching. Based on this main purpose, research questions that guide this study are: 1. How does the interaction occur in the courses? 2. Which media and technologies are used in the courses? 3. Which types of interaction are observed in the courses?

Methodology

This is a qualitative cross-national and comparative case study. Research site was two online courses of Web-based graduate programs in distance teaching universities of Turkey and the Netherlands in 2007-2008 Fall Semester. The course in Turkey was about e-business which was a course of a graduate business administration program for working professionals in business. The course in the Netherlands was about e-learning which was a course of a graduate education program for professionals working in education. In order to select comparable courses, "Rubric for Assessing Interactive Qualities in Distance Courses"[1] was used. Data was collected via observations and interviews with the experts and instructors in both universities.

Conclusion

This study can be regarded as an attempt to examine the comparability of the general issues of interaction process in two online courses of Turkey and the Netherlands, providing a framework for comparison of other specific content areas of interaction for further studies between these courses. As a consequence, it can be said that interaction process is similar except for some different tools used in the two courses. It can be concluded that the practices examined in online courses of Turkey and the Netherlands in this study offer both an interactive and independent study appropriate for the learners who are working professionals in business. Finally, technology plays an important role in interaction process in online courses. So, similarity in technology and the tools used in the two courses can be regarded as a positive case for reducing the digital divide existing between a developing country – Turkey, and a European Union country – Netherlands. Other implications for further studies are listed below:

- As it is the second-generation Web tools that promise to take interactivity to the next level, blogs, wikis, and podcasts can be implemented in conjunction with first generation Web tools to enhance interactivity and create engaging learning environments.

- To promote interactions among learners and instructors, tools that allow informal interaction can be added to the design of courses in distance education.

- Cultural issues can be exposed by examining and comparing perceptions and attitudes of learners and instructors in interaction process in a further study.

- As the experiences in two courses are similar, Turkish and Dutch universities can create programs together by collaborating for multinational distance education programs.

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MULTIPLE CHOICE TESTS IN DISTANCE LEARNING: SOLVING THE PROBLEM OF POORLY EVALUATED QUESTION POOLS THROUGH NONMETRIC MULTIDIMENSIONAL SCALING

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A principle tool for evaluating learner knowledge within the scope of distance learning is multiple choice questions. In view of the ever growing number of tests that are given to learners, evaluating the question pools in advance is becoming something of a practical problem, as the usual method of counting correct answers entails a great dependency on clarity and correctness of the questions and the response options.

The paper suggests a procedure for enabling knowledge, within distance learning, to be assessed using multiple choice questions, without the need to examine the correctness of individual responses. Using this procedure, the pairwise similarity of the response pattern between examinees is depicted in a low-dimensional space with the help of nonmetric multidimensional scaling. The quality of each candidate can then be discerned from the relations between the persons. An experimental evaluation using the external criterion of four groups with differing levels of expertise shows that with a well evaluated question pool, the procedure is as good as the traditional counting of correct responses, and in the case of a non-evaluated question pool, it is even markedly better. This solves a fundamental problem inherent in tests conducted through distance learning.
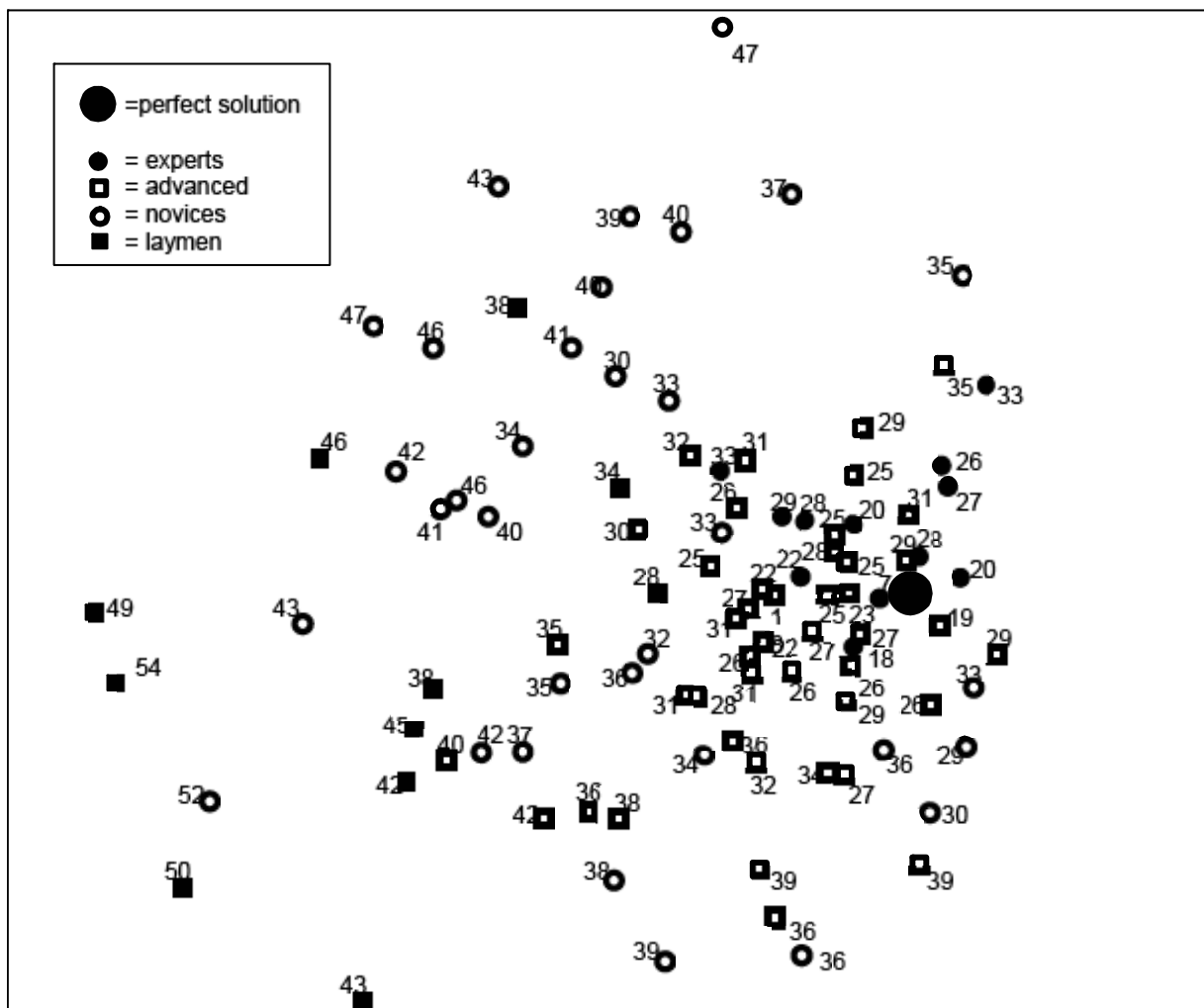
Relational NMDS map of 101 subjects (four different levels of knowledge in the tested area), figures indicating the total number of errors made by the respective subject when evaluating the response quality by the traditional method

E-TUTORING AND MATHEMATICS: HOW THEY WORK IN BLENDED LEARNING COURSES

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The Tutorship Project

In every educational institution the teaching of mathematics has had to face growing and more specific problems, especially in relation to modern students' attitude towards this discipline coupled with a general decline in students' mathematical abilities. A change in teaching methods through the use of e and blended learning can help students overcome any natural barriers they have with the subject of mathematics by allowing lecturers to follow a creative teaching pattern even in subjects where the theoretical aspects are prevalent, such as mathematics. The use of tutors in blended learning can aid the students in the understanding of the subject but also in the development of different skills which will enable to participate more fully in University life.

The idea of guiding the student to lifelong learning skills occurs when the student "learns" to participate actively during the tutoring process and can therefore assume for themselves tutoring skills. The tutor emerges as an important bridging factor between cultural, disciplinary and contextual experience. Such a figure should be able to create ties and interactions between the many steps in the educational life of the student. The tutorial also has the role of promoting life-long learning by removing obstacles that stand in the way of effective participation on behalf of the student in courses, by identifying and developing the complex needs that are manifest in the educational, social and professional culture of the student. Starting from 2004-2005 the Advanced Mathematical Methods course in the Economics faculty was delivered in blended learning mode. Students divided into two broad camps: average-low ability students, who preferred to undergo practical activities, exercises and tests and showed little interest in participating in forums or more collaborative problems and average-high students who participated actively in more complicated problems and showed some willingness to interact with fellow students, or rather would respond to any adjustments made by other students to problems set by the lecturer. The lecturer was interested in drawing out the average-low level students in order to give them the confidence to participate more and therefore learn to interact more spontaneously with their peers in an e-learning context. The following year (2005-2006) a tutor system was instigated whereby certain students from previous courses who had demonstrated both skill in the discipline and active interest in the e-learning part of the course were engaged as tutors. The idea being that someone who was closer to the students themselves would be able to assess their needs, abilities, be able to oversee their online participation and bring out those who needed it. The idea of using senior students is that they are closer to the students' needs on some levels than the lecturer.

For the course in the academic year 2006-2007 the tutor role evolved somewhat to become a "holistic tutor", that is, tutors now engage with students within the classroom as well as the online setting. The use of the word holistic denotes a role that encompasses all aspects of both the course and the students' path through it. The holistic tutor not only operates on a didactic level but also maintains a watchful eye on the students' welfare. The tutor's role is much more informal and allows as student who may not be too confident in his or her ability to make contact with a far more approachable figure. It was also hoped that tutors could encourage a certain collaboration amongst students. The project described in this paper demonstrates the potentials and weaknesses of the diverse forms of traditional tutoring and has demonstrated the need for greater integration between activities in the classroom and online by tutors. The principle aim is to develop the relationship between student and both in the classroom and online. Rather than have a tutor that is a discipline expert or acts as a facilitator online, the tutorship project has assigned different activities to various tutors to undertake in the classroom (exercises, seminars etc) depending on each person's strengths. Each tutor has a different context and various tasks in order to support the different needs of the students and their particular approaches to study. Each tutor has a personal forum and is in close contact with the teacher of the course in order to resolve problems and to ask for a direct intervention of the teacher if needed. The results of this experiment proved interesting. The use of student/tutors in the e-learning part of the course meant that students engaged with it much more quickly and not only in standard activities, but also by participating in discussions and the resolution of problems posted by the lecturer. Through the experience we have undergone we have decided to change the role of tutor from a disciplined based "teacher" to one which is more focused on the students' interests, and so have created different tutoring roles.

THE TRAINING ROOM: A WEB-BASED MULTI-USER TEACHING PLATFORM

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Despite decades of research we still experience a lack of appropriate and interesting content that would engage learners and improve the learning process. It is often necessary to provide a complex level of interactivity that stimulates users' engagement, apply different interactivity concepts as object, linear, construct or hyperlinked interactivity, and non-immersive contextual interactivity as well as immersive virtual interactivity. Computer games, and games in general, support these aspects required for the learning process. With games, learners are encouraged to combine knowledge from different areas to choose from a number of given solutions or to make a decision at a certain point, and in a game environment they can test how the outcome of the game changes based on their decisions and actions. Learners are also encouraged to contact other team members and discuss and negotiate subsequent steps, thus improving, among other things, their social skills.

Game-based learning has gained popularity in schools and has been proposed for adult education, both at Universities and in the corporate training sector. Game playing is becoming a new form of interactive content that provides an interactive and collaborative platform for learning purposes. With Universities looking for new positioning in the changing setting of lifelong learning and needing to develop innovative forms of learning in order to provide concepts for lifelong learning to their prime customers, students, game-based learning is of prime importance. Modern technology needs employees proficient in effective communication, teamwork, project management and other soft skills such as responsibility, creativity, micro- entrepreneurship, corporate culture, etc., and game-based learning can provide the platform for teaching these skills.

This paper discusses the constructivist design required for successful game-based learning. A model is provided to display how game-based learning occurs which includes a time element to allow the player to progress through the game increasing their knowledge and acquiring new levels of ability. An important role in current learning structures is played by "collaborative learning", which allows participants to exchange information as well as to produce ideas, simplify problems, and resolve the tasks. With this approach, the teacher is the active partner, moderator and advisor of the educational process, not just a repository of the information importing his or her own knowledge to a passive student as in traditional education. "*The Training Room*" platform is provided as an example of collaborative learning using constructivist methodology. The product can be found at www.gamedesigncampus.com.

"*The Training Room*", a platform based on the successful EU funded concept of *UniGame*, offers an environment where trainers can define there own on-line role playing scenarios and provide the opportunity for learners to apply factual knowledge and to gain experience through the digital world. Trainers can define new games or adopt and modify sample games without any programming skills. The platform provides a variety of communication means within the scenarios; players can communicate with the use of discussion forums, text and voice chat modules as well as through multi-user video conferencing. "*The Training Room*" can be classified as a role-play game where the learning outcomes fit into the knowledge and affective learning categories. The product fosters participation in problem-solving, effective communication, teamwork, project management, as well as other soft skills such as responsibility, creativity, micro-entrepreneurship, corporate culture, and cultural awareness. It is designed for use as a supplement to normal in-class teaching and corporate training, but it is also possible to be used independently from a class course.

RISK MANAGING YOUR VLE: STRATEGIC IMPLICATIONS FOR LEARNING PROVIDERS

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This paper is of interest to those who use mediated platforms as virtual learning environments and managed learning environments within the context of either a learning management system or content management system. These acronyms serve only to define the confusing and sometimes highly complex nature of that by which we now choose to mediate the communication and delivery of our learning programmes / products.

The delivery of mediated learning has continued to evolve expedientially with greater emphasis being placed upon meeting new, more mobile technologies that are closely related to the user interface, as exposed by both the learner and the deliverer. The development of new and evolving learning technologies to enhance the learners experience has led to a greater reliance upon available ITC mediated VL platforms that appear to create a learning solution, academically and functionally, both for the learner and the learning provider. This has placed a greater pressure upon learning providers to meet both the commercial cost and the pedagogical implications of these as part of their strategic planning and development.

The focus of this paper is related to the authors' experience in measuring and managing risk potential within the context of establishing capacity building, appropriateness, economic justification and sustainable platform evolution as a pedagogical and technological focus of Northumbria University's future strategic direction, as a global leader in the delivery of higher education. The implications of this study are of interest to those who understand the fragility exposed to large organic learning institutions such as Universities and colleges of further education in the form of the dictation of commercially driven products (VLE/MLE's) and the impact this has had on radically shifting the emphasis of the delivery of learning and the choices we make in relation to our stakeholders.

INFORMAL LEARNING IN THE CONTEXT OF FORMAL ACADEMIC EDUCATION
SOME FACTORS OF SUCCESS

Gottfried S. Csanyi, Vienna University of Technology, Austria

"A respectable number of teachers at TUW (Vienna University of Technology) are already stimulating some kind of informal learning by giving their students assignments with open structured problems to be solved in small groups. Especially courses offered as blended learning scenarios are often following this concept. Nevertheless, there could be improvement in terms of quantity and quality. But for the latter we still need more detailed empirical research upon the factual conditions and structures of successful informal learning." (Csanyi et. al., 2007a)

Starting from this shortened outlook of last year's contribution, this paper presents first results of our research.

Methods and questions

In consideration of the restrictions of a support unit doing research we decided to apply a qualitative approach. This decision was linked to the expectation to get results which allow for the development of explicit hypotheses about detailed interrelations of relevant factors of success on the basis of our findings. Step 1: In a series of informal interviews with members of the student's councils of the eight faculties of TUW we asked for best-practice examples of courses applying e-learning elements in their faculty. The results of these interviews were a longlist of about 15 courses and a shortlist of three *very-best-practice* examples. Step 2 was a survey carried out by e mail or via blog (of the respective course) informing the participants about and inviting them to join the questioning. We addressed the participants of one course of the Faculty of Mechanical and Industrial Engineering with 320 students, and one of the Faculty of Mathematics and Geoinformation with 28 students. The blog-mediated enquiry referred to a course at the Faculty of Informatics with about 700 participants. According to the qualitative approach we posed one yes/no and two open questions which could be answered by the students in every way they wanted. *1: Is – in your opinion – the course #: (…) Title: "(…)" a best-practice example for a successful course? 2: If yes – what are the crucial attributes of quality / success of this course? 3: Why do – in your opinion – the attributes mentioned above have such a positive effect?"*

Results

Here we give an overview of the most frequently stated factors of success. Details are discussed in the full paper.

Area	Sub-area	Attributes
Course	Concept	(a) Students are an active part of the course, have to play an active role
		(b) Great number of interesting and diversified assignments
	Content	(c) Up-to-date topics
		(d) Relevant for course of studies and beyond (vocational practice)
	Presentation & technology	(e) Vivid, thrilling, interesting presentation
		(f) Immediate communication - everywhere & every time (time saving)
		(g) Tools are easy to handle
Teacher is		(h) Highly interested in student's development
		(i) Highly interested in subject matter / course topics
		(j) Charismatic
		(k) Humorous

INTER-SECTORAL MODELLING AND COLLABORATION COMPETENCE NETWORKS

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There are experts in different organisational units disposing of special know-how. The efforts to extend the e-learning development and application were intensified and diversified in the last few years. Depending upon the particular background the researchers, developers, and users dispose of different kinds of views regarding their knowledge, skills, abilities, or competencies. Therefore, a lot of diverse processes, methods, tools for opening up new resources were developed and applied in e-learning and e-education resulting in a world from particular islands up to the huge network solutions spreading across the beginner's level up to the highest stage. That is why competencies have to be developed to integrate the different kinds of levels and solutions for facilitating the user's access to the e-learning or e-educational systems, respectively. The holistic sense of the learning activities is the competence and knowledge development, insuring the sustainability of the learning procedures.

It is important to reveal the particular competencies and to analyse as well as to evaluate them. The creation of new competencies will be advanced by passing on information and knowledge to related partners. Therefore, communities and clusters are especially appropriated forms of organisation. Community is a fellowship of like-minded persons forming a network based on continuous information exchange. In contrast, the cluster is a network of cooperating key persons with relative fixed relations. The communities are characterised by less dynamic of the change of the relations between the agents. Usually, the continuance and sustainability of clusters will be better.

The precondition for creating and developing a competence cluster is to find out the quality and quantity of the competencies of the network partners. Special methods such as different kinds of mapping are available to acquire the needed information and to represent it in the right manner. The opportunities of the competence development in networks can be defined on the basis of these analyses. Especially, the level of competencies of the network associates and the opportunities of the mutual supplementation of their competencies are essential for the decision of forming the competence clusters in the separate partner units as well as for the cross-linking of clusters in the framework of a superior competence network or a master cluster.

For arrangement and structuring of the detected information there are various methods, e.g. competence mappings. These maps are in turn multivalent useable. It provides a basis for knowledge transfer in multilayered architectures of e-learning units. With the help of these maps it is possible to form, enlarge and advance the open knowledge and competence network. Furthermore, it can support the experts in their work and act as base for knowledge transfer among the key personnel. Otherwise it is possible to forward the appliance and the users systematically by dint of the last mile support. The quality of the open learning process can arise.

The developed highly qualified competence clusters can be transferred and exported in the next step out of the single network into other national and international contexts.

On the technological view of e-learning competencies it is possible to set up a knowledge network for information and knowledge competencies in the next step. Thus, knowledge competencies can be cross-linked. For the realization of this level, it is necessary to develop and integrate incentive schemes and a system for rating the knowledge for further use.

BUILDING GLOBAL BRIDGES TO THE FUTURE: OPPORTUNITIES AND CHALLENGES FOR CROSS-BORDER DISTANCE EDUCATION

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Globalisation: A Catalyst for International Higher Education

Globalisation is transforming the international marketplace and accelerating unprecedented socio-economic, cultural, social, political and educational change across the globe. The forces that are driving this transformation are diverse and complex. Global competition, advances in information technology, employee mobility, multiculturalism, emerging economic markets, English as the global language, and global migration are just a few of the driving forces.

Cross-Border Higher Education: A Competitive Edge Strategy

The increasing development of cross-border higher education is, to a large extent, a direct response to this economic competitive edge that is driving the national agendas of many countries. For many nations, the short-term strategy of tapping into the expertise, research, and knowledge base of highly developed educational systems is preferable to expending exponential resources domestically to gear up. *The long-term strategy, of course, is for these nations to develop a high quality, sustainable higher education system domestically*.

The Changing Higher Education Global Landscape

During the past decade the international higher education landscape has changed dramatically. We have seen increased mobility among students and more universities engaged in cross-border delivery of higher education programs through branch campuses, distance education and blended approaches to educational delivery. We have seen new providers, public and private, enter the global higher education arena. In some instances, home country students may forgo formal study abroad programs if foreign providers are offering flexible, culturally sensitive, academic programs in their home language and/or English via distance technologies or a hybrid of distance and face-to-face delivery modalities. Conversely, distance education and cross-border delivery inherently faces some major pedagogical, logistical, language, cultural and social challenges in the delivery of these programs.

Distance Education as a Strategic Resource

Distance education has become an important cross-border delivery model. Examples include The Open University, the Arab Open University, UNISA (University of South Africa), the University of Texas System TeleCampus, Stanford University, the Indira Gandhi Open University, Monash University, Athabasca University (Canada) and many others from all regions of the world. French universities are actively engaged in cross-border delivery in Turkey, Vietnam, Armenia, Egypt, Lebanon, UAE, and China and increasingly distance learning is being incorporated into these cross-border initiatives. In East Asia we are increasingly seeing more cross-border delivery by Chinese, Malaysian, Singapore institutions. Indeed, it is a brave new world for international higher education.

THE DEVELOPMENT OF E-SERVICES IN AN ENLARGED EU: THE CASE OF E-LEARNING

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Pal Gaspar and Renata Jaksa, ICEG European Center, Hungary

IPTS launched a project in 2006 to study eGovernment, eHealth and eLearning developments in the ten New Member States (EU-10)[2] that joined the European Union in 2004. The research aimed to assess the current status and developments of each of these domains, the most important opportunities and challenges faced by the countries concerned, the lessons other Member States may learn from them, and the related policy options. National experts from each country gathered the relevant qualitative and quantitative data for analysis, with a view to assessing each country's current state and trajectory, and to determine their main factors that drive developments. This analysis serves as a basis for policy and research recommendations.

In this study, eLearning was defined as encompassing both learning through the use of ICT and learning the ICT skills necessary in a knowledge society. Hence, the study considered the use of ICT in formal education (schools and higher education), the use of ICT in training and learning at the workplace (professional education), the use of ICT in non-formal education (including re-skilling and training for jobseekers) and the use of ICT in everyday life (digital literacy/digital competence and informal learning). This article summarizes the results of this research on eLearning, complementing them with European statistical data. First, the context for eLearning in the EU-10 is described. Then, an overview, based on information from the project reports, of the status of eLearning in different settings in these countries is presented. The article concludes with suggestions for eLearning related policies. The national reports and the synthesis report developed in the study can be found on the IPTS website at: http://ipts.jrc.ec.europa.eu/.

The national reports show clearly that EU-10 is not a homogeneous group of countries. EU-10 countries differ in many respects, as do those in the EU-15. The common contextual features of the EU-10 include large income inequalities, social divides, regional disparities and persistent long-term unemployment. This puts further emphasis on the need to consider not only solutions for the EU-10 as a group, or as individual countries, but also to pay attention to the different regions and population groups within these countries.

The educational context in most of the EU-10 countries shows good levels of basic education and public investment, but low rates of lifelong learning, i.e. adults participating in organized education and training activities. In ICT development, many of the EU-10 countries are still lagging behind the EU-15, but they have been catching up quickly and the rates for access, usage and skills are getting closer to the EU-15 average. Furthermore, Estonia and Slovenia especially show very high IS development levels. However, ICT access and skills remain a constraint for remote areas, less developed regions, and some user groups such as ethnic minorities, older people, and the unemployed. The reports show that ICT is being used in all educational settings, although not all learner groups and environments have equal usage. Higher education shows the most developments in ICT usage for learning.

Overall, it can be said that eLearning is already progressing in the EU-10, although information society developments started in most of these countries much later than in the EU-15. The take up of the Information society has been fast and the development of other eServices (eGovernment, eHealth) has also increased capabilities and interest in using ICT for learning. As the economies are changing and there is a need for employees with both high general qualifications and ICT knowledge and skills, the demand for learning ICT skills and ICT use in lifelong learning has been rising. All the country reports suggest that eLearning is receiving more policy attention. Suggestions for regional, national and EU policy development include: addressing low digital literacy, ICT infrastructure and access; promoting awareness of the potential of ICT for innovation and learning; improving settings for ICT and innovation at educational institutions; coordinating the overall vision and policy to support ICT and innovation for lifelong learning; carrying out R&D on developing and sharing solutions; developing measurements and guidelines for good eLearning; and supporting the eLearning developments with EU structural funds.

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[1] The views expressed in this article are the sole responsibility of the authors and do not necessarily reflect the views of the European Commission.
[2] Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia

THE FINNISH ONLINE UNIVERSITY OF APPLIED SCIENCES – FROM NATIONAL TO INTERNATIONAL

Teija Lehto, The Finnish Online University of Applied Sciences, Finland

Organisational Structure and Background

The Finnish Online University of Applied Sciences (FOUAS, also referred below as "Online University") is a networked co-operation organization of all the 29 Finnish universities of applied sciences. It manifests itself as a national virtual campus which includes all its members – all the Finnish universities of applied sciences.

The FOUAS operations and services are coordinated by the development unit, which is located in the city of Tampere, at TAMK University of Applied Sciences. The FOUAS development unit was founded in 2001. The services offered by the Online University are mainly financed by the Finnish Ministry of Education and the Finnish universities of applied sciences. Some financing has also come from the European Social Fund (ESF).

The cooperation between the FOUAS and the Finnish Virtual University has been very active since 2007. The Finnish Ministry of Education is encouraging these two national virtual campuses to offer more and more shared services in future.

The Online University Services – from National to International

The main objectives for the FOUAS Development Unit have been:

- To arrange exchange of online courses between all Finnish universities of applied sciences.
- To define guidelines and make recommendations on the policies of acceptance of studies in other universities of applied sciences.
- To offer high-standard educational services, and coordinate the production of online learning materials for all the Finnish universities of applied sciences.
- To promote modern information and communications technology in learning.

The services the Online University offers are available to the students, university staff, and the partners on the www.oncampus.fi (oncampus.fi) portal. The portal has been designed to provide one point of access to all the FOUAS services. The portal web pages are maintained in three languages: Finnish, Swedish and English. The main services at the oncampus.fi portal are the Study Services, the material bank and metadata repository and the e-Production platform.

Study Services provide one point of access to the online course supply arranged by the 29 Finnish universities of applied sciences. It also offers a fully electronic application system to the courses. In 2007 as many as 682 courses were available for the students, and 2603 electronic applications were accepted on the portal. The **educational material bank** and the learning material metadata repository **DIGMA** are also key services of the portal. The **e-Production platform** is an environment inside the portal, where teachers and developers can compile course material from separate learning objects. The complied courses are available for teachers and students on the portal.

Once we have accomplished this all nationally, why not simply apply the same scheme internationally? From the technical point of view foreign universities could easily be added to the oncampus.fi portal services. Starting with the European educational institutions would be easiest, because inside EU we have agreed on the all-European ECTS crediting system.

However, international flexible study right is not a technological issue in the first place. It is an administrational and a political one. As soon as we manage to agree on the study compensation principles and procedures across the borders, it will be reasonable to create information systems to serve the purpose of the European flexible study right.

NORDIC PERSPECTIVES ONLINE – LESSONS LEARNED FROM A FIVE COUNTRY COOPERATION

Erica Sahlin, Gunilla Sterner Kumm, Swedish Association for Distance Education – SADE, Sweden

Innovative use of online conferencing

The subject of this presentation is the experience from a close project co-operation between partners in the Nordic countries of innovative use of online conferencing in the field of e-learning. The content of the conferences varied – development of co-operation between organisations in the Nordic-Baltic region, quality development, use of learning objects etc.

Background

Since 2001 the Nordic associations for open and distance learning have cooperated in different activities. It started with the SOCRATES Minerva project BOLDIC in which there was a strong participation of Baltic partners. In 2005 almost the same partners joined forces again for a project called Flexible eLearning network – Nordic perspectives Online. It was funded by the Nordic Council of Ministers through its programme NordPlus Voxen. The idea of the new project was to follow up and develop the BOLDIC experiences in online conferencing. Focus was still on the specific Nordic-Baltic intercultural understanding in ODL and the possible contributions to this lately stemming from the rapid involvements of ICT's in all parts of the educational sector.

The new development project, called NordFlex, was dedicated to:

- Further the dialogue between ODL and e-learning professionals throughout the Nordic-Baltic region;
- Create awareness of quality when using digital learning objects by stimulating participants to take part in different evaluation activities;
- Develop online conferencing methods building on the BOLDIC experiences and the new tools later presented.

Focus of the presentation

During the presentation conclusions and a summary of the results of the project will be presented. This will include short summaries of Nordic perspectives on e-learning, the online conference formats and themes, conclusions about the best ways and methods to use online conferences for international project work and some general observations from the project evaluation.

The audience will be invited to contribute with their experiences of similar activities.

IMPACT OF OUTREACH IN E-LEARNING – ROLE OF AN INTERNATIONAL COMMITTEE OF A NATIONAL AGENCY

Petersson G., eHealth Institute, University of Kalmar, Algers A., Swedish University of Agricultural Sciences, Fransson T., Royal Institute of Technology, Stockholm, Lagergren F., University of Gotland, Nilsson A., University of Växjö, Tågerud Y., University of Kalmar, Westman P., Swedish Agency for Networks and Cooperation in Higher Education, Lundquist J., University of Linköping, Sweden

Higher education is more and more globalized thanks to the internet facilitating collaboration as well as competition. In order to keep up with international trends within higher education (HE), each country can benefit from an "educational intelligent service", i.e. a body that can advise authorities and universities. In Sweden, this kind of body – the international committee (IC) – has existed since 2003 at the Swedish Agency for Networks and Cooperation in Higher Education. The members of the committee have different connections to international networks within the fields of eLearning field and Teaching & Learning. The IC acts mainly through study trips, personal contacts and literature reviews. Examples of trends within the higher education sector that the IC has identified: increased emphasis on issues related to quality assurance and assessment; awareness about the significance of ranking systems and their impact; e-learning as an integrated part of Teaching & Learning, increased used of IT-based tools not only for distance learning but also in campus-based academic courses/programs. The committee communicates its observations to the agency and also to representatives from all Swedish universities. We conclude that a nationally based international committee for eLearning and other educational issues is well suited for early global information exchange that in turn will promote the quality and development of higher education.

TOWARDS AN INTERNATIONAL COMMUNITY OF E-LEARNING EXCELLENCE

Dawn Leeder, Raquel Morales, Reusable Learning Objects CETL, University of Cambridge, United Kingdom

The Centre for Excellence in Teaching and Learning (CETL) in Reusable Learning Objects is a consortium of three major UK universities (London Metropolitan, Cambridge and Nottingham). For the past three years, the CETL partners have been building, supporting and sustaining powerful communities of e-learning practice in order to create, share, reuse and evaluate high-quality e-learning content in the form of learning objects. To achieve this it has designed and implemented the Wolfson Reward Programme, an intensive residential experience, designed to reward staff and seed and support emergent networks by providing quality, protected time for them to generate ideas and create e-learning content in a supportive and creative atmosphere.

The Wolfson Reward Programme has been evaluated very highly and continues to grow and evolve nationally. Building on its success, in 2009 the RLO-CETL is launching the Wolfson e-Learning Fellowship programme, where senior academics and academic-related staff from higher education institutions worldwide are invited to apply for visiting Fellow status at Wolfson College, Cambridge where they will carry out a programme of e-learning related work for a ten-week period leading to significant outputs that may be redeployed for maximum effect at their home institutions.

This paper outlines the background to these initiatives, showing how the networks have grown organically and have been nurtured by promoting a culture of sharing and by careful continual critical evaluation. It concludes with an invitation for like-minded colleagues to join the Fellowship and form the vanguard of an international community of e-learning excellence that can have an impact on a global scale.

DISCUSSING DIGITAL LITERACY THROUGH E-INCLUSION INFORMAL E-LEARNING IN EUROPE

Mehmet Kesim, Anadolu University, Turkey

Introduction

It appears that the digital revolution is unavoidable. Because of this overwhelming development, new ideas must ensure the transformation to interconnected and motivated people taking place in a common purpose of learning. This can be achieved through Information and Communication Technologies (ICTs).

While technological advancement continues, it is essential for developing an understanding of e-inclusion to achieve the cultural change necessary to sustain social and cultural lifestyles. This achievement can be supported by the use of ICTs, which provide many potential benefits for digitally engaged individuals. While the development of the knowledge society has contributed to the widespread use of ICTs in Europe, various changes taking place on a demographic, socio-economic, digital literacy and aging societal level contribute to differences in usage observed between urban and rural areas. While developing technologies generate new inequalities in these fields, access to broadband can help cope with these diversities.

e-Inclusion

The term "e-Inclusion" covers all aspects of the use of Information Communication Technologies (ICT) and refers to an inclusive information society. The aim of this term is to enable full participation in the information society of all people, despite individual or social disadvantages. Considering that e-Inclusion has a role of providing social justice and equity, it is essential for the achievement of sustenance of the social and cultural diversities that contribute to inequalities in various fields.

In accordance with the Ministerial Declaration of Riga 2006, based on the requisite that EU Member Countries develop digital literacy and competence actions through formal or informal education systems, it is essential that the revolution in teaching and learning that is brought upon us by ICTs be taken advantage of to developing e-Learning systems which will empower learners regarding the management of their learning process and to enhance competitiveness in knowledge-based economics, providing better jobs for social cohesion. Various issues such as unemployment, skill obsolescence, productivity and the diversity of people's needs must be addressed by the EU, which require that radical changes in ICTs are managed to accommodate the modifications taking place in a diverse societal context. Knowledge is becoming a major factor for accelerating change, and each community has a responsibility to share specialized information for the development of the community. E-Learning plays a vital role in this process.

Variables involved in the achievement of the goals of e-Inclusion include Internet usage, ICT and ageing, geographical divides, and digital literacy. The data obtained regarding these variables show that EU cultural and social institutions are having to make adjustments utilizing existing measures of productivity and economic change due to difficulties related to the use of ICTs by the aforementioned variables.

Conclusion

The achievement of the goals of the Riga Declaration are hindered by the aforementioned variables involved in e-Inclusion. Obtained data reveals that while ICT coverage is at acceptable levels, actual penetration is trailing behind. The flexible nature of ICTs negates excuses for lack of e-Inclusion, especially with special needs groups. It appears that the accessibility, appropriateness and accreditation requirements of e-Learning are fulfilled under the EU circumstances. Affordability is a constraint not only for e-Learning, but for e-Inclusion and the solution of the disparity between broadband coverage and digital literacy. Overcoming this obstacle will achieve the digital engagement essential for EU societies.

WHICH COMPETENCES FOR STUDENTS AND TEACHERS OPERATING IN THE "CONNECTIVE" SOCIETY?

Corrado Petrucco, Luciano Galliani, University of Padua, Italy

It is still rare in schools that social software becomes part of didactics as a specific support of curricular activities. However its use in scholastic and training contexts cannot be ignored for long because there would be the risk of creating strong cognitive dissonances in students that would see the use of tools and processes in institutions that are no longer *synchronized* with those they use themselves in daily life and will use in future working contexts. Teachers must be aware of the added value of social software, that they should first use efficaciously in their daily Network activities outside the school to then introduce it in daily didactics. A suitable educative and instructive proposal could therefore attempt to integrate the *formal* and *informal* in a coherent way but with the aim of not stopping at a limited optic of compulsory school but rather opening up horizons of life-long learning and recognition of the importance of participating in communities of practice and learning in the course of life. In fact social software is increasingly proposed as an efficient tool which permits the sharing and storage of subjects, practices, signs and languages. It is a model that follows a participative approach to knowledge and is strictly linked to social constructivism (Brown, Collins and Duguid, 1989) (Jonassen, 2000) for which learning is mainly an active process and socially situated for resolving real problems. Also *learning ecology* (Siemens, 2006) is coming into its own, metaphor used specifically for representing alternative modalities where learning presides in the Network contexts. It is important therefore that teachers have new competences regarding the rational use of Web 2.0 software with the aim of recognizing and guiding on-line knowledge sharing processes, on one hand useful for one's personal growth and professional updating and on the other, to stimulate the growth of these competences in students.

Therefore we propose reflecting upon the possible key-competences that teachers and students alike should acquire in a prospective that goes beyond the formal scholastic environment and opens up to life-long learning contexts. They are coherent for the proper management of intercultural spaces which entails the acquisition of real participation literacy (Giger, 2006), to learn how to actively participate in an on-line community of practice centred upon the research for solving concrete problems: 1) Ethics and Legality: understand ethic and legal implications of a correct use of social software; 2) Interculture: understand and manage different cultures with which one comes into contact on-line; 3) Participation Literacy in society and informal environments: understand the importance of political integration with social and be able to decode primary need; understand the importance of entering the Communities of Practice at a professional and social level; 4) Information Literacy / Digital Literacy: understand and know how to use social software as efficacious and efficient information retrieval tool.

The integration of social software in the curriculum will probably not be without hitches, because the use in itself will tend to transfer many of the traditional didactic activities in informal contexts of the Net and therefore of society. Contexts that will be in their turn represented by communities of practice or by individuals, whereby it will not always be possible to find the sensitivity and necessary patience to interact with the students with proper modalities of an educative process. The added value of the introduction of social software in formal institutional didactics will be evident only if the process is governed by the integration of contexts perceived as real or concrete. It means creating the conditions for an active learning environment in which the students and teachers on one hand, and on the other, the local communities of practice (professional, institutional and private), try to collaboratively resolve problems contextualizing them in the real world and finding useful solutions for the whole community. The elaboration of these problem solving processes can therefore be born in the classroom and carry on, develop and grow on the cognitive supports extended on the Net such as Blog and Wiki, as well as numerous other social software, thus reaching different interlocutors with which one can interact. It is a very pragmatic pedagogic prospective and requires educative and social politics aimed at catching its potentialities and local impact. It is the interaction with the real environment where one lives that determines a fair chunk of informal learning. Therefore it concerns the redefinition of the same learning concept and the way of looking at the world from outside the classroom, it concerns the community, institutions, working world and the territory they belong to. Many teachers will not feel ready until they have perceived the added value of these processes, so they must be encouraged because the power of social software ideas and practices could really enhance the perception that society attributes to their role and to that of the school on the whole.

IS THE TAIL WAGGING THE DOG? – ECOMPETENCE OF FACULTY MEETS STUDENTS' EXPECTATIONS ON THE USE OF ICT

Dirk Schneckenberg, ESC Rennes School of Business, France

Our contemporary higher education landscape is facing rapid technological advancements and the promises of web 2.0 to foster a new mode of knowledge production and collaborative learning among students around the world. More and more students are always online, continuously updating electronic information in the globalised digital village. The future of learning is taking place *now* – and yet most university professors still educate tomorrow's knowledge workers with yesterday's tools. Teaching and learning in universities is stalled in a pedagogical design of knowledge transmission which origins in the middle ages. The capabilities of faculty to use new technologies in the classroom are often light-years away from students' expectations. Professors face the dilemma to teach an audience that is more connected with their notebooks to the web than to the lecture, and they do not know how to keep students' attention. What can be done to change this situation that the tail is wagging the dog in the classroom?

This paper assumes that the sustainable use of learning technologies in higher education depends on the organisational capability and commitment of universities to actively involve faculty in innovation. Two essential preconditions have to be met to win faculty members for eLearning innovation: first, they need to become *aware* on the current changes and the potential of learning technologies in higher education; and second, they need to develop *eCompetence*, which is the capability to efficiently use the potential of Information and Communication Technologies (ICT) in their personal work routines and teaching practices. To attain this organisational goal, universities have to provide a set of competence development measures to motivate faculty and to make them capable to efficiently use ICT in teaching and learning.

A large-scale survey in 23 European and international universities shows that traditional faculty training courses remain the common approach to develop eCompetence; but the results of the study also show that training alone has not a sufficient impact to generate the required ICT competences for a critical number of staff. Universities need to combine formal training with additional measures for non-formal competence development: examples are communities of practice, eLearning appraisals, career incentives for technology-savvy junior professors, and process-ownership of faculty in eLearning innovation. These non-formal measures have to be integrated into the immediate work environment of faculty, so that professors are able to interact and develop eCompetence on-the-job or near-the-job in peer groups or networks.

Integrative and participative eLearning integration approaches are better suited to develop eCompetence of faculty, because they influence not only the cognitive, but also the motivational and attitudinal components of competence. In contrast to the perception of learning as the mere transmission of subject-matter knowledge, competence is a holistic concept which requires holistic learning measures. This is why integrative eLearning approaches require a whole set of comprehensive measures which need to be taken both at leadership and at faculty levels – a coherent organisational approach is to set clearly defined innovation targets, to establish strong institutional incentives for professors to use learning technologies, to share roles, responsibilities and work processes amongst faculty, and to establish and moderate learning processes in peer groups.

This holistic approach to manage eLearning innovation requires a considerable commitment of the organisation. The international study provides not a single example for a university that has created a portfolio of measures of this design and scope. But a number of cases, which have at least developed elements for an integrative eLearning approach that goes beyond pure training, are amongst the group of universities with an advanced stage of ICT implementation and use in education. There is a way forward for universities to meet students' expectations on the use of ICT in the classroom and to move their educational services into the 21st century; but universities have to shift their organisational innovation strategies from centralised training delivery to more holistic participation models to gain the commitment of faculty for eLearning.

TRANS-NATIONAL STUDY OF TEACHERS' ICT COMPETENCIES IN ONLINE LEARNING ENVIRONMENTS IN HIGHER EDUCATION

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Contextualisation

This study forms part of the eLene-TLC project, the purpose of which is to enable teachers and students to make the best possible use of ICT in higher education, preparing teachers for the net generation of students, enabling students to transfer skills and practices from their daily life to their learning and encouraging both to fully integrate the innovative teaching and learning practices made possible by the constantly evolving technological environment.

In order to meet part of this general objective, a case study to examine Higher Education teachers' ICT competencies in online learning environments was devised.

Aim and methodology

This study pretends to design an integrated framework about ICT competencies that Higher Education teachers should have. This is aimed at the definition, concretion of the training needs for training teachers, competencies to develop, and learning-teaching methodologies that most suit the training.

With the objective of approaching the roles of online teachers within the European Higher Education context, we chose to carry out a net-based focus group (Anderson & Kanuka, 2003). The aim of the net focus group is to query teachers themselves on which competencies they identify as necessary for teachers to have in order to teach with ICT. We were also interested in finding out what are the learning-teaching methodologies that they consider good experiences for the training design.

The Net Focus groups were simultaneously held in four European countries (France, Netherlands, Sweden and Spain/Catalonia) with the participation of 16 universities. In total, seven Net Focus groups were held, through a platform to facilitate online discussions. Experience on teaching with ICT was one of the criteria to select teachers. To select teachers' trainers we looked at their previous training experience on the topic: Pedagogical use of ICT to teach in Higher Education.

Results and final comments

An analysis of the results from the discussion groups allows to identify a wide range of competencies, which can be grouped into five areas in relation to the tasks, roles and functions that an online teacher may perform, which we can summarise in this paper as follows: a) Pedagogical/instructional, b) Social, c) Design/Planning, d) Management and e) ICT domain. The last two have a transversal nature.

The results of this research provide a conceptual approach as point of reference, which alludes to teacher functions and competencies in online learning environments. Special emphasis is given to the need to assimilate the concept of socially-situated competency, that is, to pay attention to the nature of the tasks, and the particularities of online learning environments where teaching takes place.

In our opinion, this conceptual clarification may assist in designing training actions which are closely linked to the nature of teaching in asynchronous learning environments, designs based on authentic learning, learning based on tasks, problem-solving, projects – learning by doing -, so that the training itself enables the re-conceptualisation and renewal of teaching practices. This proposal may become an antidote to resistance to change, whilst at the same time enabling us to adjust training to teachers' needs and capabilities; that is why there is a need going forward of keeping this research focused on defining the methodological criteria that may assist trainers in the effective design of training actions required by Higher Education teachers, if they are to respond effectively to the challenge of teaching to learn in virtual environments.

THE DYNAMIC LEARNING MODEL FOR DIGITAL LITERACY AND E-INCLUSION

Albert Einarsson, Vox, Norwegian Institute for Adult Learning, Norway

The DLM model was developed as an effort to include some qualifications from former learning processes and hook them together with new qualifications in the digital area – qualifications like flexibility in both time and space. The DLM model is made for inclusion. The participants in the learning process are invited to share their experience and knowledge and together move forward to higher understanding and better skills.

The DLM model has the following pillars:

- The learners or participants are all active in working life and they lack basic competence – basic digital competence.
- The participants are organised in groups. The group members come from different workplaces – with different professions, different positions within the organisation and other kinds of backgrounds.
- The group is operating independently within the course structure and the leadership is circulating between the members.
- The group has a common responsibility for the individuals in the learning process – one for all, all for one.
- The participants share their competence and experience within the group.
- The participants, as individuals, are following recommended plans which include both individual learning, group work and gathering of all groups in the course.

The DLM model is supposed to obtain:

- **Cooperation**: The content is the only thing the participants (on principle) have in common. They must cooperate on the basis of their own competence and experience in order to obtain better understanding and conditions for developing better or higher skills.
- **Independence**: The groups are responsible for carrying out the learning process.
- **Anchoring**: Good learning conditions for the groups show that the companies' owners are involved and committed.

From our practical experience with using the DLM model, we have observed the following: The role of the instructor was moved a little to the side, while the role of a dialogue between the participants was more in the centre. It took a long time to get acceptance for using time to talk – acceptance for the dialogue. Most of the participants were more interested in the keyboard and the screen and how to log on to the Internet, than knowing and understanding what Internet is and how things are linked together on World Wide Web. Bringing forward examples from their own jobs leads to more knowledge about the different jobs and different workplaces. The participants become more "involved" in each other's jobs and become better able to take part in the discussion and to contribute.

The participants come from 42 small enterprises and 6 bigger companies and organisations. Most of the small enterprises have less than 5 employees, including the owners. About 75 % of the participants were women. The biggest age group was those between 40 and 60 years.

In the beginning of the course the participants were tested for their digital competence. More than 30 % said that they had never read newspapers on the Internet. About 20 % said reading newspapers was not so difficult while another 20 % said it was difficult. 60 % of the participants said they had never ordered tickets on the Internet. At the end of the course the participants were asked again about how they managed various tasks. This time the score was on the opposite end of the scale.

Already a few days after the course was completed some of the participants had ordered a new course and they asked to be put in the same group, even though they did not know each other before the DLM course and they did not work in the same workplace. It was a good sign that we had succeeded in building a solid network between the participants, a network which could help them in their further training and education.

A DIGITAL LITERACY PROPOSAL IN THE UOC SCENARIO

Montse Guitert, Teresa Romeu, Open University of Catalonia, Spain

Bearing in mind that universities have a key role in providing students with strategies and competences to allow them to be part of the current information society and hence, be able to have a productive career, UOC Digital Literacy subject has adapted to the evolution of the new technologies.

Since UOC origins, ICT were integrated to UOC educational activity. Also, a specific subject of this university on digital literacy was created which has been evolving in agreement with the necessities of students. It is by now a subject that currently works the basic competences in ICT and it is inspired by the declaration of Bologna.

In the scenario in which the UOC is making strategic decisions about the implementation of the new degrees within the framework of the EHEA, the competence is defined at the UOC as follows: use and application of the ICT in the academic and professional environment.

This institutional option is based on the historical one of the university that from its origins created its own and specific subject and this subject has a good evaluation of the students and good academic results. Also, it is based on the social context of the Catalan territory, specifically in the proposal of the Government of the Generalitat de Catalunya that approves the Plan of work to create the accreditation of knowledge in ICT. The results presented in this paper have also been enriched by the European project eLene-TLC in which UOC is currently participating.

UOC proposal of digital literacy for the acquisition of the ICT use and application competences in the academic and professional scope are the following:

- A subject Competences ICT in "name of the obligatory Degree" of 5 credits ECTS that is recommended to take in the first semester within the cross-sectional basic credits.
- The rest of subjects will be optional and they could be taken throughout the degree: subject of superior level specialized in one or several abilities linked to the necessities of the Degree, methodological Subject on the Work in the network of 6 Credits ECTS, and course/seminary on the use and application of the ICT in the professional environment linked to the Final Work of Degree.

The acquisition of this competence includes the rational and critical use of the ICT to work and to study in the information society. This competence includes the specific abilities within the degree framework and cross-curricular programme favouring a net work methodology: to search, to locate and to recover information in the network, to treat and to elaborate the digital information, to present and to disseminate the digital information, to acquire network social communication strategies, to dominate the basic functions of digital technology, to plan and to manage a virtual project, to acquire a critical and civic capacity in the use of the ICT in the professional environment and to acquire abilities to work in teams in a network.

The added value of the competence of use and application of the ICT in the academic and professional environment, is that it starts in the compulsory subject, is reinforced throughout the degree and is consolidated in the Final Work of Degree.

GOOD PRACTICES IN E-COACHING: HOW TO COACH EXCHANGE STUDENTS AT A DISTANCE?

Ilse Op de Beeck, EuroPACE ivzw, Belgium, Anna-Kaarina Kairamo, TKK Dipoli, Finland, Katrin Bijnens, AVNet-K.U.Leuven, Belgium

The VM-BASE project (Virtual Mobility Before and After Student Exchanges) wants to raise the quality of student exchanges by offering virtual support, both before, during and after the physical mobility. Virtual support is used to prepare and follow-up the mobile student, as a complement to the existing exchange programmes. Special attention is paid to support teachers in coaching exchange students at a distance (e-coaching).

The project started from a study giving an overview of the state-of-the-art in virtual exchange support measures and a needs analysis, making an inventory of student and teacher needs.

In general, the incoming students are paid a lot more attention to than the outgoing students. Both the size and the structure of the organization as well as the number of exchange students, among other things, affect how students can be supported. While the advantage seems obvious (teachers will benefit from better prepared students, and students themselves are more productive during their Erasmus stay) real course modules, tools and systems to facilitate the preparation of exchange students do hardly exist nowadays.

Nevertheless, possibilities on how students can virtually prepare their physical Erasmus are manifold. One can think of orientation guidelines (providing exchange students with very practical information on everyday life in the host institution to up-to-date information on courses they can follow at the host university), pre-selection tests (offering exchange students tools and tests to assess themselves in how far they are prepared for the studies at the host institute) or preparatory courses (on language, culture, digital literacy, …).

After the physical exchange, students are often forgotten, even though, in most cases, support and guidance are also needed in this final stage. Return activities aim at debriefing the student/teacher and evaluating the mobility experience, but also at reinforcing the social and content-oriented networks that have arisen during the period abroad.

The major activity of the VM-BASE project consists of several pilots focusing on the orientation and selection of students, preliminary courses for students preparing for a physical exchange and examination facilities at the end or even after the exchange. Each pilot testing out different kind of e-coaching methods. Next to the pilots the need and feasibility of a Virtual Alumni Association for Erasmus students is being investigated.

Some examples

- The Katholieke Hogeschool Leuven introduced a "Virtual Buddy System" for exchange students whereby incoming students (already before their stay) get a 'virtual' buddy (a local student) that will be their 'real' buddy once they arrive at the institution. As a means of communication e-mail, Skype and MSN are used.

- The "Virtual Window to Study Abroad" (University of Tartu) is an online course combined with forum on which experiences among former and future outgoing students can be shared.

- The Katholieke Universiteit Leuven designed a course and preparation tests for a Master in Physiotherapy. In order to equalise the initial level of the knowledge of the (international) students for the Master, a course and tests are available on the K.U.Leuven learning platform which students can already access from their home country and allowing them to realistically test their chances to succeed for the master.

- A final example is the "Exam Aquarium" (at TKK Dipoli), which is a camera-guarded and computer-equipped room reserved for writing exams and requires special software designed for writing exams. Teachers create the question database and can verify answers on the Internet. For (exchange) students it offers great flexibility as it allows them to reserve the time to use the exam aquarium in advance and to take exams independently and at a time suitable for themselves.

Students, teachers, international relation officers as well as higher education institutions in general can benefit from the results of VM-BASE which are collected in a manual with concrete guidelines, validated procedures and recommendations for blended mobility activities and a manual on good practices in e-coaching.

RE-DEFINING VIRTUAL CAMPUSES: FROM A "FULLY-FLETCHED" VIRTUAL CAMPUS TO A BLENDED MODEL

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Virtual Campus schemes can offer educational opportunities that are no longer location dependent and allow for collaboration with foreign students and teachers (and thus promote intercultural understanding). Apart from these cross-cultural and mobility aspects, a Virtual Campus has a huge potential to contribute to increased participation in lifelong learning: students learn from their homes, after work in the time that is available for them.

This in fact responds to the European Commission's "Detailed Work Programme on the follow-up of the objectives of Education and training systems in Europe". Key issues that are mentioned to reach the implementation of strategic objective "Facilitating the access of all to education and training systems" are: "Delivering education and training so that adults can effectively participate and combine their participation in learning with other responsibilities and activities" and also "Promoting flexible learning paths for all".

Throughout the last decade, numerous initiatives have been set up to experiment with the establishment of Virtual Campuses and Virtual Mobility activities. Virtual Campuses have appeared in various forms and structures and also to varying degrees of success. Through these previous experiences, we have noticed a shift of concepts: from the "well-defined" clear, 100% online Virtual Campus to Virtual Mobility, whereby the more traditional universities open their borders and "blended models" gain more and more interest. An example of such a redefinition of virtual campus can be found at the Katholieke Universiteit Leuven (K.U.Leuven) in Belgium. This traditional university progressively organizes its educational support from a *multicampus* perspective, combining virtual with physical support for collaborative learning initiatives.

While numerous Virtual Campus initiatives in the past decade have gained experience and know-how, there is a striking lack of validation and dissemination of this knowledge. Detailed information on Virtual Campuses appears hard to come by.

To raise awareness and redefine the concept of Virtual Campus in order for it to be applicable to the educational needs of today, the Re.ViCa project has been set-up. Re.ViCa stands for "Reviewing (traces of) European Virtual Campuses". The project runs from October 2007 to September 2009. It brings together nine partners in the field that will use their privileged strategic positions to collect vital information and open it up for the wider community of the European Higher Education Area. The project can amongst others build upon the partners' experience with and involvement in Virtual Mobility/Virtual Campus projects (e.g. cEVU, e-LERU, VENUS, Victorious…) and initiatives (e.g. Finnish Virtual University, UNINETTUNO, UkeUniversity, …).

The Re.ViCa project is making an inventory and systematic review of cross-institutional Virtual Campus initiatives of the past decade within higher education at European, national and regional levels. In a second stage of the project in-depth discussions are organised to incorporate the input of different interest groups. Finally, a set of action points and guidelines for decision-makers are to be formulated that can be applied to ensure the realisation of successful European Virtual Campus initiatives.

Main results of Re.ViCa will be: a global benchmark overview, knowledge sharing through the organisation of discussion sessions at carefully chosen events and meetings with experts and policy makers and a manual with guidelines, best practices and recommendations. All results and information gathered during the project (manual, desktop research results, outcomes of the workshops, etc.) will be collected on the project wiki http://revica.europace.org. It will be a platform where both experts, policy makers, providers, sponsors and key actors can meet and stimulate dialogue.

As such, Re.ViCa's added value lies not in the creation of a new Virtual Campus but in the foundations it will lay for all future or current initiatives which can learn from past and current initiatives.

MANAGING A VIRTUAL MOBILITY COURSE – A CASE STUDY

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Introduction

College of Business Doba Maribor, as the largest distance HE provider in Slovenia, started to develop virtual mobility (VM) courses in 2006 in order to create an opportunity for its students to obtain international experience. The great majority of Doba's students study namely part time and due to their work commitments they are unable to participate in Erasmus physical mobility. The main aim of the internal VM project was to identify the main success factors that influence course design and delivery in an international virtual context and the ways in which these success factors might differ from the usual design and delivery of distance courses that are only offered to domestic students.

The virtual mobility course implementation and lessons learnt

The selected course was Business Communication and Intercultural Dialogue with the special focus on business communication, intercultural dialogue and language skills. The 5-week course was structured around online activities, individual and collaborative, mandatory and optional. The course was carried out in Blackboard, while development of language skills was supported by Tell Me More software. There were 54 students participating, aged between 21 and 41, from Finland, the Czech Republic, Lithuania and Slovenia. A course tutor and a technical administrator were envisaged to help the students with learning and technical issues. An informal exchange of information about the course implementation and students' participation with co-ordinators at partner colleges was also envisaged. Pedagogical approaches used for the course design were based on constructivism and collaborative learning.

The evaluation results show that a VM course design and delivery requires adapted design principles and sound pedagogical approaches. Managing international groups requires careful planning not only because of the usual inactive students but also for maintaining the international character of the groups since the proportion of students from different countries may vary during the course.

Students with little or no experience in online learning needed more support. More time was also needed to get familiarized with the environment and online learning principles. During the course, some of the planned activities were adapted to the motivational needs of the students. There were some students who preferred learning by observing rather than by participating. Some collaborative activities were thus changed into individual ones.

Tutor activities were focused around maintaining motivation. The percentage of drop-outs (20%) was slightly higher and the success rate slightly lower than in similar courses at Doba. According to the course tutors this was mainly due to false expectations and lack of motivation since the course was optional for most students. Students with little or no experience in online learning gained confidence in online learning by the end of the course as reflected in their self-evaluation and pointed out in the interviews with the tutors.

Students did not have problems with collaboration because of age differences; they had problems with collaboration as such, especially at the beginning. At the beginning no hypothesis related to the role of co-ordinators at the partners' college was defined. However, it turned out that close contact and co-operation with them was of vital importance for the successful course implementation and achievement of the quality criteria.

Conclusion

The existing practice, growing interests, good practices, developments and research in the field have shown that VM has potential although it is not widely spread yet. Some of the issues opened during course implementation are now being addressed in a new Erasmus project Ready for Virtual mobility (http://www.morevm.org). The core objectives of the project are to encourage participation in VM, enhance the efficiency of VM in HE and to contribute to the holistic implementation framework of VM.

TECHNOLOGICAL SOLUTION FOR ON-LINE TEACHING OF LATVIAN PROVINCES

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Within the frameworks of European Social Fund in Latvia (ESF) projects "Informational Technologies for motivating Latvian provinces to take advantages of opportunities provided by ESF" and "Informational Technologies for further education of Latvian province teachers of informatics" in May and June 2007 a set of courses were organized by Riga Technical University (RTU). For courses' provision online e-teaching methods were actively used. Realized teaching process had its educational, economic and trial reasons.

Target group of first projects are employees of Latvian province state and municipality institutions, who are interested in offered by ESF opportunities. The basis of project is implementation via Internet in the form of distance learning specially developed course consisting of two parts. First one is devoted to overall issues of project management adapted to wide auditorium and is rather invariable. Second one reflects particular features of currently opened calls and has to be very urgent that requires online collaboration with learners to become familiar with raised issues.

Second project is a subsequent development of realizing during several years via Internet approved by the Ministry of Education and Science post-graduate education programme.

To support implementation of mentioned above projects multi-level technical-human environment covering the whole country is created. This environment is used both for asynchronous and synchronous modes. Teaching materials include specially prepared records for self-study as well as a set of on-line lessons.

The research devoted to finding of cost-less alternatives to commercial applications and services for web-collaboration shows that the best such a solution could be built on the based on VoIP Skype. Together with local coordinators and limited set of selected course participants several experiments to find reasonable solution of online lessons realization were made. In technical solution the following software and services were used:

- VoIP Skype client software for providing text messages and voice broadcasting;
- HighSpeedConferencing service for providing conference call management;
- "PrettyMay Call Center for Skype" for rerouting calls in a case of low quality of signal;
- "ScreenStream" for transmission of screen picture and mouse manipulations.

For providing online lectures from broadcasting side lector and moderator, who is responsible for technical part, were involved. For lectures broadcasting special workstation with broadband optical Internet connection was used. If direct participant's connection to session's server had too low bandwidth (felt by inappropriate quality of received voice and video) then participant could connect to another participant having installed PrettyMay and HighSpeedConferencing services and playing in such a case the role of proxy. In our case local coordinators play a role of proxies.

Used solution has both advantages and disadvantages which are based on solution's expenses, VoIP Skype architectural and specific properties and e-learning course working results. Besides of the fact that usage of costless software and service decreases total expenses essentially, as a main advantages could be mentioned high capacity of voice broadcasting and text messages' exchange. As main disadvantages must be mentioned that (1) usage of HighSpeedConferencing free service in several cases provided unsatisfactory quality of voice broadcasting and that (2) to participate in courses, audience had to install Skype client software on their computers and know how to connect to HighSpeedConferencing.

Majority of e-learning course participants were unacquainted with each other. It is difficult or even impossible to establish and strengthen close cooperation between members of the group. Participant is not well motivated to communicate actively during the lesson. In groups where the amount of participants is more than 10 people the majority of participants can take part as effortless listeners.

Management of virtual lessons is psychologically complicated process and it is difficult to control it. Lecturer of such a course must speak to audience which he/she do not see and do not hear hoping that any of the course participants would express their opinions by text messages or would ask for a microphone to speak.

THE RURAL WINGS PROJECT LEARNING CULTURE: SPREADING THE WINGS OF KNOWLEDGE, BRINGING RURAL COMMUNITIES CLOSER

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The Rural Wings project: Vision

The Rural Wings project is an ambitious wide scale international research project aiming to contribute to the elimination of the "digital gap" of the remote, isolated and rural areas. The Rural Wings project takes advantage of modern Satellite Communications and exploits new networking technologies such as DVB/RCS platform in combination with terrestrial local area wireless networks, to provide broadband services to end users located in rural areas all over Europe. The project focuses specially in locations where terrestrial fast internet, ADSL type, is not present or impossible for certain reasons or will not be able at least for a large period of time. But Rural Wings in not only that; e-learning and e-training services are provided by Rural Wings through the satellite broadband services and are accessed by the local end-users incorporating an added value to the aims of the whole procedure and concept. These e-learning services are made possible through the actual use and implementation of web based e-applications, provided by the project partners, building upon existing e-platform and e-tools, and enabling the remote, real time interaction of the local users in a pilot site with tutors and trainers.

Rural Wings aims to bring the rural communities closer and to diffuse Information Society to people not having access to modern communication benefits, because of geographical isolation, economic status and other related reasons and thus by contributing in the end to the improvement of their quality of life. Rural Wings is providing the opportunity to offer both broadband and e-learning services to a variety of users in relevant areas by promoting a user-centred approach, based on innovation practices and techniques and enabled through satellite broadband services. Three learning pathways formulate the main learning approach and stimulate the training and educational practice in Rural Wings: learning@school, learning@work, learning@home transforme a rural pilot site into a learning centre ("Learning Hub") and link the learning outcomes to the rural areas user needs. The interaction between the users of the rural pilot sites with other remote users or with knowledge centres provides a unique opportunity to develop and support a "digital" culture in the isolated areas. That, being the ultimate goal of Rural Wings, will not only relax the resistance of local communities to the use of new technologies but will further encourage them to introduce their own contributions and initiatives and develop new emerging applications through their personalised interactive engagement, directly addressing their own needs.

The main goal of the Rural Wings project is to offer e-learning services through broadband satellite infrastructure into 128 pilot sites all over Europe. These remote sites refer mainly to isolated villages in rural areas such as mountainous sectors or islands and are implemented in 13 European Countries (Greece, Spain, Sweden, France, Romania, Cyprus, Estonia, Poland, UK, Israel, Armenia, Georgia, and Switzerland). 34 of these pilot sites are currently operating through the project's first pilot phase while the rest will be operated and fully working within the current year. At least 30 WiFi networks are also implemented in parallel to certain pilot sites depending on the feasibility of this implementation in order to provide access to all possible remote users.

The Rural Wings project *www.ruralwings-project.net* (2006-2009) is supported by the European Commission (6th Framework Programme) and incorporates a variety of disciplines towards this ambitious goal. A National Coordinator in each country, where rural pilot sites have been identified, is responsible for their implementation and operation while many partners have obtained more than one roles than the above described.

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ANALYSING THE IMPACT OF SOCIAL COMPUTING ON INTERCULTURAL COMPETENCE DEVELOPMENT

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The internet has become a dynamic arena for communication between individuals from different backgrounds, also referred to as "telecollaboration", that is "the use of online communication tools to bring together language learners in different countries for the development of collaborative project work and intercultural exchange" (O'Dowd and Ritter 2006). Together with linguistic benefits, the potential increase in the learners' intercultural communicative competence (ICC) – comprising skills, attitudes, knowledge, and critical awareness (Byram 1997) – is generally seen as the main aim in telecollaborative exchanges. These draw on various online tools including those associated with Web 2.0 technologies and 'social computing' based on learner-generated resources. Synchronous computer-mediated communication (CMC) such as audio conferencing enables students to be in direct contact with native speaker learning partners, whereas asynchronous communication via, for example, blogs and wikis provides learners with more time for reflection and has been shown to have a greater impact on their ICC (Hauck and Lewis 2007). Both increasingly combine different modes of communication such as text, audio, and the visual in one single multimodal medium, the learners' computer.

The main research objectives of this four-way telecollaborative exchange between learners from the UK, the USA, Germany and Iceland is to analyse the impact of synchronous and asynchronous multimodal environments on the development of

- computer mediated communicative competence and
- intercultural communicative competence,

and to establish to what degree the competences are interdependent.

We will use an open source online meeting tool *FlashMeeting* (http://flashmeeting.open.ac.uk) with audio and videoconferencing facilities and *fOUndIt* (http://foundit.open.ac.uk), an open source content management system which allows students to generate their own learning materials by posting, discussing and jointly evaluating resources from the World Wide Web. The former is synchronous, the latter asynchronous, thus providing the opportunity to examine the particular strengths of each type of online communication as a vehicle for learning different aspects of culture and cultural mediation.

COMPETENT NET DIALOGUE TO BRIDGE CULTURES

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What Is a Dialogue?

A dialogue is a special kind of conversation with the aim to reach a deeper understanding. We want to influence each other and we want to learn and be inspired by each other. When we meet in a group to discuss a book that we have read or a problem we need to solve, then we utilize the fact that every single person has his or her own view on this book or problem. We belong to different cultures and have different backgrounds and education, different experiences and hopes. This means that we look at the subject from different points of view and can illuminate aspects that other participants have not seen. This creates new possibilities compared to if we try to solve the same problem alone or together with look-alikes. Together we can broaden the view and take into account more facts. We can shift perspective and consider another opinion. We can transcend the scope and go beyond borders.

Dialogue Competence

To be competent participants in the dialogue, and to take advantage of the possibilities that lies in this kind of group conversation we need to consider the following ingredients:

- Speak
- Listen
- Critical self-reflection
- Critical review of other people's standpoints

Speaking and listening form the core ingredients of the Dialogue Competence Model. They represent closeness, while the following represent distance. In order to learn from and with each other in a dialogue, and perhaps build new shared knowledge, we must also be capable of pleading for our own standpoint, but we must also be open to other people's arguments. We have to be prepared to query our own standpoints and to critically review other people's.

Dynamic Dialogue on the Net

Let us now consider what happens if this dialogue will take place on the net, through email or in a forum system. What happens if we apply The Dialogue Competence Model on the net?

To "speak" now means to write down on the computer what we think, our opinions, and what we know. Maybe we should also explain something about our own background and experiences, so other group members understand why we think like we do. To "listen" means to read what other group members have written, but this is not enough, because reading does not show through the electronic communication. We have to show clearly, in some way, that we "listen". We can answer that we have read and want to have some time to reflect, or that we appreciate the contribution and want to know more.

To show that we "reflect critically" we can tell if we change our mind about something and why we do so. To give a "critical review on other's standpoint" is normally not very difficult. But the important thing here is to explain exactly on which point we disagree and to give reasons for it, so that the other group member does not feel offended as a person. We criticize opinions or behaviour, not persons.

We argue that it is possible to have a qualitative dialogue also on the net! But you have to be aware of the problems and take advantage of possibilities. As a teacher or group leader your responsibility is to make choices. Do not rush into the task. At the outset, give time to discussions in the group about objectives and means. And return to this discussion to evaluate if the dialogue is satisfactory or if the group needs to be reminded of the ingredients of a competent learning dialogue.

THE I2C PROJECT: IMPROVING INTERCULTURAL COMMUNICATION
A MULTIMEDIA COURSE IN INTERCULTURAL COMMUNICATION

Edo Poglia, Patrizia Schettino, Manuel Mauri Brusa, University of Lugano, Switzerland

The I2C project

Due to the economic globalization and the international mobility, an increasing number of professional activities require a deep competence in Intercultural Communication (IC), competence that cannot be confined to some pragmatic formulas. The threefold goal of the project is: on the one hand, to arrange systematically the scattered and often ambiguous knowledge produced in the newly born field of Intercultural Communication (IC) via an interdisciplinary approach; on the other hand, to foster the development of analytical tools and, finally, to strive to elaborate some concrete IC competencies.

Description of the I2C project

The project

Intercultural Communication, under the pressure of an ever-increasing community of researchers, has grown into a very broad and dynamic field of study, yet a comprehensive theory and methods designed precisely for IC are still to be defined, while epistemological ambiguity still tends to prevail. The model proposed in this project has the ambition to develop, after a discussion on motivations and epistemological orientation (module M0: introduction) through an interdisciplinary approach a set of comprehensive analytical tools (modules M1: communication processes, M2: cultural configurations, M3: individual and psychological aspects, M4: social actors and frameworks) and operative instruments (modules M5: methodology in IC and M6: ethical aspects of IC) and concrete communicative competencies (module M7: Intercultural Communicative Competencies) to tackle multicultural situations. Intercultural communication competencies, which have been the focus of numerous researches, are often confined to interpersonal communication. The approach chosen aims at extending the field to public, educational and media communication (modules on application and related fields, for example M8: intercultural pedagogy and M9: IC and media). For every module, a set of 12 different tools has been created: these comprise slides, handouts, interactive maps, audio and video documents, various glossaries (verbal and non verbal communication), etc.

Learning forms

The main learning form is **blended**, though thanks to modular structure of the course content, it is possible (and has been successfully tested) to use a **distance** course (particularly useful in an individual study context). The visual connection between handouts, slides and tools allows the students to independently run over the lessons having an explicit link with the contents shown in class in the case of the blended scenario. The project is also structured for a "from theory to practice" and a "from practice to theory" approach. Each module is structured in a theoretical part (knowledge transmission) and a practical part (intercultural laboratory), both of which can be used as access point for the module's contents. Both an individual and a cooperative social form of learning are provided. The flexibility in learning forms is thought to support different teaching and learning styles, very common in multicultural classes.

Technology and customization

The I2C e-learning course runs on the Moodle learning management system, which is the eLearning environment used at the University of Lugano (over 300 courses currently running). Moodle offers almost all functions needed for the project, including forum, chat, etc. and it has already been adopted for some Swiss Virtual Campus (an initiative aimed at promoting the information society in Switzerland) projects managed by the eLab. Moreover, Moodle supports over 60 languages including all Swiss official languages. The integration of Moodle with the Swiss Authorization Authentication Infrastructure is currently under consideration. The eLab disposes of excellent competences in the management and development of Moodle, including two specialized developers. The default templates have been adapted to the course contents. For the I2C project a visual identity based on textures from typical fabrics of different cultures collected from ethnographic museums has been created.

EDUCATION PERSONALISED: THE LOGOS PROJECT

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An innovative ubiquitous e-learning environment

The term u-learning (from ubiquitous learning) is used to refer to innovative eLearning services that support learning anywhere, anytime exploiting alternative delivery channels and related devices. U-learning goes beyond the traditional web-based learning approaches and incorporates personalisation in order to account for individual learning styles, preferences and educational goals of learners. Learning content production to support u-learning processes becomes a major challenge and special attention is given to the effective exploitation of available material residing at content archives and digital libraries in order to reduce the production costs and give added value to existing content.

Within the LOGOS project (www.logosproject.com), a Knowledge-on-Demand ubiquitous learning platform is being developed in order to bring the u-learning vision into reality. The Platform consists of layered repositories supporting the gradual creation of learning experiences starting from existing content residing at multimedia archives. An Authoring Studio of tools provides the necessary functionality for learning content creation and supports authoring tasks for certain user roles. Cross-media delivery of learning experiences integrating web-based, mobile and digital TV technologies is handled by special (Moodle-based) Learning Management System components and publishing services.

During the first phase of the LOGOS project the most interesting learning and authoring scenarios were identified, analysed and documented. These scenarios guide the implementation and experimentation activities. Moreover, the design of the LOGOS repositories, Authoring Studio and delivery platform has taken place and major technical decisions were taken with respect to the standards and specifications to be used to ensure interoperability and modular development of the underlying software components that the project partners develop. The most promising objective of the LOGOS Learning Platform is the provision of its learning services in a ubiquitous way, enabling the learners to access their courses from different devices and different personal situations. The learning experience is formed in the context of courseware materials, created with the tools of the Authoring Studio, selected and imported into the Learning Management component. Course providers are able to introduce further collaborative and supporting elements and activities into the course to emphasize an organizational and pedagogical approach in the background of the contents. The learners are able to access and actively take part in these learning services from different devices, including PCs, mobile phones and Interactive TV.

The overall course provision and learning process derives from the requirements extracted from abstract scenarios and it is formalised into an overall course provision model that covers the following different aspects:

- A personalisation framework model that highlights how the different components and high-level services of the platform compose a personalized learning experience.

- An overall learning services model introducing the user roles of the Learning Platform and how they interact in the system to facilitate the personalized learning experience.

- Based on the high-level learning services model, detailed process definitions and role descriptions for the Course provider, Learner and Teacher users.

UML activity diagrams provide guidance for the technical developments to offer further details for these models as well as offer an overview on how the Learning Platform serves the end-users' needs. At the current state of the developments the original goals of the Learning Platform have been implemented to provide a ubiquitous, personalized learning environment.

TOWARDS ITALY: AN E-LEARNING EXPERIENCE FOR FUTURE INCOMING STUDENTS. LINGUISTIC AND CULTURAL SHARING AT UNIVERSITY, WHILE STILL PACKING

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Every year the University of Macerata, as many other universities, receives students coming from abroad thanks to several international mobility programs. Such students obviously need both linguistic and cultural tools to become part of a new social and educational network. Since Italian is not one of the most spoken languages (unlike English or French, for instance), quite often students come to Italy without previously studying the language. This could cause some inconveniences on the very first days spent abroad, above all in small-scale cities (such as Macerata) where not everybody can speak other languages apart from Italian and where, therefore, switching to English in order to be understood is not always useful. Moreover, it might be quite daunting to start studying Italian only once arrived (thanks to specific courses organized by the University) especially when you are required to attend other lectures at the same time. As a consequence, the University of Macerata has developed a growing interest in how to exploit at best its own resources in order to create a first contact with incoming students even before their departure from home. It thus appears of primary importance to reach students during the delicate moment of their "virtual" preparation of luggage so as to be with them while they are still packing and help them to develop those linguistic and cultural competences that could be precious when they first arrive.

Under this perspective, the University of Macerata, thanks to three of its Centers for services, organized in the Academic Year 2007/2008 an on-line course (a pilot project) that could satisfy the needs of those incoming students who have not left their Countries yet, and encounter their appreciation while doing activities for Italian linguistic and cultural acquisition, using e-Learning as a precious resource for a first contact. The above-mentioned Centers are: the **International Relations Centre (C.R.I.)**; the **Language Centre (C.L.A.)**; the **e-Learning Centre (C.E.L.F.I.)**.

The course (called "*Verso l'Italia* – **Towards Italy**") is not built under the perspective of a traditional language course, but through the concrete application of the communicative and intercultural approach. Its curricular program was composed by three main units:

- Unit 1: Getting to know each other: *who we are, where we do leave from, where we do expect to arrive*;
- Unit 2: Cultural identities: *Italy, Italian and Italians*;
- Unit 3: Living places through social activities: *the "city campus" of Macerata*.

A series of tools were always available to be used, such as "instant messages" (to reach other participants while logged in), a "café" and, above all, many "chat rooms". In fact, at least one chat has been organized every week, in consideration of the communicative level of the students. This activity was very useful in order to stimulate both participation and interest for the language. At the end of the course, its outcomes show that the experience can surely be considered a positive one (among the strengths: the establishment of a new way to cooperate; the testing of the validity of the teaching material and of the activities; the creation of a sound connection between the participants, making their arrival easier; the strengthening of the communicative skills), even though it could be improved in some points (among the weaknesses: too short time of action; overlapping between the central section of the course and Christmas Holidays).

Moreover, the University of Macerata integrates the curricular didactic offer with particular courses given in other languages than Italian. This initiative represents a chance for students to integrate their academic *curricula* with courses attended even without knowing the language of the country where they live their mobility experience.

At first, this could apparently seem to frustrate the efforts and the commitment of all the centres involved in the project. On the contrary, broadening the students' interests makes the Italian language much more than a required skill to pass the exams.

Thus the language, becoming the necessary tool to acquire cultural competences through personal experience – while making new friends, learning how to relate to Italians, having fun, and so on – might be even more connected to its culture.

DECREASING GENDER DIFFERENCES IN E-LEARNING?

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There is some inertia in cultural developments; otherwise culture would not be a social parameter one can systematically refer to. The empirical analysis of certain cultural dimensions would otherwise not show any intra- and intercultural stable results. Even the most untypical German, Korean or Mexican person is able to recognize specificities of his or her own culture and of foreign cultures while comparing them. However as culture is different in different regions and different times it must also be open for change. Such a change of culture can only be observed in regard to the change of single aspects. We focus on one specific aspect: the association of gender and technology because via information technology and the general need to use this technology this association is relevant for e-learning.

Gender is being done. It is culturally produced by using – or misusing, e.g., as means of power distribution – the male/female-distinction. It is so ubiquitous because on the one hand it is much easier to use than more complex social categories. Referring to a 'natural' binary distinction like the sex-difference makes it much easier to explain certain behaviour than analysing complex social settings and their constraints. On the other hand it is omnipresent, because we adapt our behaviour to this category (dress, haircut, attitude to technology etc.). In certain cultures the attribution of technical competencies to the different sexes is such a way of doing, performing, or conceiving gender. The coupling of the sex difference with enthusiasm for or aversion against technology is not a logical necessity but a cultural contiguity.

In retrospect the literature about gender differences in e-learning contexts is by no means consistent. The relation between gender and ICT is intermingled with learning related differences (e.g. learning and cognitive styles) and mainly differences – if significant – are not stable. Recent long-term studies deny overall gender differences concerning the use of e learning in higher education. Where gender differences have been observed they are often due to self-attributions. This kind of difference is directly related to the statements already made regarding the construction and performance of gender.

We argue that the gender-bias of educational technology will (further) be decreasing. This is so, simply because people must get used to it, when studying nowadays. More and more features of e learning and e-administration of study programmes are unavoidable or – at least pretend to – save time. Something one has to do in daily conduct in an unambiguous way is not suited to be a good feature to attach differentiating cultural, including, gendered meaning. So we suppose that differences in the usage of e-learning – if there are any – will further vanish and that the possibility to construct, perform and recognize one's sex by referring to the technical aspects of e learning will disappear as well.

VIOLENCE AND VICTIMOLOGY ACROSS THE LIFESPAN: CREATING A CULTURE SUPPORTING LEARNING AND INCLUSION

Christine A. Walsh, Myra Baynton, University of Calgary, Canada

Background

Marginalized populations are at greater risk for violence. Aboriginal women and children experience multi-generational cycles of family violence, lower socio-economic status and limited educational attainment within a context of racism, sexism and colonization, places them at greater risk of abuse and violence (LaRocque, 2005). Younger and older woman, individuals in same sex relationships, those with disabilities, racial and ethnic minorities, people living in poverty or geographically isolated are at greater risk of violence (Canadian Centre for Justice Statistics, 2000; Day, 1995; DisAbled Women's Network [DAWN], 1994; Podnieks, et al., 1999). Social work professionals are required to play key roles in preventing family violence achieving this objective and thus will be required to have a solid foundation in family violence and bullying and a demonstrated ability to integrate knowledge from theoretical, research, policy, and clinical domains. E-learning is an effective way of delivering this content to geographically dispersed learners within a learning culture that is inclusive and supportive of diversity.

University credit courses in social work, dealing with issues of violence, have typically been delivered in F2F format. Violence has been a difficult topic to address due to cultural taboos and the resulting emotional impact on individuals and families. Online learning is sensitive to the needs of cross-cultural understanding (Hudson, 2002), can assist in the integration of theory and practice, may offer new opportunities to encourage dialogue and engagement and allow the learner to pace the uptake and integration of material (Bushfield, 2005).

Findings

Violence and Victimology Across the Lifespan is delivered online and examines each of the major forms of family violence across the lifespan upon various marginalized populations with synchronous and asynchronous components included Blackboard small group learner-facilitated case discussions. An evaluation survey completed by the students at mid and end points and anonymous Blackboard discussion data were analyzed to examine the efficacy of providing this type of content using online technology and the nature of the learning culture. Analysis revealed the following five key themes: (a) application to practice; (b) cultural aspects of violence; (c) the role of professional social work; (d) personal disclosure; (e) increased comfort with technology and others.

Discussion and Recommendations

"As educators we must provide the conditions which facilitate opportunities for students to bridge personal experiences and styles with facts, concepts and theories" (Gitterman, 2004, p. 97). A preliminary analysis suggests that the online environment achieves this goal while providing a learning culture promoting inclusion. Recommendations for enhanced online learning of family violence content concerned both content and technology. In terms of content online courses are needed to: increase awareness of the prevalence of violence in Canadian society; increase access for learners residing in rural or remote areas; encourage critical thinking about the issue of violence; asynchronous media facilitate learners' critical reflection; and allow learners to incorporate practical strategies that they can apply directly to work with clients. Use both synchronous and asynchronous media to at the beginning of the course to build relationships and facilitate the development of a learning community characterized by a culture that is safe, stimulating, inclusive and open and provide time for adequate training in technology and keep credit and non-credit students in separate sections of the course.

QUESTIONING AND ARGUING ON-LINE: TOWARDS ACTIVE LEARNING IN HIGHER EDUCATION

Neri de Souza, F., Loureiro, M. J., Universidade de Aveiro, Portugal

The emergence of different contexts of learning, especially in synchronous and asynchronous environments, is an advantage, but also an increased challenge for teaching and learning. The challenge issue is how to stimulate active learning and the development of skills in online learning (e-learning) or in face-to-face contexts with the support of communication platforms (b-learning). Due to the importance of arguing competences and questioning skills to promote active and reflexive learning, this work reflects on how these strategies could be implemented to stimulate learning through arguing and questioning online. That is why we intend to deepen the studies of the influence and implications of these learning contexts in educational practices of students involved.

Questioning and arguing

This work links two studies (Neri de Souza, 2006; Loureiro, 2007) and stems from the idea that it is possible to promote active learning in higher education, through the incentive to questioning and arguing during didactic exchanges and through interactions. Due to the importance of critical thinking in arguing and questioning, it also reflects the emphasis being placed by an increasing number of educators (Andriessen et al., 2003; Kanselaar et al., 2003; Loureiro et al., 2008; Pedrosa de Jesus et al., 2005; Van Gelder, 2002; Neri de Souza & Moreira, 2007) on the importance of correct and deep argumentation and of quality questions in the learning and teaching processes, as well as on the need to stimulate those interactions positively.

Students' questions and argumentative schemes, online interactions and productions were a central issue in these studies (Neri de Souza, 2006; Loureiro, 2007). The incentive for using ICT platforms were one of the instruments used for facilitating the interaction between students and between students and teacher.

THE ISSUE OF CITIZENSHIP AND THE CHALLENGE OF DEMOCRACY: THE QUANDARIES OF E-GOVERNMENT AND E-DEMOCRACY

Marc Jacquinet, João Caetano, Universidade Aberta, Portugal

The worlds of e-learning and online education and training are high on the agenda of higher education policy but other themes are now at the center of state reforms and political debates: e-democracy and e-government. The lessons on e-learning are worth meditating for a better understanding of the quandaries of e-democracy and e-government.

After decades of expansion of traditional distance education, the world of e-learning and online and education and training is expanding at an astonishing rate, in real terms and not just at the level of discourse. New concepts such as e-moderators, e-tivities, as devised by G. Salmon, are emerging alongside with the established – but still much debated – ones like e-government, e-governance, e-learning and, more recently, e-democracy. All those notions are emergent concepts and realities. There is a clear state of confusion coming from contradictory debates, divergent information, paradoxes and the newness that points out in every field of action and the related discourses.

First of all, our objective is to settle the basic issues and offer an original interpretation of what is going on in distance and online higher education. Our interpretation and main argument are based on complexity theory and scenario analysis. This is a paradoxical mix given that the former denies the possibility of forecasts and the latter states that we can tell stories and make decisions about the future. Forecasts and storytelling are different things, but when looking more carefully to what scenarios and stories mean for organizations, they have much in common. This is fundamentally a difference of paradigm and way of seeing and giving sense to things and events.

The second objective of the presentation is to discuss the issue of the lack of in-depth work and initiatives with relation to e-learning and e-democracy. Our point here is that both scenario analysis and complexity theory are capable of identifying challenges, shallowness in current discourses, practices and strategies that identify an urgent need for deeper thinking and hard work on the issues of e-learning, e-democracy and e-government that allow us to go beyond the rhetoric of excellence and petty marketing.

THE GLOSSARY MODULE IN MOODLE

Maria Ivone Gaspar, Vitor Rocio, Universidade Aberta, Portugal

The interrelation between the learning objective and technology provides a support for collaborative action which becomes evident throughout content apprehension based on learning constructivist theories. This is possible thanks to the utilization of a technological resource available on the MOODLE (MODULAR-OBJECT-ORIENTED-DYNAMIC-LEARNING ENVIRONMENT) – the glossary. It is in a synthesis implication that we approach a learning content, foreseen and announced for one course into the plan of studies for a Master degree in Pedagogic Supervision – Elements of Curriculum Development. It matters to obtain a synthesis about core concepts of this curricular unit, which required the consensus relating the utilization of some terms in the curriculum area. This would be possible if there was a clear perception of the meaning of these terms, its attribute identification and, as a consequence, indexation to categories in order to appropriate their essence. This concern led to a work mode framing. The decision was, then, taken by steps. We assume the glossary enables the concept comprehension more easily, especially when we have students with different knowledge levels. The concept acquisition, by strong interrelation, allows them to reach similar comprehension and to attain the same learning level. The more participated the reflection is, the richer it will become, as this participation is a constructivist activities axle.

A concept, learned and apprehended, through a definition built in group, gives support to complex learning which is transformed into true professional competencies. The constructivist approach has generated the most benefits and it is the one that better contextualizes and takes more profit from technological tools towards teaching-learning process. Collaborative learning also seems to be a way of propitiating success in computing experiences in educational area.

Supported by these reasons, we decided to systematize the content of the topic – *Concepts and Guide Principles in Curriculum Development* – of "Elements of Curriculum Development" by a glossary elaboration. This goal was reached in two distinct moments: (1) organization of four small groups, each group receiving three key concepts. From these three concepts the groups must find several subsidiary concepts. We created one glossary for each group; (2) the four glossaries will become just one at the end of this course (after students went gradually improving each concept as learning is getting deeper and more complete). But this kind of intervention made us change the students' roles, giving them some new permissions. We identified problems and tried to find their solutions in Moodle.

A great deal of flexibility is achieved by tweaking permissions in glossary activities. Another aspect that is important to consider when designing an activity based on a glossary is the definition of roles and permissions for the participants. By default, the teacher can do anything in the glossary, while students can create and edit their own entries only.

The use of roles allow teachers to assign (and enforce) different tasks to students working in the glossary.

A first approach, by using the basic configuration of the glossary, raised some problems. First of all, a bug in MOODLE 1.7 prevented students from editing their own entries. Upgrading to a new version was not a viable short term option, since we were using a production system with several hundred students. So we had to circumvent this bug by tweaking permissions. Another problem with the basic approach was that all students could create entries, and no distinction was made between group leader and other group members.

To overcome the 1.7 bug, we started assigning a special role to the group leader. We chose the non-editing teacher role, because it was not used in the course. Non-editing teachers can manage entries in the glossary, but cannot change its configuration or delete it. Also, we had to deny other students permission for creating and managing entries, by setting permissions *mod/glossary:write* and *mod/glossary:manageentries* to "prevent".

The result was as intended: students proposed definitions and discussed them in a forum, and when consensus was reached, the group leader published them in the glossary. In the future, we intend to improve this design by using comments and by correcting the 1.7 version bug.

The main consideration we draw from this work is that pedagogy and technology must be closely related: each one contributes to the other. In the future, we will address open questions, such as defining editing periods and making glossaries available to other courses.

BRINGING CULTURES TOGETHER: TEACHING ESP (BUSINESS AND TOURISM) AS AN INTERNATIONAL LANGUAGE

Raquel Varela Méndez, María Luisa Sevillano García, UNED, Donaciano Bartolomé, Universidad Complutense de Madrid, Spain

This paper deals with how to overcome the above mentioned differences between the various types of cultures and English language thanks to the ICT. Those characteristics are often overlooked when preparing material to teach students of the business and tourism fields; (Crystal, 1997; Graddol, 2006). The key question is how to familiarize students with these varieties of language and culture.

In order to avoid episodes of misunderstanding derived from possible confusing pronunciation or lack of cultural background when dealing different kind of people in the future, a project has been implemented during a whole academic course of English for Tourism. The main aims of it were creating language bonds among students from UNED and others from different parts of the world as well as elaborating a recollection of international body language signs.

ENGLISH FOR SPECIFIC PURPOSES – OR BREAKING DOWN SILOS

Walter Zeller, astyle, linguistic competence, Austria, Iwona Misztal, Jagiellonian University, Poland,
Evangelia Varella, Aristotle University, Greece

Three challenging e-learning courses

It is a truism that English has become the *lingua franca* in the last decades, but the English courses offered usually concern general aspects of communication and only a few specialise in certain subject areas. Few or even no courses are, however, available for natural sciences and related subjects.

It is not surprising, that all people speak "normal" English, even chemists or therapists. But scientists have additional needs; they must also be able to manage "jargon" – the language of specialists. This means that several new words have to be studied, a few new phrases must be introduced which are commonly used and some grammatical features must be studied harder than in "everyday" courses, e.g. passive voice.

The conclusions found so far are that scientists have to understand **instructions** in all details. They also need to write **reports** and **articles**. They need to be able to prepare **meetings** with colleagues, establish first contacts by **mail** or **telephone**, work out an **agenda** and, not to forget, entertain guests in the evening. They will also attend **conferences**, where they not only have to follow a **lecture**, but also have to cope with the **registration**, for example.

Many of these parts are included in **ESP:C**, a language course for chemists. In the meantime new EU projects have sprung up from this basis: "**ESP:T**", a language course for therapists, or **E-ConsSc**, addressing virtual mobility in the field of material cultural heritage preservation, have been approved by the Commission and work is going on. All these courses concentrate on distance and e-learning.

For more detailed information, please, visit the following websites:

- www.esp-c.org
- www.esp-t.eu
- econsc.chem.auth.gr/VirtualCampus

HOW CAN WE ADOPT A COMMUNICATIVE APPROACH IN TEACHING FOREIGN LANGUAGES THROUGH COMPUTERS? THE IMPACT OF WEB 2.0 ON INSTITUTIONALISED TRAINING: A CASE STUDY

Flora Sisti, University of Urbino, Italy

This paper investigates the use of distance learning in foreign language teaching. Currently, the debate on e-learning covers both theoretical and technological perspectives which sometimes seem to be independent from each other and, even worse, which sometimes seem to be totally distant from the research paths of the taught content subject. In our case, on the contrary, we tried to use a holistic approach that does not deny the specificity of each single perspective, but can connect them in a coherent theoretical, technological and didactical framework.

Therefore, when planning our course of *English Foreign Language and Teaching Methodology for Primary School Teachers* we were aware of the necessity of adopting SLA methodologies, and consequently of adapting ICTs (information and communication technologies) to them. We suggest that technology tools can match the needs of our foreign language students and their cognitive and affective processes. It is necessary, though, to implement computer software in order to match SLA methodologies instead of accepting Formalist/Structural FL courses which have been proved totally ineffective for so many years.

However, some problems are still unsolved. How can we improve collaborative learning without reducing the flexibility of online courses? How could web 2.0 tools be effectively used to improve foreign language teaching/learning, and how should they be improved in order to be more user-friendly for both FL teachers and students? There is still a lot to investigate and many practices to analyse and evaluate in order to find the most effective methodology.

The results of this case study may provide some empirical support for future implementations of Foreign Language blended learning.

DISTANCE LEARNING WITH A CONSTRUCTIVIST APPROACH – TOWARDS COLLABORATIVE LEARNING

Pilar Rodríguez Arancón, UNED, Spain

Introduction

The ability to communicate in more than our native tongue is essential for European business. However, a great deal of people find little opportunity within their busy working schedules to go to classes. In this environment, the future of distance teaching/learning is only going to grow in importance – we therefore need to improve it.

Some of the principal problems within distance education which cause students to leave their courses are: the feeling of isolation; and the delay in the feedback from their instructor. *Collaborative learning* within a *constructivist* approach is proving to be a successful method to solve these issues.

Constructivism and Collaborative Learning

Constructivism is based on the belief that, through the processes of *accommodation* and *assimilation*, individuals construct new knowledge from their experiences. When individuals assimilate they incorporate the new experience into an existing framework without changing it. When individuals learn through failure they accommodate it, reframing the mental representation of the external world to fit new experiences.

But constructivism is not a type of pedagogy; it describes *how learning should happen*. It promotes active learning and the involvement of the student within the learning process. This is obviously very apt for distance learning in which students must be proactive and control the time and pace of the learning process.

Collaborative learning refers to a variety of approaches in education that involve the joint intellectual effort of both students and teachers. Learners engage in a common task in which each individual depends on and is accountable to each other. The approach is closely related to *cooperative learning* and is sometimes referred to by authors as the same thing, but they are two different ways of understanding constructivism. Cooperative learning relies on the teacher to structure the process. In collaborative learning the students take responsibility for their own and even each other's learning processes. They are a team working towards one single goal, and it is in everybody's interest to take part and to help others who need it – there is no feeling of isolation.

This type of learning is not new: it has been applied in classrooms since the 70s, although most of the theory work on this area comes from the 80s, when e-learning started and spread.

Computer-aided collaborative language learning is one of the teaching strategies that obtains great results since it allows students to build their learning together with others with a computer as mediator. The computer is just a cognitive tool, which, according to Vygotsky, is an object provided by the learning environment that allows students to incorporate new auxiliary methods to solve the problems they encounter. Students move within an area of new understanding – the Zone of Proximal Development (ZPD), an area in which they can carry out the activities with assistance. The goal is to be able to be autonomous so moving in the Zone of Real Development (ZRD), and pushing the boundaries of Proximal Development along constantly: ZDP becomes ZRD and a new ZDP is encountered.

Conclusion

Collaborative learning is the way forward for distance language education as it involves the students even more in their learning processes. It provides fast, if not immediate, feedback from the other team members. It requires good planning on the part of the instructor, with carefully set activities. It also requires good communication techniques and technologies for the team to work together successfully. But the possibilities for this type of approach are endless.

PROMOTING INCLUSIVE LANGUAGE IN TEACHING AND TRAINING: AN AUTOMATED APPROACH

Gerald Schmidt, The Open University, United Kingdom

Most instances of exclusive or insensitive language in teaching and training materials are not spotted by conventional spelling checks. House style guidance can help, but often it is time-consuming and difficult to ensure consistency across teams in large organizations. This presentation demonstrates a web-based, automated response to the challenge of conventions that elude the spelling check but can cause serious embarrassment when overlooked. The style modules include sets of rules relating to disability, ethnicity, gender, post-colonialism and religion. Also included are Commonwealth and American conventions. Although the existing modules focus on English-language conventions, the tool is in no way restricted to English-language materials.

The tool has been in production use at the Open University (UK) since 2005. It takes as input any XML document, a choice of style module and optionally an instruction to work on parts of the document only.

Style modules can inherit other modules, building a hierarchy of rules. For example, a university could create a new module House Style that includes the Diversity module (comprising all inclusive language modules), Commonwealth spelling and a number of conventions specific to the university, and which overrides the default -ise spelling with -ize.

That done, the tool will pick up terms such as 'Bombay' (should be 'Mumbai'), 'Madras' (should be 'Chennai'), 'stewardess' (should be 'flight attendant'), 'fireman' (should be 'firefighter'), 'severely handicapped' (should be 'severely disabled'), 'jewelry' (should be 'jewellery'), 'organise' (should be 'organize') and 'analyze' (should be 'analyse'). If the university's house style specifies a preferred form for dates (e.g. '1 January 2008' instead of 'January 1st, 2008'), this will be highlighted as well.

For each item, the report will include the problem word or phrase in context, the proposed replacement text and a reference to the relevant rule and style module. The layout and appearance of the report can be adjusted depending on the output device and screen size.

The tool uses patterns rather than a dictionary to identify words and phrases that may be problematic. As a result, 'McDonaldisation' (should be 'McDonaldization') will be flagged even though it is not found in most online dictionaries.

The web interface, libraries and style modules are free and open source software. As a result, new style modules can easily be shared with the wider community.

CASE STUDY: "ACQUIRING BASIC LANGUAGE SKILLS THROUGH BLENDED LEARNING"

Ronald Habraken, Jan Swerts, Reinoud Vandervelden, Limburg Catholic University College, Belgium

Why blended learning?

For some time now we have noticed that classic education fails to improve our students' alarmingly weak language level. Strengthened by one of the spearheads of Franck Vandenbroucke's (the Flemish Minister of Education) policy, according to which the enhancement of the students' language level is of paramount importance, we started to give our language approach an "extreme makeover". The reconstruction was primarily focused on the most pinching problem: the lack of differentiation possibilities in the classic face-to-face lessons. We wanted to familiarise each student with his/her individual linguistic profile in order to come as close to their needs in authentic and relevant contexts as future teachers as possible. Electronic aids are certainly as instructive for students because of the possibility to provide multiple evaluations with reliable feedback. Another objective that can easily be achieved through e-learning is the continuity in language attention (the constant maintenance of linguistic insights and attitudes).

Goal of the course

The students will have acquired the basic linguistic skills recommended for a future teacher in practice: a correct spelling, a decent text construction, a clear standard language, an understandable pronunciation and an extensive vocabulary.

Organisation of the course

The first step in the linguistic learning process is a diagnostic language test. During a 'language day' at the beginning of the academic year, the first-year students get information about the school's language policy and the language course (Basic Language Proficiency), and they perform a number of electronic tests. For organisational reasons (e.g. timing and ICT coaching) the tests are taken at school. The aim of these tests is merely informative:

- the teachers get an idea of the language level of the starting students,

- the students get to know their own linguistic possibilities and boundaries,

- the students are confronted with the electronic learning platform which they will have to use intensively.

The subject BLP (which stands for "Basic Language Proficiency") consists of 5 topics or modules, each of which lasts for four weeks:

- In the first week all the students attend an interactive face-to-face session in which the topic (e.g. spelling) is introduced with the help of a PowerPoint presentation and some preliminary exercises.

- In the second week the students have no communal BLP class, but they have to study and practise the subject matter individually. In order to do so, plenty of practice material is provided on Blackboard. By the end of the week they must take an electronic diagnostic test about the topic.

- The students' result of that diagnostic test will determine their individual course in the final two weeks of the module. Students who achieve the desired standard are exempted from the further remedial course in week 3 (visiting a seminar: a face-to-face session in larger groups) and week 4 (visiting a "language doctor": a face-to-face session, individually or in very small groups).

Evaluation of the course

At the end of the academic year, there will be an oral and written final exam. Those tests, which are not taken electronically, determine for which of the five modules the students obtain a 'pass' or a 'no pass'. The e-portfolio (which is considered to be the sixth module) is also evaluated at regular times during the year.

COMMUTER, A MULTILINGUAL KEYWORD DATABASE FOR SPEECH-LANGUAGE PATHOLOGISTS AND AUDIOLOGISTS

Paul Corthals, Ghent University & University College Ghent, John Van Borsel, Kristiane Van Lierde, Ghent University, Elise Maes, Maaike Callens, University College Ghent, Belgium

Introduction and aim

As in many other disciplines, in speech-language pathology and audiology English is the *lingua franca* for information exchange in international contexts. Whatever one's mother tongue, on most international fora one is expected to use English professional jargon. This is a challenge in educational settings as well as in research settings. Reading professional literature, publishing papers, presenting results on international conventions and searching the internet all require thorough knowledge of specialist, professional terminology in English. Also staff and student exchanges in higher education nowadays demand a good command of specific English terminology. Moreover, cross-linguistic consistency in terminology is a constant concern of the general scientific community (e.g. the terminology project of the IGOTF-CSD (International Group on Terminology Framework – Communication Sciences and Disorders), initiated by IALP (International Association of Logopedics and Phoniatrics) and CPLOL (Comité Permanent de Liaison des Orthophonistes/Logopèdes).

Translation dictionaries or translation tools for specific professional jargon are often lacking, and there is a paucity of learning tools. A good learning tool for professional jargon should include at least an audio pronunciation key and realistic exercises in a suitable ICT format.

The proposed poster is an outline of an ongoing project coordinated by University College Ghent and Ghent University (Belgium). The project, called COMMUTER, is aiming at a collaborative educational website for speech language pathologists and audiologists from different language groups and countries. The goal is to accumulate and disseminate authorized translations of professional jargon, establishing e-learning opportunities and elicit information exchange among experts in terminology issues.

Method

1100 frequently used English keywords relating to prevention, assessment, or interventions by SLPs and audiologists were drawn from the "Vertaalwoordenboek logopedie en audiologie" by Corthals, Van Borsel & Van Lierde. These terms are being translated by, at present, 27 participants, covering 19 languages: German, French, Portuguese, Chinese (Traditional & Simplified), Bulgarian, Danish, Spanish, Galician, Maltese, Hebrew, Icelandic, Greek, Italian, Finnish, Serbo-Croatian, Irish, Slovenian, Polish. The content providers (all specialists in SLP and Audiology) translate the English terms into their native language. They communicate with the instigating authors by means of an internet based tool (www.commuter.be). The instigating authors have added an audio pronunciation key for each lemma in the corpus and are now preparing vodcasts for multimedia vocabulary exercises.

Results and expected outcomes

Hundreds of keywords have already been processed in several languages. These contents will be disseminated through a collaborative website. This "*WIKI jargon pool*" will encompass a TRANSLATION ZONE with a search-and-translate engine (from language X into English, from English into language X), a LEARNING ZONE for multimedia vocabulary exercises on professional English jargon, a DISCUSSION ZONE for professionals to amend translations and to reflect on terminology issues, and a NOVELTY ZONE for current events and publications.

SCENARIO-BASED APPROACH TO THE EMERGING COMMUNITIES OF LEARNING AND TEACHING IN ONLINE EDUCATION

Marc Jacquinet, Universidade Aberta, Portugal and CERIO, FUCAM, Belgium, João Caetano, Universidade Aberta, Portugal

In the recent past there have been plenty of attempts and positive outcomes in online education. Most universities and tertiary education institutions are at least paying lip service to the trend and have teams working on extending training and education programs on internet or intranet based schemes.

The trend is clear, online teaching and learning are the way forward. However, the way it will be and the interaction with other trends and processes are not that well known and clearly understood. The overall trend for online training and e-learning is quite clear; we are now entering in the mass take-off.

By online education, we mean internet-based interaction, between teachers and students, and computer-based learning (such as intranet training programs) that can be either fully online or partially online. The first of these cases is the 'radical' or full e-learning model, with only online activities and virtual classes, and the second case is the blended learning scheme that combines distant or asynchronous online education with traditional lectures in the classroom.

Our discussion of the challenges in online learning and teaching revolves around the prospective or scenario analysis that is often called the long view and which is divided in two main strands of literature as we will see in the next section.

Besides the discussion of strategy and prospective analysis, a word on the scope of our study has to be clear. We will not discuss the administrative and managerial aspects of the higher online education. These substantial problems are worth a special and in-depth attention that is beyond the objective of the current paper. Problems of management will be referred to when they are central elements in the definition of some of the scenarios for the future.

PRE-SERVICE TEACHERS' COLLABORATIVE KNOWLEDGE ADVANCEMENT AND SELF-PERCEIVED DEVELOPMENT IN A HUNGARIAN BLENDED TEACHER TRAINING COURSE

Helga Dorner, Central European University, Éva Major, Eötvös Loránd University, Hungary

The Knowledge-Practice Laboratory (KP-Lab) project is coordinated by the University of Helsinki and EVTEK University of Applied Sciences. The general objective is to facilitate "innovative practices of working with knowledge in education and workplaces" (Hakkarainen, K., Ilomäki, L., Paavola, S., Muukkonen, H., Toivianen, H., Markkanen, H. and Richter, C., 2006, p.1). The theoretical innovation is based on the "trialogic knowledge creation approach" (Hakkarainen et al., 2006, p.2), which refers to the collaboratively developed and shared objects of activity.

The BA/MA structural change introduced also in Hungary provides a unique opportunity to reconsider the contents of teacher training programmes and to shift from the traditional subject matter towards a more competence-based training (Dorner and Major, 2007). Integrating the usage of certain ICT tools and applying the theoretical innovation of *trialogic learning* and innovative practices such as the *mentored innovation model* (Kárpáti and Molnár, 2005) in teaching and learning processes in HE context are possible ways to bring about change in teacher and student attitude i.e. to enhance collaboration and *collaborative knowledge advancement* (Paavola and Hakkarainen, 2006), to develop the trainees' own competence in this field and at the same time, as loop input, show them a model for classroom application.

In the framework of the KP-Lab project in our case at the Eötvös Loránd University (ELTE) we focus on groups of pre-service teachers in a collaborative learning environment created by the Moodle course management system (CMS). In order to introduce a smooth transition from a knowledge-centred approach of the traditional HE setting to a competence-based training course we launched an EFL methodology course (n=17) in a blended learning set-up i.e. combining online and face to face (F2F) instruction (Bonk & Graham, 2004; Rooney, 2003; Ward & LaBranche, 2003). We did a course level blending, thus "blended" F2F and CM activities.

Our pilot study focused on examining pre-service teachers' collaborative knowledge advancement in the blended learning teacher training course, more precisely, we wished to investigate to what extent can successful online communication, the quality of learning materials, the quality of the CMS, the role of the facilitator and the ICT competence of the pre-service teachers contribute to their self-perceived development. As regards the research tools we mainly relied on quantitative data analysis methods i.e. statistical analysis of the results gained from a participant survey, results of an ICT competence test that was taken at the beginning of the course and the log file data of the Moodle surface. Through the complex data analysis we investigated, collected and made visible the most important factors that can contribute to the participants' collaborative knowledge practices and self-perceived knowledge advancement in the framework of a blended learning teacher training course We intend to incorporate the results of this study to a long-term research project on the integration of the blended learning model in our university's teacher training curriculum.

TEACHING WITH ICT – WHO AND HOW? A REVIEW OF OUR FINDINGS (2005-2008) AND PSYCHOLOGICAL LITERATURE

Anna Linda Szirmai, Eötvös Loránd University, Hungary

Our main aim in the last three school years was to find out, what other factors than ICT-competency influence the use of such equipment in teaching, since statistics show that having the equipment and the knowledge how to use them is not enough. We conducted three phases of research under the umbrella of the projects EPICT Pilot, EPICT for CALIBRATE and CALIBRATE Phase 2 (*http://calibrate.eun.org*). We presumed that the applicability of these tools depends very much on the extent to which the teacher can accommodate his/her *educational habits* to these tools. Based on this hypothesis János Ollé constructed the first version of Educational Strategies Questionnaire, which was further developed and restructured by Erika Lakatosné Török and Andrea Kárpáti, so the final version of ESQ has a clear structure of four factors and measures the attitude towards ICT-use, the theories of education and what becomes reality from these beliefs. We also assumed that the openness with which the teacher relates to these new kind of methods, the flexibility which s/he needs to apply them or the creativity with which s/he uses them depend at least partially on the teacher's *personality*. To explore as many influencing traits as possible, we used a psychological questionnaire, the California Personality Inventory (CPI), that has factors like Dominance, Reliability, Tolerance or Psychological sense and also measures the five personality-factors (the so called Big Five), that are world-wide accepted as the model best describing the personality up to this point. Together with the ICT Competency Test, that was developed by Balázs Török our results shed a bit of light on the connections between personality, educational strategies and the use of ICT-tools in educational practice and how they might influence changing on one field or the other. The poster will describe these results in detail. The second part of the poster will be about the theoretical thoughts that might lead the research into a rather new field. Every behaviour has three components: a cognitive, an affective and a motivational, which in the case of ICT-use in education means that I can have all the knowledge how to apply them, and I even can know it would be good for me to use them, if I don't feel like it, it is never going to happen. With learning is just like that: seemingly it is a passive state of just taking in information, but in reality it is a very active process. One needs to try over and over again, against failures, has to be creative, find alternative solutions, deal with brand new situations, etc., even if I am smart enough, it needs a lot of motivation to go through with it. It is possible that the main difference between teachers is not in their competence (to use ICT-tools or to change their educational strategy) and not even in their attitude (they know, it would be a useful, positive change) – but *in whether they are motivated or not* to do so. Hence, we have to get to know all the types of motivation to be able to activate them – in every person the motivation(s) that fir his/her personality the most. Surprisingly enough, if we follow the though of Abraham Maslow's pyramid of human needs we can find something from educational ICT-use for every level. Since the 1950' we psychologists believe human kind is born with specific humanistic urges, like the need for exploration: we need the stimuli of new environment, of new toys, new kinds of events. It is just as rewarding for us as food might be and it has the same extreme effect, if deprived from it. Though every person has a different level of optimum arousal, we all need something new in our lives every now and than. Why not let that be a new method to teach a material or a new project for my class? So there is already a physical need that can be motivating someone towards new possibilities. The second level need is for security of the body, of the shelter, of the family – and also of the job. To gain new knowledge, to be a more popular teacher, etc. might enhance one's position in the school hence lessening the threat of being fired. The motivation for existential stability might be a big drive towards modern competencies. The third level of the need for love and belonging might not even need an explanation with the internet being called the "global village". One click and one can send and receive (e)mails, look for old and new friends or be a part of communities that shares an interest. In addition within the global village, one also belongs to a pan-European community, to a community of teachers and also very strongly to the community of national teachers. On the next level stands the motivation for a well-based, strong and positive self-esteem. This usually lies on the experience of competencies, reached goals and the respect received from others. Probably one of the reasons mankind had such a success in evolution was the strong need to feel strong: to handle problems, to create, to always go forward to develop ourselves and our environment. The need for achievement pushes us to look for new tasks and challenges, like learning the language of this cosmopolitan community or practicing how to handle the newly discovered features. And if all these needs are fulfilled, one can move on to becoming what one can become, to evoke all the possibilities inside. Endless energies are reserved within us for this almost final goal of every person – to be a true person (self-fulfilment). Viktor Frankl said mankind is not defined by its needs, but its goals: what one wants to reach in life. Whether it is new people, new challenges or to fulfil one's ideal picture of self, these are the powers, that lye within every human and on what we should always count, when inviting someone to a new experience. Practical aspects of these theories will be discussed in the poster.

MOBILE LEARNING: PRESENT AND FUTURE

Ed O'Brien, Judy Nix, Fintan Costello, Ericsson, Ireland

The role of mobile learning in European education

The role of mobile learning in European education is the provision of a programme for the implementation of mobile learning in education and training in Europe. It is planned as a contribution to the thinking on mobile learning of the European Commission, the 27 European Ministries of Education and on institutions and individuals who are considering the implementation of mobile learning. Mobile learning is being incorporated into mainstream education and training, especially in Europe, South Africa and Japan. The Socrates project, led by Ericsson, has studied the provision of mobile learning in 2008 in 28 European countries (the 27 members of the European Union and Norway).This research has shown some activity in nearly all the countries studied, but the level of activity varies greatly. Four levels of provision can be identified. At level 1, there can be no doubt that the United Kingdom is the leading provider. The United Kingdom has at least 4 areas of provision: primary and secondary schools, universities, government departments and corporate providers. There are a wide range of British companies involved either in the production of mobile learning systems or of mobile learning courseware to run on these systems. These include Tribal CTAD, Handheld Learning, ConnectED, Learning in Hand. Level 2 consists of countries in which there has been mobile learning activity mainly in the form of participation in European Commission funded projects. These countries are: Austria, Bulgaria (notably the University of Plovdiv), Cyprus, Czech Republic, Denmark, Finland, Hungary (notably Corvinus University of Budapest), Ireland (notably Ericsson Education Ireland), Italy (many university and government research centre projects), Netherlands, Norway (notably NKI), Portugal, Slovakia, Slovenia, Spain, and Sweden. Level 3 countries are making their first fragile steps in the field of mobile learning. These countries are: Estonia, France, Greece, Latvia, Lithuania, Malta and Poland. Level 4 countries are those in which little or no activity in mobile learning has been documented. These countries are Belgium, Luxembourg and Romania. The concrete aims and objectives are to contribute to the continued development of mobile learning and to address the imbalance identified above between the availability of mobile devices and the lack of education and training provision on the sophisticated communications devices which every student in every EU country carries and uses constantly – except in education.

The impact of new technologies on distance learning students

The impact of new technologies on distance learning students is a Leonardo da Vinci Reference Materials project triggered by the fact that all EU Ministries of Education spend millions of euros annually on the provision of educational technology for schools, colleges and universities and yet the research findings on the impact of technology on learning and whether this impact can be judged beneficial are weak and fragile. Most of the work that has been done is on American children in K-12 schools. This project focuses clearly on the impact of technology on learning in adult education, lifelong learning and distance education. It has a special focus on distance education because in distance education the technology is a replacement for the teacher whereas in other forms of education and training it is a supplement to the teacher.

Using wireless technologies for context sensitive education and training

Mobile learning is the harnessing for education and training of the 3 billion mobile devices in the world today. Every student in every higher and further education institution in every EU country possesses one. The future is wireless and wireless devices are replacing wired ones in all walks of life. The profile of the typical mobile device is changing rapidly. It is estimated by 2010 that the number of people using mobile broadband connections will have increased to over half a billion. This access is being made on all types of mobile devices: mobile phones, media players, handheld games consoles, ultra portable PCs, etc. Already one is seeing a great deal of convergence in the marketplace; while it is common to see people carrying both a mobile phone and a media player, such as an iPod, these devices are merging, with mobile phones offering gigabytes of storage for audio and video. Devices running Windows Mobile and Symbian have many of the features of laptops or desktop computers and are now being used to access the net at broadband speeds. Because mobile devices can be used almost anywhere, they are perfect platforms for situated learning activities, where real life is used to provide stimuli and activity for learning. An example of a situated learning activity would be studying art in a gallery instead of from an online photograph or a text book. In this scenario, the learner would be pushed information about the specific artwork they are standing in front of which would be determined by the mobile network. Handheld devices can be used in public and social settings where larger devices would be intrusive and seem out of place. Using a small device like an audio tour guide or an iPod or a mobile phone web browser is an obvious use of mobile technology; typing on a laptop computer in the same environment is not as acceptable or practical. It is now possible to envisage an audience for mobile learning content which is media rich, collaborative and always available to the user. Using established technologies such as GPS and SCORM, and developing for newer technologies such as RFID and Mobile Positioning, training content can be developed for both context sensitive and location based delivery. It is the aim of this project, supported by the Life Long Learning Programme, and its objective is to contribute to the advance of mobile learning by harnessing the latest technological developments in the field (GPS, RFID, and Mobile Positioning) for learning, to support the development of innovative ICT-based content, services, pedagogies and practice for Lifelong Learning. The field of mobile technologies is developing with amazing rapidity. It is essential for all involved in education that mobile learning is not left behind.

TIPS – T-LEARNING TO IMPROVE PROFESSIONAL SKILLS FOR INTERCULTURAL DIALOGUE

Ilaria Mascitti, Federica Funghi, For.Com. Formazione per la Comunicazione, Italy

TIPS Project Objectives

TIPS project has been funded in the framework of the Lifelong Learning Programme sub Programme Leonardo Da Vinci. It aims at realizing an innovative pilot training course for cultural mediators based on t-learning methodology and the integration of three tools: e-learning platform, TV-learning platform and mobile learning portal. The innovation consists of the integration of the three tools in order to provide effective didactic support whenever and wherever needed. This methodology would provide users with effective individual and on the job training. Each participant will have the chance to choose in every moment the tool considered more suitable to his/her or job needs. The TIPS project will exploit then the opportunities offered by ICT tools for training purposes. The innovation consists also in the type of contents that will be conveyed through them. In fact, TIPS project applies this methodology for staff involved in social and relation activities, the cultural mediators, who play a key role in the social integration process of immigrants. They are involved in all welcoming services for immigrants and refugees. Lifelong learning could support these professionals providing specific training activities according to their needs. Lifelong Learning Programme, by this way, would also actively contribute to awareness raising activities about immigration and migrants problems. These professionals often need updated and innovative training, especially exploitable in everyday job activities and the proposed methodology would effectively answer to these needs. TIPS project lasts 24 months, from the 1st of November 2007 till the 31st October 2009.

TIPS Didactic Methodology and Tools

The didactic methodology has been developed according to two goals:

1. exploiting benefits of integrated use of distance and digital devices,
2. maximizing benefits offered by each specific tool (e-learning platform, TV platform, mobile portal).

The course contents will be then accessible through the three tools and for each tool specific didactic features will be structured. Internet will be used to provide, through the TIPS project web site, more general information, materials, news, and will allow the access to the e-learning platform where didactic material can be stored and downloaded. TV learning will allow the realization of personalized training session according to participants' time availability and needs. Video and audio lessons, with topics organized as hyper textual contents, will be available on TV and e-learning platform created for the project. Training course contents will be also available any time and anywhere on Mobile, through smart phones and PDA portal.

The **target groups** involved in the project are:

- would-be cultural mediators,
- social workers.

PRODUCE, PODCAST, SHARE, DISCOVER, RATE – THE E-LEARNING PENTATHLON

Birgit Gaiser, Tilman Kuechler, IMC – information multimedia communication AG, Germany

A considerable number of higher education institutions practice lecture recording already as a standard form of e-learning in their curricula. At the University of Freiburg (Germany), for instance, the entire curriculum in information sciences is already available as e-lectures. An "e-lecture portal" provides easy access and sophisticated retrieval possibilities to search within a vast collection of lecture material.[1] Students generally appreciate this service: over two thirds of the students use e-lectures on a regular basis, either exclusively or as an addition to attending the real lectures for self-study and exam preparation purposes. Another goal strives the "self-study online"-initiative at Stuttgart University (Germany). Here, the focus is on the low-cost production of study material on the basis of faculty members' regular teaching activities. And the results are positive: 70% of the students confirmed they had used the lecture recordings, 97% of them at their own desk at home and mostly directly via the university websites. On average, the lecture recordings were used between six and ten hours, 20% of the students using a recording instead of the live presentation especially in large events with more than 800 participants. In the case of smaller events, this value is lower (15%), but here it has to be considered that the number of students who weren't able to hear the live presentation because of lack of time and who would have missed the lecture completely without the recording, does play a role. And finally, half of the students (57%) confirmed a gain in motivation from the use of recordings (Boehringer et al., 2005).

LECTURNITY[2] is a software tool that is widely used in academic teaching for the recording and distribution of lectures and presentations of all kinds. Creating knowledge modules and learning content with LECTURNITY is based on the idea of capturing all the information used in a presentation in a single recording process and without additional effort on the side of the "content producer". All media at the time of creation, or recording, i.e. audio and video, the presentation slides, handwritten annotations, animations of all kinds, software applications etc., are captured without alterations and integrated in a time-based, multimedia document. As LECTURNITY produces e-learning content "on the fly" (Mueller & Ottmann, 2000), i.e. during the actual presentation process, lecturers do not need to be proficient in the use of complex authoring systems. They should be able to concentrate completely on their core competencies: the verbal and handwritten communication of their knowledge, using slides or other supporting media. With the increasing distribution of e-lectures, a demand is arising for the fast and convenient provision of these content modules to the respective target groups. Slidestar is a new Web 2.0 Community platform with which universities can offer their students such a service. In addition to the rapid searching and retrieval of relevant learning content via a full text key word search, Slidestar also makes the sharing, the handling and the assessment of content very easy and simple. With Slidestar, authors can easily place their recorded courses on the web, supplement them with scripts or slides and make them available for downloading. The upload of content is very simple thanks to the integrated indexing and tagging procedures. Slidestar, in particular, draws on the ability of LECTURNITY to automatically index the content on the presentation slides. In Slidestar, the possibilities of automatic tagging via full text indexing are used. In addition, it is possible to jump from the returned search result directly to the relevant position in the content. Time-consuming browsing through the content can be avoided. The powerful search engine that covers both presentation slides and even the audio stream of an e-lecture is best demonstrated on the Freiburg e-lecture portal which is the first full-fledged implementation of the Slidestar search and retrieval technology.

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[1] E-lecture Portal University of Freiburg: http://electures.informatik.uni-freiburg.de/catalog/courses.do

[2] See http://www.im-c.de/lecturnity/en/index.htm

COOPERATION FOR FLEXIBLE LEARNING – AN EXAMPLE OF HOW WE LEARNED WHAT WE TEACH

Bo Malmström, University of Gävle, Lasse Bourelius, Blekinge Institute of Technology, Per Lind, Luleå University of Technology, Brittmarie Myringer, Mid Sweden University, Bo Svanteson, UR – Swedish Educational Broadcasting Company, Sweden

SNH – Cooperation for Academic Net-Based Learning – is a network for cooperation between four universities and UR, the Swedish Educational Broadcasting Company. The universities are Luleå University of Technology, Mid Sweden University, the University of Gävle and Blekinge Institute of Technology. UR is a public service corporation, financed by licence fees, and produces educational radio and TV-programmes on a non-profit basis. The cooperation was started with the aim to develop e-learning courses, for lifelong learning, supported by Radio and TV programmes. These programmes were developed by UR in contact with the team of lecturers who developed the academic content.

Sharing learning objects

With a basic agreement between UR and Copyswede, the umbrella organization that represents the vast majority of rights holders and performers in Sweden UR's programmes may be used for education in closed-circuit networks, UR access. The development of learning objects could then take the next step, from only consisting of video clips and radio to having other content, including text, pictures and connections between other learning resources and the learning objects. The learning objects developed from consisting of passive content to functioning as a learning resource. In the server we have created the possibility of "sharing alike". It is possible for the teachers to upload their own learning objects and in the next phase we hope that students will also be able to produce usable learning objects.

Flexibility and mobility

The Steering Group works in a flexible and mobile mode, and in doing so lives as it teaches which provides inspiration and spreads these methods of working. Academic teachers can test different methods, gain an understanding of flexible solutions, and feel support to explore them. This means changed set-ups for courses and responses to new demands from the students, e.g. possibilities of accessing resources of learning via the Web. Through UR access students and teachers now can reach the material on demand from anywhere.

Quality

The mode of development becomes in itself a kind of peer review where the members of the group examine and evaluate each other's proposals. Normally the development of courses is carried out as the work of one person, but in this case it involves at least three parties. The method gives a triggering effect influencing what one takes into one's course. Everybody makes an effort to raise the course to a high standard far above the stated quality demands, and this happens in an atmosphere of positive competition.

Efficient and sustainable development

The development of courses, subjects, programmes and competence in e-learning occurs to a great extent using distance methodology. The sharing of learning objects broadens their use, enabling them to be applied in other courses, according to agreements. An example is a module in statistics that has been used in courses of quite a different character. This is a way to pool resources. We are not good at everything, but the existence of different competences in a group, including the Steering Group, gives a broad competence with a peak. The working mode involving a number of teachers from several universities makes it possible to introduce a new teacher in the group without risking the quality of the course. The reuse of learning objects, the mode of developing courses, and the support provided during the development process and the realisation phase mean that the courses developed will form part of the policy for sustainable development of each respective university.

Networks and business development

The result has been sustainable academic networks, which is no mean achievement. If we, in our capacity as a steering group and academic leaders, do not act as forerunners, then who else will do this?

AN INNOVATIVE AND INCLUSIVE TRAINING SYSTEM BY DIGITAL TERRESTRIAL TELEVISION. EVIDENCES FROM BEACON PROJECT

Marco Recchioni, University of L'Aquila, Valentina Castello, Chiara Sancin, Maurizio Roscani, Didagroup, Italy, Helena Bijnens, Europace, Belgium

This contribution focuses digital divide and social inclusion issues and the most relevant features of t-learning. It reports also the main evidence arising from the Beacon (*Brazilian European Consortium for DTT Services*), three year innovative research project dealing with: interoperability between the European (DVB) and the Brazilian (SBTVD) Digital Terrestrial Television (DTT) standards; tLearning methodology; tLearning services related to social inclusion.

T-learning can prove highly beneficial to regions where access to internet-enabled computers is significantly low. E-learning is potentially *inclusive* since it is based on the idea that the use of ICT can facilitate the access to learning resources, having the potential to overcome some social and physical disadvantages. However, the nature of e-learning can entail access difficulties and *digital divide* phenomena, namely the gap between those people and communities who can make effective use of ICT and those who cannot; many recent studies indicate that access to Internet connection at home is the key to bridging the digital divide. Within this framework, the t-learning has reached a considerable importance in the last years and is emerging as an innovative media to allow users to get learning services at home. To this extent, DTT is strictly linked to social inclusion issues. Moreover, being an enhancement to traditional TV sets, IDTV is easy to use and well known for everybody, meeting the socially important need to offer online learning services to people who cannot afford to buy a computer, do not have Internet access or lack the knowledge to use such technologies. As a platform for education, Interactive Digital TV is considered a key system to reach the widest audiences. Over 90% of households own a TV; recent researches suggest that the penetration of internet-enabled computers is unlikely to reach more than 60%. These figures are even more unbalanced when relating to Latin American countries such as Brazil. In Brazil the following scenario is quite acute: 95% of households own TVs with less than 20% owing computers and Internet. T-learning is regarded as: a better methodology with respect to e-learning being easier to use and considering that computer utilisation is still a cause for social exclusion in Brazil; a widespread communication and training medium (TV setsare in all households and they are easier to use); an effective solution for fostering social inclusion (thanks to its accessibility and cost-effectiveness).

Nevertheless the spreading of t-learning services will primarily depend on their effectiveness and reliability that in turn depend on: the development of consumer access devices (end user terminals and associated open middleware) that have to be affordable and easy to use; the suitability of the developed t-learning services; the availability of the technology solutions that enable and facilitate such developments. Digital television is not just an innovative signal representation; it can represent a new multiple-channel data broadcasting that affect not only the technology side but also the content and the learning processes themselves. T-learning application effectiveness depend on the didactical model aimed to meet the end-user needs and be advantageous compared to other forms of training; implementing t-learning training systems and services requires a choice of methodological models able to supply the end user with great advantages. The focus on t-learning methodologies has been placed right away on the usage of the *interaction* elements. On this respect, t-learning still evidences significant restrictions: user interface; remote control menu options' choices; text editing. Despite these limitations, there are quite a few technical choices one can select and these are all strategies which allow participants interaction with one another. Moreover, t-learning combines TV transmissions with a specific MHP application creating a multimedia programme which is a mixture of television and e-learning. Main Beacon outcomes highlight that t-learning courses and services for students should be developed according some considerations: accessible language, interactivity and speed of contents; contents modularity; medium flexibility; appealing format; emotional factors (e.g. displaying a guide/coach); support services for surfing the contents and a propedeutical utilization track; interactivity and simulations/exercises, self-evaluation tests. Finally, tutoring is needed not only regarding the services supporting the content understanding but also with regard of motivational aspects. Research' group is now focusing in designing tutoring model (and related competencies maps) that can be effectively implemented to support t-learning courses.

iCAMP PROJECT: A GENERAL LOOK ON INTEROPERABILITY IMPLEMENTATION

Danguole Rutkauskiene, Andrej Afonin, Kaunas University of Technology, Lithuania

Introduction

Recently e-learning market was accessioned with a huge number of various virtual learning environments and platforms that are intended to support learners and teachers in educational process. However a wide selection often does not cover all the scope that is required for a certain situation. Hereby there is a demand to use several tools or systems. Despite nowadays situation tools integration and data interoperability between distinct systems is still a relevant problem. Nowadays many people work in this area. Let's take a look how this is being done in the iCamp project.

Challenging technological solutions

The main iCamp project aim is to create an open educational information system that will associate open source virtual learning environments, learning and social software tools, digital repositories and establish interoperability and communication between them. When implementing integration tasks a particular attention is paid to create and develop an open API's for open source learning environments, tools and libraries. Also a special attention is paid to open source social software instances and its integration into common network. For some of them the interoperability functionality was implemented, while others just provide an additional functionality and could be used as embedded objects in other learning materials. Another raised challenge was certain digital libraries integration into one searchable space.

Tools interoperability using feedback technology

RSS feeds mostly are used to deliver information from information source to information consumer. However RSS feeds could be used not only to "pull" information, but also to "push" it. And that was used in the iCamp to implement interoperability between different data sources. In the iCamp project such a technology also was used to establish data interoperability between social bookmarking systems Scuttle, feeds aggregator feed-on-feeds and in Moodle virtual learning environment. The working principle in those instances is similar to the ones described in the article. The other valuable thing in feedback mechanism is that such type of communication could be used not only between two same kinds of software installations but also between different software that support same feedback technology. Some example of such a usage is provided in the article as well.

Federated Repository network 'ObjectSpot'

Another case of interoperability mechanism that is being developed and is already in use in the iCamp project is Federated Repository network 'ObjectSpot'. Following the ideas of open API's implementation the iCamp team developed an open API's for a number of different repositories and digital libraries using SQI (Simple Query Interface). SQI interfaces were implemented both on search portlet side and repository side. To connect to all data targets, check them if they are online, perform stability monitoring, collect data from different sources, rank them and give them back to search portlet there was developed middleware that was called Mediator. In a paper you could find more detailed overview and some schemes describing to federated repository network works.

Conclusion

In this paper we have first defined problems that currently appear because of the variety of different learning environments, tools and distributed data repositories. After that we defined the aims of the iCamp project and its ways of dealing with that problem by developing interoperability mechanisms and implementing them in different learning tools and environments.

In the second part we briefly overviewed couple technical solutions that were highly evaluated by European Commission. It is important to mention that these solutions are already successfully used and further developed.

TEACHING AND LEARNING BENEFITS OF USING INTEGRATED TECHNOLOGICAL SOLUTIONS

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Ene Tammeoru, Estonian E-learning Development Centre, Estonia

E-Campus
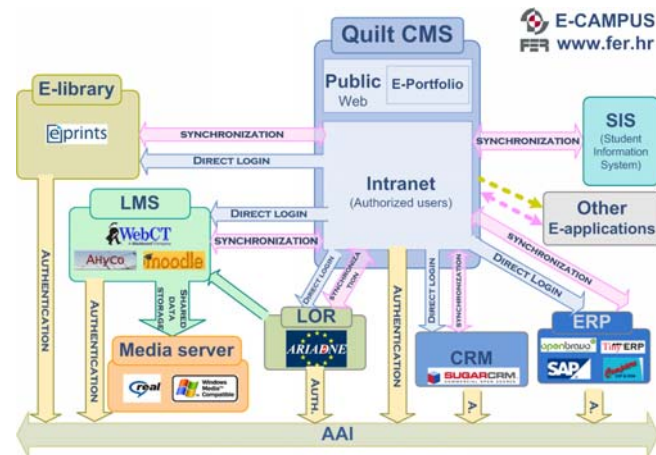
The integrated e-learning environment known as the E-campus is being developed at the Faculty of Electrical Engineering and Computing, University of Zagreb with the goal of creating standards-compliant, integrated technical infrastructure which should incorporate all necessary information, learning and collaboration resources to enable successful and easier e-education.

It consists of (integrations with last three items are currently in development):

- The **Content Management System (CMS)**, which serves as a public Web, intranet and teacher / student portal;

- The **Learning Management Systems (LMS's)**, namely Moodle, WebCT and Faculty's own system AHyCo, which provide space for all course materials, quizzes, polls, grading, wikis, forums, chat and other important tools;

- The **Student Information System (SIS)**, which provides complete student information infrastructure and information about all the courses that are available at the Faculty;

- The **E-Library**, which provides space for e-books and materials shared between courses;

- The **Media server**, which provides necessary infrastructure for delivering streaming video and audio;

- The **E-portfolio**, which is integrated as a module in the Content management system;

- Other integrated **E-applications**, which can exchange data and authenticate users using E-Campus;

- The **Authentication and Authorization Infrastructure (AAI)**, used by all E-Campus elements to ensure Single-sign-on from the portal and usage of the same usernames and passwords, if a user wants to directly access any connected element;

- The **Learning object repository (LOR)** which will facilitate sharing of e-learning materials published under open licenses among teachers, and enable them to easily access the materials via the GLOBE's (Global Learning Objects Brokered Exchange) federated search;

- The **Customer Relationship management System (CRM)** which will help technical support keeping track of support requests and needs;

- The **Enterprise Resource Planning System (ERP)** which will enable E-Campus users to see relevant financial information about their projects' statuses, resources and business processes from within the Content Management System.

Benefits of particular integrations will be described during the poster presentation.

PACEL PROJECT: LEARNING OBJECTS IN MATHEMATICS

Enrico Cavalli, Adriana Gnudi, Agostino Lorenzi, University of Bergamo, Italy

Introduction

In every educational institution the teaching of mathematics has had to face growing and more specific problems, especially in relation to modern students' attitude towards this discipline coupled with a general decline in students' mathematical abilities. For this reason it seems to be useful to introduce into high school and university courses some activities which can make the students more involved in learning mathematical concepts connected with their applications. Usually teachers need to be supported with specific instruments in order to present the contents (concepts and applications) in an integrated manner and related to the curriculum.

Furthermore the use of e-learning integrated with other learning activities (blended learning) is quite effective for motivating the students and improving the quality of learning, then the use of e-learning platforms becomes widespread. In this context the production of standard Learning Objects (L.O.) is crucial and useful in order to allow the implementation of e-learning modules. The use of Learning Objects can create atomic resources based on the granularity of the contents. In this way flexibility in teaching and learning is ensured. The L.O. may be re-used for teaching different levels and in courses of different disciplines. Teachers and students can build flexible and personalized learning paths by selecting the contents. The resources can also be shared in different learning environments.

The aim of the project is to create a set of L.O. which can be used to present some fundamental mathematical concepts The objective is to produce multimedia structured in a manner which allows teachers to connect the theory and the applications in a very flexible way using a model which integrates both aspects in a form which promotes real understanding and the acquisition of calculus instruments related to them. Each concept is expounded with a set of problems in Economics, Physics, Statistics and Finance which are typically used as examples of applications.

The project

The description of the model can be done via a schema based on five steps:

- Presentation of a typical problem within one of the contexts (P)
- Mathematical description of the concept that can be used to formalize the problem (C)
- Examples of the concept with calculus (E)
- Logical development of the concept (L)
- Application of the concept for the solution of the problem in point 1 (A).

In order to organize the contents of the materials, two distinct aspects are considered for each concept: level and context. Two levels especially are taken into consideration: high school and university (graduate level) and the context within these can be Economics, Physics, Statistics or Finance. The project starts with the realization of a prototype regarding a particular mathematical topic and the implementation of L.O. of the five types following the steps:

1. Setting of a mathematical concept.
2. Choice of the context and the problems.
3. Production of the text of the mathematical core (C, E, L steps).
4. Realization of different macro-stages (P, A steps, one for each context).

Technologies and software tools

SCORM compliant Learning Objects are created and tested on the most popular Open Source LMS platforms, like Moodle, Ilias and Dokeos. Adobe Captivate was used to create digital contents, because it is a user-friendly software tool and makes it straightforward to create SCORM compliant LO, starting from traditional files. Adobe Captivate also enables the effortless creation of the three main components of a Learning Object: content, activities for learners and assessment.

E-LEARNING AND E-TEACHING STATISTICS: MOODLE AND "R" APPLICATIONS

A. Oliveira, Universidade Aberta, T.A. Oliveira, CEAUL and Universidade Aberta, Portugal

A competitive world in permanent evolution requires the analysis of behaviours in all possible areas. It urges to make research and to handle statistical techniques such as sampling, experimental design, data analysis, statistical modelling and simulations.

When you need to extract information from highly complex data, the answer is well known: you need to study and to know how to handle Statistics. Statistics are nowadays included in an amazing number of areas curricula such as those involving graduation and post-graduation courses in Health Sciences, Social Sciences, Biology, Management, Engineering, Education Sciences and Computation besides of course those specific ones involving Statistics and Mathematics by itself.

Students of almost all subjects feel the need of getting an active knowledge on statistical methods and their computation techniques, so that they better accomplish their courses and develop expertise to succeed in their future jobs.

We have been assisting to an increasing activity of Web Education Components and Online courses, and definitely this is the best bet to improve the ability in statistical computation techniques and also in Web research.

Most of the best-qualified jobs place as a reality the need of a great variety of skills, including mathematical, statistical and computational abilities, so the development of qualified e-learning tools for high statistical levels is an actual challenge.

In literature and on the internet we can easily find good tools concerning the e-learning/e-teaching of statistics for undergraduate students, and in our work we'll present some of them. However, it seems little attention has been given to the particular cases of post-graduate students considering e-learning/e-teaching of high-level statistical subjects, like Multivariate Analyses, Experimental Design and Simulation Techniques.

In our work we will emphasize the importance of using R on the handling of quantitative data, on simulation and on graphical insights. Since it only requires that you have a computer and internet available there is also the great advantage of R, on being free and possible to access and use, in any job or research. Also we state the relevance of using R on establishing the connection between theoretical problems and applications. Some examples are presented.

SCIENCE TO GO: DELIVERING SCIENCE LABORATORIES AT A DISTANCE

Dietmar Kennepohl, Athabasca University, Canada

University-level science courses that contain a substantial laboratory component have always been a challenge to deliver effectively through distance education. A number of different means have been employed by science educators to deliver an effective laboratory component at a distance. These include laboratory simulations (virtual laboratory), remote controlled laboratories, and home-study laboratory kits, as well as concentrated regional and on-campus supervised laboratory sessions or fieldwork. There is no one correct solution in delivering laboratories for distance students and often an assortment of methods are used in concert to overcome challenges. This paper offers a review of some of the major strategies being used around the globe in the sciences, as well as some summary analysis based on experience and research at Athabasca University.

Supervised Laboratory Sessions

These face-to-face laboratory sessions (sometimes also called residential schools) operate in almost an identical manner to those found at more traditional institutions. However, unlike traditional laboratories a degree of flexibility is introduced for the distance education student by (1) offering the sessions in regional sites (i.e. not centrally) and/or (2) concentrating the sessions so they can be completed fewer visits and/or (3) offering sessions at non-traditional times (i.e. evenings, weekends, holidays). The biggest overall strength of this face-to-face mode of delivery is the humanizing of the learning process, while in many cases also insuring the safety of the student.

Home-study Laboratory Kits

Another solution is to enable students to carry out real experiments in the home environment. This can be achieved by selecting experiments that use readily available supplies that the student can obtain or by providing a laboratory kit. One potential concern with the home-study laboratory is that there is no student-student interaction and there is no physical presence of a laboratory instructor. However, we know that other forms of interaction can also lead to learning. In a fifteen year study of our general chemistry course we have established with student surveys and student performance data that the home-study and in-lab experiences are different but equivalent.

Virtual Laboratories

Interactive computer simulations offer a viable solution for distance learners in the sciences to meet their laboratory requirement. Research indicates that the use of experimental simulations in laboratory sciences like biology, physics, geology, and chemistry does promote learning in those disciplines. Computer simulations can offer some learning opportunities that real laboratories alone cannot, but conversely, they cannot replace the real experience in all cases. It is the innovative combination of the virtual and real laboratories that seems to offer the potential for effective and meaningful learning.

Remote Controlled Laboratories

With the increasing availability and robustness of new technologies, the use of remote laboratories and remote access is being explored by many educators in the natural and physical sciences as a viable method of offering a first-class practicum experience for the student. The opportunity to do real experiments as opposed to simulations cannot be understated. Remote laboratories are a step beyond the virtual realm and their computer generated laboratory simulations. They represent the best alternative to working in a real laboratory. To illustrate this, we describe the real-time control of sophisticated analytical instruments in a remote teaching environment aimed at chemistry students.

TEACHING CHEMISTRY ONLINE: SETTING BRIDGES TOWARDS SUCCESS

Carla Padrel de Oliveira, Fernando Caetano, Filomena Amador, Universidade Aberta, Lisboa, Portugal

In distance education concepts and ideas can be *easily* transmitted through classic media, but making a science course accessible requires imagination in order to overcome some barriers.

As we enter the 21st Century, adult students see the need to enhance their education both at the undergraduate and graduate levels to enter, change, or advance in their careers. However, due to work and family schedules, attending a traditional class may not be a good option. A distance education Internet based on-line class which transcends the time and space requirements of a traditional class may be very appealing to a well motivated independent learner.

However it should be emphasized that teaching and learning science in a virtual environment represents a great challenge both for teachers and students. Nevertheless and bearing in mind the importance of science both in the foundational education for future scientists and for the scientific literate citizen an effort is required in order to create the conditions for the successful learning of science in online courses. As far as science teaching is concerned two view points can be considered: one concerned with scientific courses aimed at developing a set of skills adequate for research work; a set of more general courses with the purpose to promote competencies and skills in science matters but adequate to professional activities other than strictly related to scientific work.

The Universidade Aberta recently assumed a student centered pedagogical model founded on three main principles: flexibility, interaction, digital inclusion. Following this new strategy we redefined our approach to laboratory work in online course and introduced a wider range of teaching and learning methods, matching those with the goal of developing a set of learning experiences.

In this context and because we are continually seeking new ways to capture the attention of students and create active learning environments, where minds are engaged and interests are nurtured, a graduate programme on Environmental Sciences was offered for the first time in 2007. For most practical courses, an important component of the design plan should be the incorporation of hands-on laboratory experiences. The challenge of including hands-on activities in Internet courses can be divided into two parts: selecting meaningful activities and managing those activities effectively. It is a especially difficult task to offer a distance learning course in a laboratory science but it is a real necessity if we want these programmes to be successful for distance learners.

The present work presents some results concerning the *laboratory* activities that were developed and assessed in this distance learning course as well as the feedback that was given to the students.

To create an effective distance education course the technologies and educational techniques that will prove beneficial to students have to be carefully selected. Using multiple technologies and methods within a single course is the best way to meet the demands of the content, the needs of students, and the requirements of the teacher. In the course described among the several resources used students have almost unanimously reported that the hands-on activities in asynchronous learning network enhance their learning.

These successful demonstrations of hands-on activities have established a new benchmark for distance education. The inclusion of laboratories and field trips is as valid in distance delivery as it is in the classroom. Laboratory exercises need not be restricted to computer simulations. Critics can no longer say, "It can't be done." This challenges online teachers and institutions to use these tools to deliver the richest educational opportunity possible to their students.

VIRTUAL MOBILITY OR DISTANCE LEARNING? A UNIQUE CASE STUDY FROM THE FACULTY OF ECONOMICS

Giuliana Meraviglia, Marina Ribaudo, Marina Rui, Università degli studi di Genova, Italy

Introduction

In this paper we present the experience of the University of Genova in running **AulaWeb** (http://www.aulaweb.unige.it), a web portal based on the Open Source software Moodle[1], adopted in 2005 as our centralized platform for improving traditional teaching through the use of IC technologies. The ICT, as learning support, was introduced in our university in 2001-2004 with the CampusOne project of the CRUI Foundation[2] mainly devoted to enhance the use of technologies in education.

In July 2005, we decided to adopt the software Moodle due to its large diffusion and its active and numerous developers' community. In September 2005 the first prototype of AulaWeb was ready and one Faculty started to experiment it. In February 2006 AulaWeb became available for the whole University. We adopted a process based on voluntary adhesion. Due to the little available resources, we put the majority of our efforts to support colleagues in their first steps in using AulaWeb and to maintain the software platform, without investing any resource in the software acquisition.

Nowadays every Faculty has at least some courses[3] on AulaWeb where there are 111 courses of study and 21400 students registered, out of a total of 40.300 students enrolled to our university. The updated numbers can be found at http://www.aulaweb.unige.it/dyna.php/stats.html.

A case history

The second part of this paper presents the experience of one colleague of the Faculty of Economics.

"Since 1999 I have been delivering my course of "International law" teaching in English, in order to promote foreign students' mobility to Genova under European programmes coverage. The other reason that made some colleagues and myself accept to initiate this experience was the feeling to have a great opportunity to create an intercultural environment while staying at home, and this not just for us as teachers, but also for the classes. When, in 2001, the time came for the University of Genova to start discussing what to do with ICT and teaching, I was in the pilot group of volunteers willing to learn and share the adventure to become *technology enhanced teachers*.

The first edition was very successful: students were fed with materials regularly and in an easy to get format; tools for communication were available within the virtual classroom; assignment involving teamwork improved the cohesion of the students and brought out individual skills. And, last but not least, gave them the possibility to come back to the course resources wherever and whenever they wanted or were able to, having the further opportunity to complete the course job even after their return at home, staying in touch with me via AulaWeb and/or simply via Internet in case of need.

One student, particularly, felt as extraordinary interesting this way to go through the exam and profited of this expedience to complete the study plan set for his mobility, thus getting the maximum benefit from the period abroad. His enthusiasm must be the reason that made him spread across his home university mates the good news about my course: with the unexpected result of motivating a companion to ask me if he could get my course though remaining in his country, just as a single unit "*studied*" abroad. Virtually, of course … without even coming to Genova.

From then until now, every academic year I have almost one of these "virtual" students. Thus the question is: "Am I just promoting *virtual mobility*, i.e. a special form of the so called *internationalization at home*, both to foreign and Italian students or am I offering some opportunity for experiencing a form of *distance learning*?"

(In both cases, this is thanks to AulaWeb)

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[1] http://www.moodle.org
[2] The National permanent Conference of Italian Rectors
[3] Notice that the majority of these on line courses supports traditional teaching in a blended learning modality

SPINNING SUCCESS OR CAUGHT IN THE WEB 2.0?

Lorraine Walsh, Margaret Adamson, University of Dundee, United Kingdom

Technology is not neutral. It comes to us pre-packaged with 'values that have already been espoused'. Such values have been superimposed by external agencies but to what extent can it be argued that there is value in using technology in teaching and learning? Beyond the gloss and the hype, the question remains whether the expanding range of e-learning tools – virtual learning environments (VLEs), social networking sites, blogs & wikis and other Web 2.0 technologies – can add genuine value to the learning and teaching experience, particularly in the context of the 'global classroom'.

In 2003 a study (Walsh & Adamson) was undertaken at the University of Dundee to obtain a general overview of staff interaction with the VLE (Blackboard) which had been in use since January 2002. At that point a sample of 50 instructors across the institution were either interviewed or completed a paper version of the questionnaire. While the majority of respondents felt that their teaching style had changed (to a greater or lesser extent) through the use of the VLE, a substantial minority also indicated that using the VLE had had no impact on their teaching style

The current project (Walsh & Adamson, Spinning Success or Caught in the Web 2.0?) is the 5 year follow-up to the original project, involving revisiting the original data and exploring through questionnaire, to what extent the situation has changed and developed over the last five years, in order to specifically address and explore the following questions:

- **What pedagogical changes and new learning strategies have developed as a result of teachers' and learners' engagement with the new learning tools?**

Has the paradigm shift in learning and teaching with information and communication technologies that was identified by a number of commentators at the beginning of the century been realised, and to what extent have the modes of development of the technologies in the intervening years opened up new vistas and areas for exploration?

- **What combinations of delivery modes in different learning settings are most effective in supporting learning?**

In what ways have the conceptions of 'teachers' and 'learners' changed and developed in light of a methodology that is increasingly situated within a blended approach; has the ability to span continents and embrace global approaches, perspectives and viewpoints as easily as local ones; and is engaging with a variety of new tools under the auspices of Web 2.0?

- **How can good practice be identified and shared regarding what works in e-learning, in which environments, and what does not?**

How can the 'affordances' of e-learning be explored and examined for the benefit of developing good practice in the area of teaching and learning? For example, assessment of online discussion may be viewed by the teacher as affording new and creative possibilities in teaching and learning which consequently leads to greater acceptance by the teacher, while for the learner, the same approach may be perceived as affording little but uncertainty and 'extra work' which generates reluctance or hostility towards it incorporation within a course of study.

This poster will therefore:

- build on the 2003 pilot study by presenting data, conclusions and suggestions for good practice drawn from the 2008 study;
- explore and examine the developing identity of teachers and learners in the Web 2.0 informed global classroom;
- elaborate upon the developing pedagogy of e-learning and associated good practice.

USING ICT AND WEB 2.0 TOOLS TO SUPPORT FACULTY INTRODUCING ACTIVE LEARNING IN UNDERGRADUATE ENGINEERING EDUCATION

I.S. Carvalho, Instituto Superior de Engenharia de Liaboa, J. Vinagre, O. Dias, B. Williams, Escola Superior de Tecnologia do Barreiro, Portugal

Project Objectives and Implementation

The <u>main focus</u> of this work is twofold: i) Facilitating and encouraging the use of Active and Cooperative Learning (ACL) techniques in the engineering education in Portugal by working initially with a core group of interested lecturers who will progressively introduce and develop the techniques in their teaching practice. This group will then be encouraged to disseminate the use of ACL techniques through mentoring and Community of Practice enabling techniques, and; ii) Development of a tool (Learner Activity Monitor Matrix – LAMM) to monitor the degree of student activity before and after the implementation of ACL techniques in engineering courses. Hence, this project targets staff professional development using peer observation and the generation of data to monitor and assess the teaching / learning process.

The <u>approach</u> is centred on the promotion of more flexible and effective learning environments. Active Learning techniques will include in-class individual, pair work and group work and may involve short discussions, information exchange in jigsaw activities, comparing opinions, gap-fill, and so on. These short activities are intended to help students organize their ideas, interact with the area being studied and, being interleaved with more traditional lecturing, provide a more varied learning environment. The project also aims to explore the learning possibilities of student teamwork using Cooperative Learning techniques in face-to-face and online contexts. This builds on existing group and project work approaches but goes further by applying systematic methodologies which recent credible studies have shown to be effective. In the first two years of the project, it is proposed to introduce Active Learning methods via a core group of lecturers, mostly new to this approach, who are teaching students at the ESTBarreiro Engineering College. The Cooperative Learning approach, on the other hand, will be implemented with 4th year students at ISEL Engineering College.

The following <u>ICT tools</u> are being used: i) video recording of lectures to a dedicated server followed by their analysis to determine Learner Activity Indices before and after the introduction of ACL techniques; ii) use of a proprietary browser-based videoconferencing tool (Moonlight Conference) for synchronous meetings between faculty in the participating colleges; iii) use of online groups (Google Groups) and wikis (pkWiki) for faculty Knowledge Sharing, and; iv) use of social software (Ning) to facilitate community building between participating faculty in different institutions in the latter stages of the project.

Although there is no published work to date demonstrating the value of these techniques within the specific context of Portuguese engineering education, given the existence of a large and credible body of research showing the value of ALC techniques in engineering education in other countries, particularly in the US we believe one can be confident of the qualitative benefits of employing these technique in the Portuguese context. We are confident that this project can bring about significant improvements in the learning of engineering students in the participating colleges and provide a positive multiplier effect in other linked institutions.

The <u>main expected results</u> are: i) development of a tool to monitor the degree of student activity following the implementation of ACL techniques in engineering courses. This will involve applying the Learner Activity Monitor Matrix (LAMM) for systematic observation either in-class by an observer or post-class using a video record; ii) an enhanced repertoire of teaching tools for the participating Faculty staff and a positive multiplier effect in other linked institutions, and; iii) enhanced awareness of the role of Scholarship of Teaching and Learning in the participating engineering colleges.

Acknowledgements

TOWARDS THE CONVERGENCE OF TECHNOLOGIES USING OPEN STANDARDS IN SOCIAL NETWORKING SOFTWARE[1]

Joaquim Silva, Francisco Restivo, University of Porto, Portugal

Introduction

Social Networks (SN) enable groups of people to aggregate and share information very easily in a connected community. If we add to it a learning structure where students have a simpler, attractive and tutor guided environment, we obtain an integrated social learning environment. In order to develop a conceptual framework for such a system, an analytical research was conducted about some core issues.

Data portability, interoperability & emergent open standards

Today it is technologically possible to embed a learning environment into a SN system that connects a group of students. One core issue is data portability, which is a much needed requirement to free customer lock-in. Also interoperability is another core issue, specially for letting friends follow friends on all sites they signup, or tell them which friends are already registered on a particular new site, and keep track of new friends joining over time. One third core issue is open standards, and recently some corporations that develop SN software have started conversations to reach a mutual understanding. Unfortunately, Facebook decided to work alone and did not join the Google's platform – OpenSocial, which several other companies joined, namely Plaxo, Hi5, Ning, Friendster, Bebo, LinkedIn and Myspace. Both platforms, OpenSocial and Facebook, enable rthird party developers to build their own platform applications.

On the other side, there are some emergent open standards already in use. OpenID is designed to facilitate single logins for multiple unaffiliated Web sites. FOAF (Friend Of A Friend) is a stable core of classes and it is a linked information system, but it has some portability problems. To outcome these drawbacks, XRI (Extensible Resource Identifier) provides an interesting approach. It breaks the problem of portable access control into two portable parts: an addressing format and a format for expressing the controls of an individual or other data authority. XDI (XRI Data Interchange) is a XML format in which every node of a data graph is XRI-addressable. It creates a universal data interchange format for identifying, describing, and versioning data using XRIs.

Our current work & next steps

In a high school community, SN are being massively used by youngsters, to meet new people and establish social connections. If we could use these social interactions it would be possible to move students' interests towards sharing knowledge and increasing the levels of success at school. The teachers should participate, but also other members, namely parents or other agents, can be a part in the learning process.

Some authors have contributed to our work with their insights. For instances George Siemens with the connectivism theory, Stephen Downes and the newly empowered learner, John Seely Brown with the internet leverages, or even Win Veen, who claims that technology and games influence the skills and attitudes of learners. Also the Vygotsky ZPD supports learner's knowledge construction with social interactions. In fact e-learning 2.0 systems comprise resources and services in order to offer learning opportunities in a network environment. We are working on a SN learning framework for supporting student's portfolios and promote interactions among them, which will be validated in a high school context. The central idea is to reinforce the student levels of motivation and interests for studying class matters. We consider that by providing a bidirectional communication media system between both main actors, they will interact more, reach higher levels of understanding, mutual cooperation and at the last instance knowledge. Students will have a nicer place to learn, integrated with their virtual identity and receive instructional scaffolding by their teachers.

KNOWLEDGE BUILDING WITH SOCIAL BOOKMARKS AND TAGS

Martin Sillaots, Tallinn University, Estonia

Social software refers to environments that support group interaction. Tools like instant messaging and chat environments, forums, blogs, wikis, collaborative real time editors, social networking environments, social bookmarking and content sharing tools are very popular among students because they enable them to be not only the readers but also the creators of the content. Students often use different forms of social software even before they start using an LMS at school. Why to force them to use a LMS-like closed information system that will be abandoned when they finish the school?

Social software supports communication, social networking, collaboration, content creation and sharing. According to the social constructivist learning theory, learning is most effective when students can construct their own meaning of knowledge in communication and collaboration with other students. From this point of view the overall objectives of social software and learning seam to support each other.

The use of social software is based on free will but the school tends to be more or less autocratic. How much freedom can be given for the students in learning so that the situation retains the characteristics of social software usage and the learning still can be managed by teacher in the optimal way? To find the answer to this question the social bookmarking tool del.icio.us (*http://del.icio.us*) was tested in project management course for in the secondary school level. Social bookmarks were used as an environment for managing learning and knowledge. Social bookmarks can be used for delivering content from teachers to students using shared bookmarks. The same environment is excellent for students to collect the information related with a study project. A web page with social bookmarks can be the starting page of a course.

The teacher published the content of the course in Internet and created bookmarks (shared links to the content) in the del.icio.us environment. All of the lessons were held in a computer lab. In the beginning of the first lesson, the students created their personal del.icio.us accounts and joined with teachers' network. Mediated by the joint network they had instant access to the teachers list of bookmarks. During the lesson they copied the bookmarks and added their personal tags. The goal for the students was to create their personal starting page for content of the subject – personalized e-conspectus. This e-portfolio contained links to materials and a tagcloud. In order to motivate students to share the bookmarks and to create their personal tags, it was mentioned that they would be allowed to use bookmarks and tags in the final exam for finding answers to the questions.

The majority of the students were satisfied with bookmarking and tagging. Quarter of the class was not satisfied. They wanted to describe the bookmark with longer sentences not with separated single words. The experiment was interesting also from the teacher's point of view though he faced different learning management difficulties. The biggest problem was – students started to copy fellow students' bookmarks with tags without reading the content. The tagcloud created in this way was rich and meaningful for the teacher but was pointless for the student. It does not lead to the correct answers on the exam.

Social software environments can be easily integrated in blended or e-learning. Students are typically enthusiastic to use them because social software makes learning process more interesting. For making the teachers task easier during the management of learning process some additional functions should be developed. E.g. in del.icio.us the functionality for hiding tags previously created by other user is needed. Such kind of functionalities can be developed as the separate layer (different application that runs on information generated by the del.icio.us).

Software is social when user can freely choose the tool what best suits to his/her needs. Different students prefer different tools. Teacher cannot force the students to use only one tool. It does not fit to all of them. To collect all information created from different environments the teacher can use feed burners.

ENJOY – GUIDELINES FOR DESIGNING ENGAGING VIRTUAL ENVIRONMENTS

Eva de Lera, Magí Almirall, Irene Manresa, Universitat Oberta de Catalunya, Spain

This case study proposes a new methodology, a set of guidelines that are necessary to design motivating and engaging e-learning environments. With the focus having been on the design of motivating and engaging e-learning tasks and processes, very little has been done to understand the impact of the e-learning environment, known as the virtual campus, in the students' learning experience. This paper illustrates how this methodology can help designers, faculty and learning designers and technologists ensure that the users' overall experience in a virtual learning environment is both engaging and motivating and therefore contribute to the ultimate goal, to learn and be motivated to learn.

The ENJOY guidelines have been generated from the information gathered from a significant amount of user analysis, and the information gathered from stakeholders such as the institution. The key aspects identified during the data gathering have been translated into design guidelines, in a way that those participating in the design of a virtual campus would understand what the key element are not to be omitted. The ENJOY guidelines are meant to be used in conjunction with the other user centred design (UCD) methodologies carried out to design virtual campuses.

ENJOY: Guidelines for designing engaging eLearning environments:

- **Personalization** – the environment must make the student feel like a person and not like a user. Use of communication strategies that are more personal, common language and options for this person to participate in this environment.

- **Identity** – utilizing real images to help the student identify him/herself with the values and the community in a quicker and more efficient way.

- **Brand** – ensuring that the brand and the brand values are reflected throughout the virtual environment to reinforce the relationship between the student and the institution.

- **Community** – offering options to communicate, relate and participate. Making them visible and easily accessible.

- **Surprise** – introducing positive surprise elements or special events in the initial entry pages or in strategic locations to make the students feel that they are part of a creative and dynamic community.

- **Innovation** – integrating innovating elements in the virtual environment, those that they may begin hearing or reading about in the media and other trend environments.

- **Zen** – ensuring that there is not an overload of text in the screen, that white spaces are used, as well as photographic or graphic elements. Need to avoid unnecessary noise.

- **Search** – providing shortcuts to students that have little time, ensuring that they can find the information they need by doing a simple search.

- **Clarity** – utilizing lively and bright colours to facilitate interaction, reading and information visualization.

- **Situation** – ensuring that the student quickly recognizes the structure or map of the environment in a glimpse, without needing to scroll.

- **Aesthetics** – ensuring a consistent aesthetic throughout, to help guide the student through his or her tasks and objectives.

- **Recognition** – utilizing standard icons and symbols that can be easily and quickly understood without requiring the alternative text or an extra click to understand it.

The ENJOY guidelines where used in two different projects. In both cases our results show that this easy-to-implement methodology can contribute to increasing the motivation of the students and other users of an online learning environment.

uGoToWork: CREATING A DISABILITY ON-LINE COMMUNITY

Chrisann Schiro-Geist, University of Memphis, USA

The concept of a virtual community of practice is not a new one, but this poster will identify a model for creating such a community within an educational program for disability professionals. The academic program is offered at the University of Memphis in Memphis, Tennessee, but the community knows no national or international boundaries. Persons with disabilities, disability advocates, rehabilitation and disability professionals, professionals in related fields such as Social Work, Audiology, Nursing, Occupational Therapy, etc. can participate and support the Disability Studies program and its students as they enter the world of work. The Community can share political, medical, philosophical and other approaches to relevant issues in the field. It can help in the recruitment, training and placement of the students in field experiences and jobs. It can be the nest for the generation of the next class and a source of mentorship for students in the program.

Another important point in the creation of the virtual community of practice, as a support for developing professionals is the need for basic access to technology and technology support for the community. This allows for the merging of two disciplines (IT and Disability Studies), in a partnership for professional growth. It means that the virtual community must be vigilant in its use of disability friendly software and must be sensitive to access for all potential members. This poster presentation will identify important features and key aspects of the creation and development of the community, and serve as a model for other educators and IT professionals to use in the future development of such on-line communities in other professions.

CROSS-BORDER, CROSS-LANGUAGE, CROSS-CULTURE CO-OPERATION AMONGST SCHOOL LIBRARIANS IN EUROPE

Helen Boelens, Kalsbeek College, The Netherlands

School librarians and information specialists play an important role in the implementation of information literacy skills in schools throughout digital Europe.

Research evidence shows that school librarians and information specialists are actively promoting the important work which they are doing, on a national level, however, cross-border, cross-language, cross-culture co-operation makes their work even more effective and also helps to promote public awareness of this work on a European level.

This paper will discuss the recent establishment and development of European school library groups. School librarians are faced with some specific, very real European problems, for example the diversity of the different national school systems, the differences in national legislation which is applied to the work of school librarians and information specialists in each individual country, and the large number of different languages which are spoken or written in each country. Thanks to the availability of digital technology, these European groups are able to communicate with each other in a simple way and exchange information which makes their important work more effective.

CHANGES OF SOCIAL ENVIRONMENT WITHIN THE NETWORK OF SCHOOLS DUE TO THE UNITE PROJECT

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The paper presents some research results, formulated as changes of eLearning-based social environment, of the ongoing EU project UNITE (FP6 IST-26964, 2006-2008, http://www.unite-ist.org/). The UNITE is an eLearning environment based on three technologies: Microcosmos (eLearning management, EMS), MTS-Infopool (content management of SCORM-compliant courses, IGD) and mLearning, CTAD. The distinction of the project is the evaluation of sustainability and degree of deployment of project's results through the creation of the UNITE network of schools (NoS). Physically, the NoS consists of 14 schools from 10 European countries. The NoS provides a social and environmental basis for the investigation and validation of the UNITE framework, i.e., the technological platform, the pedagogical models, and the eLearning scenarios that are created, integrated, populated and used in UNITE schools. The UNITE framework, when applied, introduces changes in the social environment of a school. We define some terms and then outline an evolutionary model for presenting changes and evaluating social issues.

The model evaluates a state of the social environment through a set of time-dependent measurable characteristics related to eLearning at a node of the NoS, such as technology, teacher's involvement in eLearning and readiness to use this technology, methodology and pedagogy support, administrative support, etc. The model also assumes a strict framing of the UNITE project life cycle into time phases at which measurements of social factors are provided with respect to the introduced criteria. The criteria are based on the so-called Network Readiness Index (NRI). The NRI is a composite of three components: the *environment* offered by a given school, the *readiness* of key stakeholders (individuals, schools, and governments) to use UNITE, and finally the *usage* of the UNITE (eLearning scenarios, learning content, etc.). The NRI is obtained at each anticipated phase of the UNITE life cycle leading to data collecting and evaluating. The model's assessment is based on the comparative study of statistical data of the traditional learning (without the UNITE) and learning with the UNITE platform. Components of the *environment* and *readiness* were evaluated in the preparatory phase of the UNITE. During preparatory phase three instances of eLearning scenarios were developed: English as foreign language, Environmental education, and ICT education. The component *Usage* was evaluated during two validation phases: 1) when schools customised and implemented instances and new scenarios (Cross-curricular scenario, Student Research Project, Logarithmic inequalities, Rhetoric Texts and Argumentation); 2) when schools created, implemented and delivered 26 new scenarios in Greek, German, Bulgarian, Slovenian, English, Lithuanian, Latvian, Croatian and English languages related to ICT, foreign languages, literature, physics, chemistry, math, logic, etc. Pupils have used mobile devices and acted in 13 different places: computer lab, class, at home, forest/lake/urban settings, library, museum, cinema, historical location, exposition, etc.

For developing scenarios, teachers use UNITE tools and other authoring tools: MS Office, Dreamweaver, Photoshop, Flash, Movie maker, Adobe Acrobat, CorelDraw, etc. Pupils fulfil tasks related to the creation of various contents: texts, questionnaires, reports, video, diaries, and essays, made different kind of experiments. A feedback have been received from more than 70 teachers and pupils regarding usability, and from 110 people regarding socio-economic evaluation that gives a valuable contribution for the UNITE sustainability evaluation. Totally 46 teachers, 26 classes and 512 pupils have participated in the UNITE project. Teachers and pupils have experienced in eLearning: they have already spent in average 42 hours per one teacher for the scenario implementation, have created more than 30 workspaces, and have added more than 140 keywords into the metadata repository.

The ongoing shift from the traditional learning to eLearning (mLearning) is indeed challenging for schools: it opens new technological capabilities to teach, to learn more effectively using traditional and innovative models and frameworks. The pedagogical challenges and new kinds of learning scenarios enlarge the role of social aspects in eLearning environments since new collaborative links are created and new cultural and social dimensions are emerging. In the context of the UNITE, the new challenges are to be understood, addressed and evaluated. The proposed evolutionary model for evaluating social issues assumes measurements of social factors with respect to the introduced criteria within a strict framing of the UNITE life cycle. The model enables to deal with a social added value systematically through: 1) enduring quality of eLearning for teachers and learners of the UNITE schools; 2) the new role of teachers (they also treated as creators, e.g., scenarios); 3) gaining new knowledge in modern IT; 4) better interaction and collaboration that broadens learning possibilities; and 5) sharing of international experience and knowledge.

INTERNATIONAL E-LEARNING PROJECTS IN THE EXPERIENCE OF POLITECNICO DI MILANO

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Introduction

There are lots of international projects that give evidence of the effectiveness of e-learning and digital communication in supporting collaborative working. Especially in educational intercultural contexts, e-learning has the undeniable potential of overcome multicultural, linguistic and geographical differences and stimulate collaborative working. The focus of this paper consists in analyzing two international projects of Politecnico di Milano, as case studies on the use of e-learning and digital communication at extra-European level, in order to identify relevant models of application of these methodological approaches in intercultural educational contexts.

Case studies: IAOL and DAIDO projects

One of the priorities of Politecnico di Milano is improving intercontinental exchange. In particular two are the most interesting e-learning projects on this field that we would like to share: IAOL (Interior Architecture OnLine - http://eproject.metid.polimi.it/iaol), with China and DAIDO (http://131.175.10.208:8080/daido/client/client.html) with Japan.

These projects were carried out with special attention to the valorisation of intercultural exchange dimension related to the involvement of several international subjects in the project. In this way the subjects involved in the project had the opportunity to give their own contribution in the field of internationalization of e-learning and digital communication, focusing in particular on best practices that can be used for further exploitation.

The partnerships created included educational institutions and subjects belonging to different contexts: international companies, Institutes for Foreign Trade, international consulting groups, etc., to promote projects characterised by a high level of formative value (assured by universities and other traditional educational institutions), but also by a positive impact at entrepreneurial and economic level.

The local identity is a concept based on the idea of the social and cultural value of the historical heritage. The urban historic environment represents one of the main long-term concrete expressions of the local identity. In China and even more than in the other Asian countries, a strong increase of the investments in building and urban development is driving the progressive loss of the local urban identity. These projects aimed to create the basis for an intercultural approach to the preservation of the traditional urban environment through the adoption of modern techniques and methodologies. They will allow to develop strategies of reuse of the traditional areas compliant with the local identities preservation and to create the conditions for the dissemination of the results achieved for fostering the real impact on the architecture and landscape policies.

Conclusion

The main added value of these actions is the intercultural approach based on the development of learning activities really integrated in the local contexts. The selected design themes applied to the local exigencies will be the basis for assuring a strong connection with the local situation by a deep comprehension of the local needs and the local administrations actions. These projects intend also to develop the relations among the involved countries through the online sharing of experiences and didactic material: being the contents and the tools available online, the community will be potentially open to the higher possible number of people also not directly involved in the project.

eGIS+ EUROPEAN LEVEL DEVELOPMENTS OF FLEXIBLE LEARNING MODELS WITHIN GEOGRAPHICAL INFORMATION SYSTEMS (GIS) FOR VOCATIONAL TRAINING

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Introduction

This paper deals with experiences from a successful previous pilot project under the Leonardo da Vinci programme implemented during 2002-2006. That project, E-GIS *www.e-gis.org*, is the basis for eGIS+ in the Lifelong Learning Programme (LLL). Ten partners from six European countries; (BU, LT, NO, NL, PT, SE) participated in E-GIS. During the project period a study program, 100 % Internet based, corresponding to a one year full time study was implemented – resulting in eight course modules which were developed and tested out during the project. GIS – Geographical Information Systems – is a computer-based tool for handling and analysing digital map data to which are connected attribute data (spatially dependent phenomena), for statistical treatment – such as resource- and environmental planning, transport logistics, registration of archaeological findings etc. The main objectives of the E-GIS project was to establish a co-operation between European Universities and GIS user organisations and to develop modularised courses intended for Internet based learning. A heavy evaluation task was performed, based on digital questionnaires and interviews with users.

eGIS+

eGIS+ is a pilot project, within the Leonardo Program "Transfer of Innovation". The objectives of the project are to develop results from the previous E-GIS project. The aim is targeting a broader range of GIS user groups, test out new Learning Management System (LMS) and different media development software, translate course material into partner languages, create a larger variety of duration of course modules (modules from just few minutes duration, without credits, up to 10 ECTS), create flexibility to a larger extent. During the new eGIS+ eight countries (BU, GR, LT, NO, NL, PL, PT, SE,) are involved with totally 10 partners. The duration of the project is two years (2007-2009). The aims will be fulfilled through:

- design, development and organizing a web-portal for information, dissemination and course implementation.

- short modules varying from a few minutes up to a couple of hours. Different presentations adapted to different target groups. Video, audio, pictures, text with local GIS examples in partner countries. The modules will be translated to a number of languages and with open access for anybody.

- extraction of content from E-GIS courses. All partners will contribute to translation and providing national and regional examples. The modules will be free of use for interested people. Necessary GIS software must be of type free of use for end-users.

- two weeks short courses (three courses) 1. introduction to GIS, 2. special subject e.g. Archaeology, 3. covering the implications of INSPIRE on contemporary GIS activities in EU (3 ECTS).

- revise GIS modules from E-GIS (10 ECTS).

Expected results

Expected results will be to obtain awareness of GIS to a higher extent and spread the GIS knowledge to broader audiences. The project strategy is to make the portal known to as many potential user and user communities as possible by means of advertising using the networks that already exist between the partners, institutions and organisations inside as well as outside the European Union. With the geographical and sectorial spreading of the partners in different language spheres it is obvious that the project will succeed in disseminating this information to a wide variety of places, reaching large number of stakeholders. One anticipates that further developments of the E-GIS material even more will be attractive in universities and higher education institutions and in the open market among private, civil service organisations and public in general. Many people nowadays, use GIS applications in daily life unconsciously. eGIS+ will create awareness about GIS applications and usability. **The eGIS+ in born, with rich fertilising it will grow, inspire people and society and become sustainable!**

THE CMC PROJECT – AN E-LEARNING TOOL TO ENHANCE STUDENTS' MOBILITY ACROSS EUROPE

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Introduction

The European Union (EU) homes approximately 450 million Europeans from many ethnic, cultural and linguistic backgrounds – 27 Member States and 23 official languages. Respect for linguistic diversity is one of the European Union's founding principles: the 'unity in diversity' – diversity of cultures, customs and beliefs – and of languages. The European Union actively encourages its citizens to learn other European languages, both for reasons of professional and personal mobility within its single market, and as a force for cross-cultural contacts and mutual understanding. EU exchange programmes have recognised the need to foster intercultural communication and promote cultural diversity. It is claimed that students are to be allowed to actively participate in trans-national academic environments as to benefit from a worthwhile cultural and professional experience.

Aims and objectives of the project

Studying for a short period of time in a culturally different academic setting often creates a sense of initial frustration in mobility students who need to develop intercultural strategies to overcome cultural differences in the new academic context. Besides the language and culture, exchange students are frequently called to use essential academic modern language skills. The CMC project was proposed within the framework of the Socrates Programme – Action Lingua 2 and it was approved and funded by the European Commission. The main aim of the project was, therefore, to develop, produce and implement **a software tool** which offered **multimedia customized language learning materials** that should allow exchange students to develop and improve their academic language skills consistently with their needs in the trans-national higher education contexts of Italy, England, Holland, Portugal Slovakia and Spain. In social terms, the project also aims at **promoting linguistic and cultural diversity** as a means for developing solidarity among young people and knowledge of the culture of other countries. Activities within the project included the production of on-line language modules that covered both content and language skills as related to the academic environment. *The academic language learning programme* contained two academic modules divided into four didactic units (per each module) with tasks, activities and a glossary as in the Common European Framework of Reference (Council of Europe 1998) which was located on the CMC website with a common academic template for all partners. *The information programme* also placed on the website with the aim of providing information about the exchange universities (accommodation, social events, health insurance etc.) and countries (cultural differences, customs etc.).

Phases of the project

The main phases of the project were:

1. a survey of existing language materials in the target language;
2. a survey of incoming students' language needs to be carried out through questionnaires administered to international students currently attending courses at the partner university;
3. development of language materials based on the results of the survey;
4. evaluation of the students' reactions to the materials through interviews and questionnaires;
5. adjustments made on the basis of students' comments;
6. setting up of a Mobility Students Website aimed at promoting students' exchanges of information regarding their mobility experiences, and the materials developed;
7. evaluation.

Conclusion

The project was well received by all. The expected impact on each target group was huge, enhanced their language skill, academic study skill development and their ability to study autonomously in the future. This also enhanced their self-confidence and self-esteem. The project promoted an intercultural dialogue with the hope to help develop the concept of EU citizenship and spread a feeling of belonging to Europe. The project was awarded the European label in 2006 for its innovative material and a follow up was recently approved by the EU.

LEARNING MANAGEMENT SYSTEMS IN NORWAY – A PRESENTATION AND A CRITICAL DISCUSSION OF THEIR EFFECTS ON THE LEARNING ENVIRONMENT

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Learning Management Systems (LMS) as learning-tools, can never be better than the quality of the didactical and pedagogical arrangements it is connected to.

In Norway, the benefits of LMS as administrative tools have been well documented. The article focuses on how these systems have consequences for the learning processes and discuss some Norwegian experiences. The discussion will have a pragmatic and historical perspective, well aware that we have just started a process which no one knows where to end.

The Norwegian situation

Both national reports and the so far largest Scandinavian report – eLearning Nordic 2006 concludes that LMS systems are being more and more common in Norway. Both teachers and the students have a positive attitude to the systems. But the teachers use the systems mainly for **administrative purposes**, like e-mail communication, giving information and storing files. The most common functions used by the students are storing files in addition to delivering assignments. Regarding **learning-methods**, the students report that tests are the most commonly used function. Functions and assignments based on collaboration and process-working documents are, rarely used. There is no hard, research evidence confirming that learning management systems have a positive effect on the **students learning outcome**. The Nordic and the national reports also find a tendency toward using the LMS-systems as **a catalyst to implement general ICT** - **competence** among the teachers and the students.

Discussion

The main perspective is that ICT and the learning management systems are a part of a cultural change which is at its very start. The discussion focuses on learning management systems as tools that influence methods and subject content in the learning-processes. The systems are not just neutral frameworks. At a first glance, findings may seem to confirm the idea that LMS-systems lead to a technical approach to learning. Tests are for example commonly connected with a technical and a behaviouristic learning situation focusing on basic skills more than advanced knowledge. One the other hand, tests can also check logical thinking, analyses and conclusions. It's more a question of what kind of tests we use and how we use them. Portfolios have been a recommended method to implement student centred and student active learning methods from primary school to university level. But portfolios are no guarantee to a specific learning approach. A national survey in higher education in Norway shows that the portfolios can be everything from a collection of preset lab journals or tests to a wide range of different assignment where the students can influence both content and the criteria for evaluation. The portfolios therefore can be a possibility to a more student oriented learning approach, but it depends on how the teachers use this function. Finally it is discussed whether the ICT-focus can be some sort of compensation for poor subject competence. Here it is made a comparison between the teachers believe in ICT as an effective learning tool and the results of the PISA research.

Conclusion

The experiences in Norway so far indicate that learning management systems seems to be a catalyst for implementing ICT into the Norwegian educational systems. The systems seem to contribute to more effective, motivated and engaged students. But so far, there is no hard evidence that prove that the systems actually will improve the students' learning outcome. The pedagogical value of the systems seems to depend on the quality of the pedagogical and didactical approach they are a part of.

FOSTERING E-LEARNING IN LITHUANIA

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The article "Fostering e-learning in Lithuania" attempts to reveal and present the development of the programme Lithuanian Virtual University (2007-2012) that is intended to implement the principle of e-learning in the most significant areas of information society, comprising science, studies and education and at the same time promoting the system of lifelong learning to be implemented in all education levels: secondary, vocational, tertiary and other.

Constantly alternating needs of rapidly changing society determine the necessity to apply information communication technologies (ICT) in various educational processes while employing different models of e-learning. This allows implementing the policy of open learning faster, increasing the efficiency of distance learning and ensuring more flexible organization of learning activities. The application of ICT provides universities with more possibilities, presents new challenges, helps universities to become more flexible and find those students who would not have become their customers within the market of traditional teaching. One of the tools that assists while implementing the idea of life long and e-learning is virtual (open, electronic) universities that are rather quickly developing and expanding their activity while operating in virtual environment and providing a possibility of obtaining e-learning services with no time and place restrictions.

Lithuania established good conditions for the development of a virtual university in the state as computer networks have been expanded, e-learning infrastructure developed, resources for studies have been accumulated and computer literacy of inhabitants has been improved. Therefore, Lithuania has approved a new 6 year (2007-2012) funded programme defined as Lithuanian Virtual University (LVU) that is a continuation of successfully completed ITMiS programme (Information Technologies for Science and Studies, 2001-2006). LVU is a combination of tools, encouraging participants of the programme: universities, colleges, research institutes, vocational schools and education centres to expand their activity in virtual environment. At the same time the programme develops prerequisites for information infrastructure. Thus, LVU is not only a structure but a tool for the implementation of the mission of Lithuanian higher schools and the development of education ideology under new conditions. LVU fosters education, expanding into the sphere life long learning in Lithuania as well as the world wide e-learning. The aim of the programme seeks to apply the experience accumulated and the infrastructure of ICT developed as well as to employ a network based model. Implementing the tasks for developing Lithuanian e-learning infrastructure, it is attempted to further develop Lithuanian Distance Learning Network (LieDM) that was established in 1998-1999. Developing the network, it is attempted to create and coordinate a system of higher education and continuous learning based on ICT with a particular emphasis on the usage of computer network, the Internet and video conferencing. The purpose of LieDM network is to provide better conditions for Lithuanian people to further study with no need to leave a dwelling or a workplace. Services, provided by LieDM network, are classified into learning delivery services, learning content development services and support services. The technological solutions, presented by LieDM enable to develop and coordinate ICT based system of higher education and continuous learning, to solve various problems, related with further development and implementation of Lithuanian e-learning system and guarantee its high technological level. LieDM network consists not only of physical infrastructure (centres, remote classrooms, equipment and communications) but of organizational infrastructure as well that allows uniting efforts while organizing learning process, preparing and providing distance learning courses and improving employee qualifications. LieDM network provides a network with other European and world networks.

ECONOMIC EDUCATION IN VIRTUAL LEARNING ENVIRONMENT

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Distant and on-line learning is considered by many teachers and researchers to be the extremely effective way of educating students. Different e-technologies are increasingly becoming accepted as important tools for supporting learning and teaching.

This paper outlines the development of educational methods in teaching economics concentrating on "e-possibilities", allowing students to become more actively involved in educational process.

Distance Learning Faculty of Russian Plekhanov Academy of Economics offers different e-technologies, which help students to better understand complex economic processes. All these technologies can be formally divided into virtual text-books and virtual role-plays.

While virtual textbooks deliver mainly theoretical information, role-plays provide more sophisticated techniques for self-educating. All the advantages of e-technologies have been concentrated in the newly-created "Virtual educational firm" – a simulator for making decisions in various economic situations which a company may face. "Educational firm" is a programme representing a virtual company that consists of different departments (accounting department, marketing department, financial department, human resources department, etc).

Working in a department implies taking some professional steps and solution of various tasks, such as logical, situational, financial, etc. The main objective of such training is to enhance practical skills and ability to make decisions.

Design and functionality of the "Educational firm"

"Educational firm" allows a teacher to:

- Dynamically create and edit theoretical educational tools,
- Introduce, in accordance with a set scenario, economic situations for students to deal with,
- Develop educational tasks both for groups and individuals.

The programme facilitates the process of self-training for the student, allowing him to apply the knowledge received at lectures for the analysis of economic situations. In the mode of the exam, a teacher can get objective information about the accumulated student knowledge.

Students will make decisions in the spheres that are common for the really existing companies: in planning (planning-economic department), accounting (accounting department), manufacturing and maintenance (buying and storage department), selling of goods and services (marketing and sales department), personnel management (human resources department), and office management.

In most educational courses included in "Educational firm", theoretical information is backed by practical tasks. Students start with simple logical tasks and move towards coordination of separate economic units. Students will acquire a constructional approach towards economy, learn to identify a situation quickly, to put forward realistic goals and achieve them effectively.

QUALITY ASSURANCE OF JOINT SUPPORT SERVICES FOR EDUCATIONAL APPLICATIONS OF ICT IN HIGHER EDUCATION

Tuula Heide, University of Kuopio, Maija Suhonen, Savonia University of Applied Sciences, Finland

The Finnish higher education system consists of two complementary sectors with different tasks and profiles, namely universities and universities of applied sciences. University activities focus on scientific research and research-based teaching, while universities of applied sciences focus on working life and regional business needs. The higher education system is under active ongoing development as a combination of universities, universities of applied sciences and new consortiums based on cooperation agreements between these bodies. New higher education structures will generally be in place by 2012.

The Consortium Project of the University of Kuopio and the Savonia University of Applied Sciences was initiated in 2006. The aim of this project is to investigate the opportunities open to these universities to increase their cooperation with a view to combining their resources and thus improving the efficiency and raising the profile of both organisations. One important area of investigation in the project is opportunities for cooperation in producing support services for educational applications of ICT and online pedagogy.

The University of Kuopio and the Savonia University of Applied Sciences have collaborated in implementing a project with the aim of building a comprehensive system of quality assurance for joint educational support services for pedagogical use of ICT. The project was a timely one because higher education institutions are increasingly expected to cooperate in different fields, but cooperation processes have not yet been described. In addition, quality assurance in respect of joint inter-organisational activities was a new departure for both institutions.

Both the University of Kuopio and the Savonia University of Applied Sciences have their own quality management systems. Both institutions have been the object of external auditing. In addition, both universities have internal auditing procedures in place in accordance with their quality management systems. All these audits are of importance in internal quality control of an organisation.

In this project, a quality assurance system was developed for the ICT educational support services to be produced jointly by the University of Kuopio and the Savonia University of Applied Sciences. The functions under review are web-based learning environment cooperation, ICT pedagogy-related training and joint projects. The universities have previously engaged in practical cooperation for specific purposes, but now the aim is to make this cooperation work as seamlessly as possible in order to achieve the maximum synergy benefits for both organisations. This quality assurance system was produced during a year-long process consisting of a series of joint workshops involving educational ICT experts from both organisations.

In the course of the project, the common processes in the ICT educational support services of both organisations were described. At the same time, the organisation, division of responsibility, working procedures and resources of the quality assurance system were defined in respect of the jointly produced ICT educational support services extending across organisational boundaries.

Links were created between the quality assurance procedures relating to the jointly produced services and both organisations' own quality control systems. At the end of the project the quality assurance processes were evaluated by an external assessor.

DISTANCE LEARNING TRAINING PROGRAM FOR RURAL TEACHERS – A CHALLENGING LIFELONG LEARNING APPROACH

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Education experts pay more and more attention to the concept of *life-long learning* correlated with the *e-learning and distance learning programs*. Facilitating learning during a distance learning course requires a series of simultaneous and different processes which take place in a virtual space, wherein there is intervention and exchange using ICT between the defined and shared learning objectives, the tutor service, the individual learner and the participants amongst themselves.

A distance learning training system specifically addressed to the teachers from rural areas has been implemented in Romanian education system through the Rural Education Project (REP). Rural Education Project is an important part of the Ministry of Education, Research and Youth (MoERY) strategy to improve the learning opportunities and the students' achievements from rural areas. This is a Romanian Government Project co-financed by the World Bank (the value of the project is of 91 millions USD), whose implementation began in 2003.

The overall objective of the project is to have rural schools students benefit from improved access to quality education, as evidenced by higher achievement scores and completion and transition rates. The project addresses all rural school units from compulsory education (10,757 schools and more than 2 mill students). Romanian Rural Education Project is mainly aimed to improve access to quality education for students from rural areas. Professional development through the qualification system of rural teachers using a complex distance learning program based on a national curriculum is only one of the major directions which join the most innovative education reform process. In this respect, the paper focuses on the main aspects related to the professional and career development of teachers from rural areas, presenting the distance learning training program, sharing ideas, experiences, and good practices.

Given the complexity of DL courses, the relatively limited experience of Romanian education institutions in the area and the novelty of the academic programs that were developed, a team approach was used. Experts in education, in curriculum development, in the different subjects approached and in DL courses, including international, were charged with developing the curriculum framework, the distance education guidelines and the DL courses itself. Over 200 modules were developed, by approximately 180 specialists.

The programs' design is based on a *competences oriented approach*. The curriculum framework of the training programs, which was developed firstly within the project, defines: methodological principles; general framework for defining teaching profession related competences; a set of specific competences for each subject; principles for defining study plans; study plans (disciplines, number of hours and type of didactical activities, number of credits, evaluation); outline of disciplines, structured on: identification data, general presentation, specific competencies, content, evaluation, methodological approach, bibliography. Along with the traditional content, the courses are including modules specific to the training needs of rural teachers, such as teaching multi – grade classrooms.

Seven of the most prestigious Romanian universities, distributed in all geographical regions of the country, were selected for delivering the study programs for rural area teachers. The implementation started in the academic year 2005 / 2006. From the 3,060 students that joined the study programs at that time, 336 have never frequented the classes or submitted the evaluation papers. 2,432 students have taken all exams and another 218 promoted to the next year according to the ECTS system. Only 74 failed to accomplish the conditions needed for promotion. This high promotion rate is explained by the high level of motivation and interest of students, but is also due to appropriate implementation conditions.

In order to asses the extent at which the universities are following the curriculum framework, the textbooks and the responsibilities involved, a monitoring and evaluation system was putted in place.

The training system has given very good results so far, that we expect to show impact on the school results of pupils from rural area. Moreover, generalization at national level, also for urban areas, is required by stakeholders that in one way or another have come in contact with this modern approaches to teacher training.

BLENDED LEARNING FOR SMALL MEDIUM ENTERPRISES IN RURAL AREA

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Introducing "Rural-eGov" Leonardo da Vinci Project (2006-2008)

The project Rural-eGov[1] is a collaborative European project funded by the Leonardo da Vinci programme (2006-2008) and focused on improving the uptake of eGovernment services in rural areas across Europe. The project analyses the needs of SMEs in the rural areas of Wales, Greece, Germany, Poland and Slovenia who have different types and levels of eGovernment services and deployment. It looks at the degree of awareness within rural SMEs of such services and review their status in the participating countries. A vocational training curriculum is developed in order to help the target SMEs use and exploit eGovernment services. The curriculum adopts a blended learning approach, using a combination of ICT based learning, as well as more traditional forms of learning such as seminars, etc. A Web based observatory will be designed which will provide a collection and categorisation of eGovernment services that can support rural SMEs. As part of the project deliverables, a set of policy recommendations will also be developed for EU agencies, National Governments and Rural administrations.

Developing concept of pilot training (Polish case)

Before proposing the solution for pilot training for SMEs in Poland questionnaires results were collected:

- The greatest demand for training from the SMEs was for help with using eGovernment transactional services (45%), followed by communicational services (40%), and then informational services (28%).
- SMEs pointed out they need further training with regard to using a PC (26%) and the Internet with specifically asking for training in using search engines (25%).
- A number of specific training elements were mentioned including on-line filing (i.e. tax returns), on-line form filling and help with downloading information.
- As far as training methods were concerned, the most popular call from the SMEs was for small group discussion (31%), one-to-one training (23%), presentations (13%), distance learning/e-learning (13%).
- The major demand for training was during evenings with 42% of SMEs indicating evening training as either their first priority or second priority.
- This was followed by those who would prefer training during the working day (30%), and those who would prefer the weekends (28%).
- Very few of the SMEs mentioned a preference for a full day of training, 77% suggesting half days would meet their needs most appropriately.
- The major barrier to training cited by the SMEs was demands on time outside working hours (49%).
- Freeing up staff was also considered to be challenging at times (16%).
- Finally the lack of financial support at work was mentioned (16%).

For pilot training 3 hours classroom training accompanied by web components (priority given to classroom training) is proposed (Table 1).

Table 1   Classroom training accompanied by web components

	Presential component	Virtual component
Form	3 hours seminar	Web components additionally used (e.g. blog[2])
Function	Direct communication	Information, communication
Method	Instructor-led training, simulation	Groups and learning communities

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[1] http://rural-egov.eu/

[2] http://rural-egov.blogspot.com/

E-BOX

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The focus of this contribution lies on the approach of the KATHO Expertise Centre Distance Learning, to support the development of e-learning courses in an organisation. One of the objectives of the Expertise Centre is to deliver a training concept which affiliates closely with the culture of an organisation and at the same time takes the dynamics of an organisation into account. Furthermore we intend to point out the innovation potential, so that further growth can be achieved in a structured way.

For both objectives, we developed a step-by-step approach. In concrete terms, with this approach we support the development of an educational concept for distance education.

To do this, we have developed the e-box. The e-box is a collection of methods split up in the following steps: 1) learning outcomes, 2) vision and media, 3) methodology and 4) concrete approach.

To determine the 'educational vision' and the methodology, we developed a quickscan. The following paradigms are applied: cognitivism, competence oriented training, work place learning, student centred versus lecturer centred, constructivism, reflective learning, collaborative learning. To avoid a 'rhetorical discussion' – e.g. what is competence oriented training?, what is constructivism? etc. – as a result of the introduction of these paradigms, we have divided the mentioned educational paradigms into two sections: **content** and **student ownership**. These two sections lead to a number of concrete calibration points, which enable a quick and oriented discussion.

On the level of **content**, we distinguish: knowledge, skills, training of competencies: integration of knowledge, skills and attitudes and reflection.

For **student ownership**, we distinguish:

- Lecturer ⇨ student: The lecturer prescribes the assignments, the content. The student has to study what the lecturer has indicated.
- Student ⇔ lecturer: The student takes initiative to determine the content, coached by the lecturer.
- Student ⇔ student ⇔ lecturer: Collaborative learning – between students – coached by the lecturer.
- Student ⇔ mentor ⇔ lecturer: Collaborative learning – between student and mentor – coached by the lecturer.

These two levels – content and student ownership – are the basis of the quickscan.

There are two possibilities:

1. First possibility: we compare the intended approach with the actual approach. When we notice that both approaches match very well. Based on this comparison, there is no need for an urgent adjustment.
2. Second possibility: we use the quickscan as an innovation tool. The question here is whether the lecturer made a well-considered choice. If not, we advice him/her to look at the other sections of the matrix.

LIFELONG LEARNING AT BRNO UNIVERSITY OF TECHNOLOGY

Vlastimil Bejček, Brno University of Technology, Czech Republic

The project of innovation of training materials for community of technical secondary schools and universities and industrial experience is designed so as to be in accordance with national curricular reform and simultaneously with European trends and projects involving in training resources for schools.

The SWOT analysis of the Framework Educational Programmes and School Educational Programmes of all schools in the Czech and Slovak Republics involved in Autodesk Academia Programme will be made in form of grant support in the first project period. Simultaneously the proposal on system for development of existing curriculums as per RVP is arranged. The CAD Repository is in the period of concept proposal.

The project team considers that the consortium of technical schools in EMEA region will be compete for implementation and spreading of project outputs in the framework of financial support from some of the European programmes after pilot concept check.

Lifelong Learning Institute at the Brno University of Technology

The Lifelong Learning Institute at the Brno University of Technology as EDEN „Institutional members from the Czech Republic" deals with a concept of the lifelong education and especially the new form of cooperation and education in community of the secondary technical schools, technical universities, and industry.

The School Reform of the Ministry of Education, Youth and Sports covers among others the acceptance of so-called Framework Educational Programmes and the development of the School Educational Programmes.

The Framework Educational Programmes constitute the fund of just beginning curricular reform. These programmes represent the state-specified minimum pursuant to which the schools are obliged to develop their own school educational programmes within two years concerning that this programme will be unique and the best solution for needs of school and region requirements.

The Lifelong Learning Institute at the Brno University of Technology has gained a lot of experience through solution to the educational projects and especially projects co-financed by the European Social Fund in 2003 – 2007 years. In conjunction with preparation of projects for the Operational System of the Education for Competitive Strength we have been preparing together with our partners a new concept of development of training software that will be applied both at the secondary schools and universities, and in the industrial plants.

Development of Training Software for Technicians

The Brno University of Technology is the strategic partner of Autodesk company in the field of 2D and 3D Computer Aided Technology. The long-term investments through grants are invested to the development of training software in the field of Computer Aided Engineering. At present all teachers and students have the industrial curriculums for Mechanical Engineering – Autodesk Inventor, for Building Industry – AutoCAD Revit Architecture and for Infrastructure – AutoCAD Civil 3D at their disposal.

CAD Repository

The new concept is concentrated on development of storage space – CAD repository of training objects, which will be shared and accessible to expert technical school and commercial community. The development of repository will be based on existing curriculum in classification according to industry key product: for Mechanical Engineering – Autodesk Inventor, for Building industry – AutoCAD Revit Architecture, for Infrastructure – AutoCAD Civil 3D and for Digital Media and Entertainment – Autodesk 3ds Max. It will include the open, modifiable, open-ended system of training curriculums for schools and commercial companies.

CREATING OPPORTUNITY THROUGH DISTANCE EDUCATION AT DENNIS GABOR APPLIED UNIVERSITY

Csilla Muhari, Edina Krisko, Zoltan Varga, Dennis Gabor Applied University, Hungary

Introduction

In this paper the authors primarily introduce the participants of opportunity creating education. Later they detail what kind of problems teachers and students should face due to the adaptation of the affected persons into the society of higher education.

Prison inhabitants

The foundation of the anthropocentric conception is the recognition of the fact that the convict of today is the free citizen of tomorrow who might be and must be aided to social integration at various fronts. Institutional system of law enforcement should achieve that the differences of prison and free life are minimized by serving the principles of normalization, transparency, reaction, cooperation, responsibility, individuality and gradation. The time spent in custody must be consumed to establish the intention of integration, the will and capability. Therefore it should not lack the community and self-education programmes, the individual way of learning and the autonomous, liable decision-making.

Disabled distance learners

Why is it important to integrate disabled people into qualification? For instance, on the ground of economy, to reduce the load on the society by supporting and aiding them. But there is other reason. The human factor: a more complete life, hope of making life complete by learning. People living with corporal, sensory, speech or other psychic disorder are given the social benefit of the feeling of "you are needed too". The achievements of this sense are made evident by numerous diploma-works of graduated disabled students of Dennis Gabor Applied University. To mention the most obvious examples our students created orthopedagogy tutorial softwares (for vocational schools), software for visual aid of computer usage for partially sighted persons, voice recognition softwares.

Integrating disabled students (primarily with sensory disorders) into education gains double benefits. Firstly they themselves leave the institution with a marketable diploma, secondly with their own diploma works they create applications which unburden the life of fellow sufferers and furthermore they offer elementary solutions which are not obvious to healthy people. Additionally they are committed and inventive in solving problems. With that they unburden the entrance of disabled people into the world of education and science.

THE EXPERIENCE OF THE GRADUATE PROGRAM "MANAGERIAL DEVELOPMENT OF QUALITY SYSTEMS IN HOSPITALS"

José Pedro Rocha Reyes, Universidad Nacional Autónoma de México, Mexico

This paper covers the instructional and technological development required to convert online a graduate program which was previously attended in traditional classrooms; it is the first online project in the graduate division of the Administration Sciences School of the Universidad Nacional Autónoma de México (*UNAM*), and will eventually set the basis for developing online all master courses in this School.

The graduate program, on Hospital Quality, is focused on promoting the administrative skills required to establish in hospitals the conditions for outstanding medical services, whose quality can be certified under the ISO 9001:2000 standards. The program is oriented to hospitals' managers, who are generally doctors acting as top executives; their responsibility is so high they cannot easily move to a specific classroom at an established time for attending a course, while the online program allows the executive to organize his/her school schedule in his/her office or home, with an Internet access only.

Considering that *UNAM* has technical personnel with the capability of adapting software to specific program requirements, the Learning Management System (LMS) selected was Moodle. The full content of each of the six units of the graduate program is available online in the program website, whose main features are the following:

- electronic access to a general forum for the program (whose administrator is the program coordinator) and to specific forums for each unit (whose administrators are the unit professors). These forums allow the students to interact with both the professor and their fellows, in order to solve doubts, debate the program contents, deepen their projects and, generally speaking, communicate among themselves;
- access to e-mail for sending homework and receiving feedback from the professor;
- instant messaging to contact all participants on the website;
- a chat room available at established dates and times for getting in touch with the professor;
- an e-learning section where the class notes created by the professors are displayed;
- a glossary to consult;
- access to a digital library with supporting material (i.e. manuals, auxiliary documents, practicals, forms, presentations, etc.), which can be downloaded and printed.

The trial run of the online program received a fully satisfactory response. Starting off was difficult, since students needed some time for getting to know the LMS software first, then the learning process. Most of them were initially scared, but highly interested in knowing these new technologies; by the second unit they could already master the LMS and were able to devote longer time to the program contents. To limit desertions, the program coordinators started providing guidance and follow-up to every attendant, and such direct attention generated confidence and increased participation; five months after the beginning of the program, desertions were limited to 14%, mainly due to workloads.

Developing the Quality in Hospitals online program was an extraordinary experience for all the members of the team in charge, and especially for the teachers, who had no prior knowledge on e-learning and only used to deal with personal computers for digitalizing their courses (an available resource that speeded up the production), while nowadays can use the LMS software and directly update its contents. During the production process all members of the team remained highly integrated and oriented to the common goal. Three months of production were required for the first unit, one and a half for the second, and one month only for the third. The academic committee in charge of the program meets every week for evaluating and following the group of teachers and students, making decisions on individuals or the group as a whole, and providing feedback to teachers about the LMS software, in order to increase the quality of the services they provide.

The online trial stage received favourable comments from various healthcare institutions around Mexico and abroad, both public and private. Considering this attitude, a formal and open to general public program is set for starting soon.

NEW CHALLENGES FOR E-LEARNING POST-GRADUATION IN EXACT AND TECHNOLOGICAL SCIENCES

Caeiro, S., Costa, F.P., Moura, A.P., Martinho, A.P., Bacelar-Nicolau, P., Ramos, M.R., Araújo, J., Azeiteiro, U.M., Rocio V., Universidade Aberta, Portugal

Learning and teaching in an on-line environment are, in many ways, much like teaching and learning in any other formal education context, nevertheless the implementation of new on-line master courses in specific areas of life sciences, mathematics and technology is a new challenge, where face to face field and laboratory activities are often compulsory.

This paper presents a preliminary reflection on the working experience of three master courses in the fields of mathematics/statistics and computation, environmental sciences and food consumption sciences taught at Portuguese distance learning university at the Department of Exact and Technological Sciences of *Universidade Aberta* (UAb) (more information available on http://www.univ-ab.pt/ensino/2ciclo.php). In Portugal those courses are novel both in terms of the e- or b-learning regime, and in terms of curricular contents and professional competence outcomes. These are formal courses, organized according to the European Credit Transfer and Accumulation System (ECTS), and in accord with the pedagogical model of UAb. This online model rests on four major principles: student-centred learning, flexibility, interaction and digital inclusion. For Master's degrees the model is based on a Learning Contract developed by the teacher of each curricular unit (CU). Each Learning Contract is structured into working topics, aims, competences to acquire or develop, learning methodology, list of e-activities, timetable for developing learning activities, and support materials. The open source MOODLE (www.moodle.univ-ab.pt/moodle) and ODISSEIA (www.odisseia1.univ-ab.pt) are the course management systems (CMS) used in these MSc courses.

A questionnaire survey was carried out with the teaching staff in order to characterise the three post-graduation teaching courses. The survey questions were prepared taking into account previous work (Bacelar-Nicolau *et al.*, 2007 available in http://www.eadtu.nl/conference-2007/files/EADTU%20conference%202007%20proceedings.pdf). The goal was to identify the critical issues that underpin the learning processes, at a post-graduate level, in master degrees in Live Sciences, Mathematics and Technology, taught in an almost entirely virtual, and collaborative, environment. The use of the e-learning CMS in online tuition and support was also assessed and some questions aimed to identify the specific needs for more complicated tools, techniques and creation of tutorial tools for e-learning.

The geographic distribution of the students of the three Master programmes is very disperse, from outside Portugal (African countries and Brazil) to Portuguese Atlantic islands and the different regions of continental Portugal, which is a great advantage of this type of learning regime, but also a great challenge. Some of the course's problems relate to language, financial and technical difficulties of the student population from African countries, (although Portuguese is their official language). For this reason the coordination team of each Master programme must give special attention to the students, particularly helping them find financial support for their studies. In addition, greater effort in motivating, giving general feedback and communication technologies support is necessary in the initial period of a programme on e-learning regime, when the e-learning community bonds are still being formed and some ICT-issues are still a problem. This support may decrease the drop-out rates which still characterises the programmes on e-learning regime. The virtual café is an important place for student's socialization, companionship and prevention of isolation. The possibility to complete the curricular year in a more extended period of time (e.g. two years) could also help students, most of which are full-time employees, to overcome the simultaneous learning, work, family, etc. activities, thus increasing the success rate of the programmes. Some face to face practical activities are an important component in the MSc programmes, particularly in the life science areas and should not be completely removed. Nevertheless, virtual tools can be developed to complement those activities and reduced them to a minimum. Even though some problems persist in distance learning novel regimes, students from the above mentioned MSc degrees have shown a very high level of satisfaction with the learning process. Also, the continuous assessment through the e-activities has successfully increased student's learning aptitude and competences. The interaction among students and between students and teachers was highly rated by the students, as a crucial factor for their learning success.

EURO*PASS*+ ONLINE SUPPORT FOR EVIDENCING COMPETENCES OF YOUNG PERSONS

Gabriele Fietz, Natalie Morawietz, Forschungsinstitut Betriebliche Bildung (f-bb), Germany

Background

The Copenhagen Process and the promotion of lifelong learning has led to growing interest in transparency of learning outcomes. Various activities have been initiated, Member States and the European Commission have drafted and developed various instruments in order to contribute to the goal of making an European area of lifelong learning reality. One of those instruments, the euro*pass* framework concept has been introduced in 2005. With its five instruments – euro*pass Curriculum Vitae*, euro*pass Mobility*, euro*pass Diploma Supplement*, euro*pass Certificate Supplement* and euro*pass Language Portfolio* – it enables European citizens to document their qualifications and competences in a standardised way, understandable all over Europe. The principal instrument euro*pass* Curriculum Vitae (CV) can be linked to other euro*pass* documents.

The challenge: evidencing informally acquired skills and competences of young learners

Requirements to users of the euro*pass* CV are pretty high. To provide a comprehensive picture of their skills and competences means not only to list certificates of initial and continuing vocational education and training, but also knowledge, skills and competences acquired outside the formal VET and qualification system, both in informal and non-formal settings. Specially for young persons not an easy task. He or she has to

- understand the different concepts and ideas of the variety of social skills and competences,

- self reflect his/her own skills and competences and decide which of the competences he/she has,

- differentiate between skills and competences, see which of them are relevant for a certain job,

- find examples and learning/working experiences to proof own personal skills and competences.

Euro*pass* Language Portfolio users are supported by comprehensive assistance in self-assessing their current level of linguistic competences. Compared to this, young persons are provided rather poor support in documenting the outcomes of informal learning in the "personal skills and competence" section of their euro*pass* CV. This is all the more regrettable in the light of efforts of establishing a "common European language" regarding issues of outcome orientation. Young people in particular are often unaware of how large the proportion of competences gained outside formal vocational education and training programmes is and how important this makes additional information which supplements attestations and certificates.

Online support for young learners – europass+

Euro*pass*+ aims to support young learners in assuring themselves of their own competences and thus, in accord with a strategic aim of European VET policy, contributes to making learning outcomes visible, independent of where and how they have been acquired. The online tool enables significantly more comprehensive documentation of informally acquired competences: It helps to fill in the "personal skills and competences" section of the euro*pass* CV by means of appropriate sub-categories, examples, checklists and suggestions. It is suitable for learners in different European VET and qualifications systems, different cultures and also for young persons with a minor degree of digital literacy.

Euro*pass*+ is funded by the community programme Leonardo da Vinci. At present the euro*pass*+ online support tool is piloted in seven European countries. For further information see *www.europassplus.info.*

DIGITAL LEARNING RESOURCES FOR INFORMATION LITERACY

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Background

During 2007, the decentralised network Lund University Libraries (LUB) ran a project to develop digital learning resources for information literacy.

*Information literac*y is the capability to search and retrieve information, to critically evaluate information found and to use it in a wise and ethical way. It is one of the academic skills the students should acquire during their studies.

Research in higher education teaching and learning stresses the importance of student active methods, facilitating a learning process where the student acquires both skills and knowledge over a well defined curriculum. Oliver and Herrington (2001:26) use the term *task-based design* while Bowden (2004:38) talks about *capabilities-focused curriculum design*. The central idea in both models is that the students should train problem solving to prepare for real situations in their future working life. Both models also stress the importance of a learning environment offering the students a palette of relevant and differentiated learning resources which they are free to use according to their own needs.

The project to develop digital learning resources is based on the following principles:

- Digital learning resources support task-centred learning,
- Information literacy is never an isolated, stand-alone skill,
- Students have different previous knowledge,
- Distance students need extra training.

The learning resources

A common feature for the student active methods described in the literature is that the learning activities should take place in an adequate learning environment with the support of relevant learning resources. Our strategy has therefore been to design small learning resources that teachers can combine and adapt to their own and their students' needs. The learning resources differ widely from each other in terms of composition and for each resource the content has determined the choice of form and technique. The underlying pedagogical principle is based on active learning. Our ambition has been to design and develop learning resources providing a framework for the subject related education in information literacy.

We have developed learning resources in four areas: academic skills, source evaluation, academic conduct and search methods. As mentioned, the resources can be used separately or combined to larger learning modules. Teachers and librarians can also change a predefined module to fit their own needs. Most resources are suited both for self study and for classroom teaching.

The resources are developed in Swedish but will be translated into English, in order to be used in international courses.

Conclusions

The learning resources were published on the Lund University Libraries web site in January 2008 and the project report in March. The implementation plan for the spring semester involves a strategy for informing teachers about the resources and a series of workshops for the libraries' teaching staff.

The collaboration in the Lund University Libraries' decentralised network have had positive effects. The librarians collaborating across disciplines have had many opportunities to learn together and from each other. The ambition is to continue our work developing more resources as well as the methods for using the existing ones in our everyday teaching activities.

DEVELOPMENT OF TEACHERS' ICT COMPETENCE BY TEAM-BASED, ON-LINE, LONG-TERM IN-SERVICE TEACHER TRAINING: FOCUS ON THE ROLE OF THE ON-LINE LMS/LCMS SYSTEM

Balázs Petho, Eötvös Loránd University, Hungary

EPICT – European Pedagogical ICT licence

One of the key aspects of the efficiency of teachers as well as of education itself is whether teachers are able to use the ICT tools that surround them at school. Over the past few years, a great number of projects have been launched in Hungary with a view to developing the ICT infrastructure, and significant sums have been spent by the government on equipping schools with various educational tools. However, less attention has been paid to in-service teacher training and to studying whether teachers have the appropriate ICT competence needed to use such tools.

The European Pedagogical ICT License (EPICT, see www.epict.org) aims at improving teachers' ICT competence and their array of methodological tools in a task and team-based on-line distant learning environment. In the first semester of 2005, the Eötvös University translated the EPICT in-service teacher training programme into Hungarian and adapted it to its needs. The feasibility study of the course was carried out on a 120-person sample in 2005-2006, and the training became nationally available as an accredited in-service teacher training from October 2006.

In the course of the feasibility study, we examined the personality of the participants with the help of the California Personality Profile (CPI), while we tested the efficiency of the course by two measurement tools elaborated by us: the ICT literacy questionnaire (prepared by Balázs Török) and the Pedagogical Strategies questionnaire (prepared by János Ollé and Dr. Andrea Kárpáti). In the case of the latter two, we also carried out pre- and post-measurements. The analysis of personal interviews as well as of registered on-line communication is available for the assessment of the programme, and result shows significant development in different indexes.

Role of the on-line learning environment

We used the Moodle course management system as the on-line LMS of the EPICT feasibility study. (www.moodle.org). The Moodle produces a detailed log file, registering all the activities of the users. Due to the client-server architecture, the tool is able to register clicks, downloads of webpages while also noting the values of the current variables of the system. In this way, the activities carried out in an on-line environment are converted into quantity indicators, and patterns can be identified in them. Since the data registered by the system and the data gathered from the questionnaires can be assigned to each other, we could analyze the connection between the user patterns and intensity of using the system and the indicators received from the questionnaires and their changes. Therefore, the use of the LMS can be analyzed with respect to the ICT competence development, the variables of the personality profile or the pedagogical methods using ICT tools in practice on both individual and group level.

My poster shows the typical patterns and customs that can be distinguished in the practical use of LMS for educational purposes. I will analyze the work of the teachers carried out in a virtual space on both individual and group level. With the help of the data, we can get a general idea of the extent to which the indicators (intensity, frequency of functions, well-balancedness, etc.) that can be deduced from the use of the LMS determine the success of the group or of the individual and how they are related to the attitude of teachers toward ICT tools, knowledge or their personality traits.

The primary aim of this research is to improve the EPICT course and create a more efficient on-line learning environment. Nonetheless, besides the above, it also provides empirical data about the framework using habits of teachers, certain features of the creation of a more efficient system, and these data can, most likely, be extended to other areas of adult education as well.

STUDENT PERSONALITIES IN DIFFERENT FORMS OF EDUCATION (DISTANCE LEARNING VS. TRADITIONAL TEACHING)

Eva Sándor-Kriszt, Anita Csesznák, Tamás Radványi, Budapest Business School, Hungary

In a very broad sense, distance learning was first introduced when textbooks appeared in education. That was when the live performance of the teacher was replaced or supplemented with teaching material available for the student independently of time and place. Indeed, the dialogues of Plato can be seen as lecture notes or records of Socrates' lessons written by a student of his, thus making it possible for anyone to access the great philosopher's teachings. One to one peripatetic tutoring as described in Plato's dialogues has since been complemented by other options of personally conveying messages to your listeners – in large modern auditoriums, by television, by telephone, videoconferencing, etc. Much has been said and written about the latest means of transmitting information and knowledge. The focus has been mainly on *what* knowledge should be passed on to students and *how* this should be done with the greatest efficiency. The writers of this paper are inclined to think that more attention should be paid to what is happening in the mind of the student in the process of the learning experience. No method has, however, been devised that could scan the minds of the students. But even without scholarly investigation, we venture to state that, depending on a large number of factors, the students' minds would be distracted from the professor's talk in varying degrees. But who are those students? What should we know about them? How is it possible to obtain information about them? These are important questions when designing a lecture, a course, a syllabus, a curriculum, or a programme. In this paper we cannot answer all those questions but want to share our experience of teaching various courses and meeting different types of students at the Budapest Business School (BBS).

As every instructor knows very well by experience, students are different in many ways. Students can be distinguished by age, sex, physical status, (former) education, previous knowledge or experience, linguistic background, interest, motivation, cultural background, financial situation, just to mention the most obvious factors. Some of these differences (age, sex) are objective and immutable but easily identifiable, others (motivation, previous knowledge) are more difficult to identify, determine and measure but some factors in this group can be influenced or altered. When dealing with large numbers of students organised in groups, it is an advantage to be faced with the utmost degree of homogeneity within the groups. Since perfect homogeneity is impossible to achieve, the problems arising from wide disparities within particular groups must be tackled.

Education must be regarded as service provided to students. Examples drawn from personal experience of teaching at the Budapest Business School prove that the problems arising from the diversity of the students' personalities or the differences within (and among) student groups may cause. Attempts have been pointed out how to deal with some of these problems pointing out the responsibilities of the academic administration and staff especially the educators in direct contact with the students.

E-LEARNING AND EMOTIONS

Elmira Bancheva, Maria Ivanova, New Bulgarian University, Bulgaria

What is the value of emotion in e-Learning?

There has been little investigation of the extent whether emotion is associated with learning online. The impact of emotions and intentions on learning, in the real world, are an integral part of learning and cannot be separated from learning and thinking ability, that is, we cannot consider one without considering the other. The emotional component in learning is especially important in e-Learning.

If we care about our learners and about the learning, we need to know the ways to address emotion in e-learning

This paper has examined some of the experiences of adult students who are studying at the New Bulgarian University (NBU), School of Management committed to delivering more and more courses online. It has identified emotions those students experienced learning online and the particular contexts in which that experience occurred. It also has related on some evidences from research papers addressing this issue.

The study – methods and findings

The study was conducted in 2007 academic years. We implemented two research processes: a questionnaire and an interview to investigate the respondent's individual learning experience. The aim of the hard-copy survey instrument was for collecting quantitative data on e-learning. The second was to interview a sample group of adult students from the MSc program in HRM, to obtain qualitative data on their own e-learning experience as well as their own understanding of factors, contributing to e-learning effectiveness or slowing it down. The study obtained 45 responses for the quantitative approach and 25 interviews for the qualitative approach.

Frustration appeared as the most powerful emotion associated with studying online. All of the students interviewed had experienced frustration of one kind or another with one aspect or another of studying online.

In summary, for some the frustration was associated with a lack of clear instructions for locating the required site or the convoluted process needed to do that. For some, there was frustration associated with the nature or structure of the online material. For others the frustration was associated with the technology, whether it was working, and how difficult it was to access and navigate. Some was associated with the associated administrative processes, with instructions that were unclear and obscure. Other frustrations were with the design, structure and relevance of the web site content and with the learning processes, especially discussion groups.

But the strongest frustration was associated with the lack of interesting learning interaction, course irrelevance to e-student learning needs, learning style that did not match a usual one, lack of support in defining students' strengths and week points, lack of help in defining the temp of learning priorities, untrust in communications, lack of real learning community where culture of risk-taking is encouraged in which supportive process are put in place for dealing with differences and experimenting with ideas and possibilities.

Some questions which need further exploration

The in-depth data analysis is only just beginning at the School of Management, NBU; therefore we don't want to draw definitive conclusions but we would encourage consideration of these issues arising from the research study:

- How to establish the importance of e- learning to the learner - why this is important, why it matters to them, and maintain their interest?
- How to set expectations about what'll be hard and what'll be easy?
- How to ensure interest and how to design experience, which tends to mirror the affective experience we see in many popular media?

LEARNING STYLES AND STUDENT ATTITUDES TOWARDS DISTANCE LEARNING

Maria de Fátima Goulão, Universidade Aberta, Portugal

The present study investigates how it is that a sample of 995 students, at distance learning, notices this reality and what is the impact of this learning style in their attitude face to the education system that they frequent. For such we have built a scale of attitudes and used David Kolb's Learning Styles Inventory, that we have adapted.

Introduction

The learning methodologies at distance are sustained in a learning model that presupposes the existence of adult students that possess a certain level of maturity and motivation that allows them to get involved in a process of self-learning. The knowledge of their learning styles can help in the planning task, choice of materials and more appropriate courses to obtaining success.

Methods

Sample: Our study's sample was made from the answers to questionnaires sent by the students, in a total of 995. In the sample we have students representing several courses / areas of knowledge. 49% are male and 51% female. The average age is 41 years old. The minimum is 22 and the maximum is 69 years old.

Instruments: For the gathering of the necessary elements to this study, we have used an attitude enquiry elaborated for that scope, and another one for the learning styles, the Learning Styles Inventory (adapted).

- Scale of Attitudes: 18 items and 4 sub-scales.
- LSI (Kolb, 1984): 4 learning styles – Assimilator; Diverger; Converger; Accommodator.
- Learning Cycle – Concrete experimentation; Abstract conceptualization; Active experimentation; Reflexive observation.

Results

To analyze the relation between these two variables – attitude, learning styles – we have proceeded to their unfolding in two moments.

We have proceeded to the study of the behaviour of the attitude factor in function

- of the four *learning styles* proposed by the model.
- of the four scales that compose the questionnaire of learning styles that, in agreement with the theory developed by Kolb (1984), constitute the *learning cycle*.

Conclusion

1. Existence of different positions, according to the individual learning style.
2. The differences between them, in what concerns the attitude, are done at the expense of the way they appropriate the information.
3. The subjects that assume as typology to get the information, in a more abstract form, no matter how they deal with it later, will tend to have a MORE POSITIVE attitude, relatively to the distance learning, than the subjects that get the information with a more concrete way.

The results confirm the existence of a relation between the learning styles and the students' attitudes facing the distance learning. Particularly between the way of appropriation and the attitudes.

ONLINE COURSES, DIVERSE PUBLICS AND LEARNING ATTITUDES

Darlinda Moreira, Universidade Aberta, Portugal

Introduction

The existence of a large number of citizens familiarized and skilled with digital technologies is of most importance not only for the consolidation of technological daily practices but also to nourish a cultural environment that expands markets, knowledge and technological artifacts. This poster presents the preliminary results of ongoing research that aims to understand diversity in online courses mainly in regard to how people look for and use online courses to meet their different needs. In particular it aims to uncover new potentials and contributions of information technologies that can trigger individual change to meet the challenges of contemporary societies.

Framework

Although deterritorialized, cyberculture is embedded in several levels of social life. The appropriation of knowledge and the competences and capacities of this cultural dimension emerge in different aspects of behaviour, cognition, and relationships in daily life. Thus, we need to consider the problem of human diversity in the context of cyberculture as well as the different ways this diversity is reflected in daily life. To better understand diversity in cyberculture, it is necessary to connect different levels, namely, why people use technology, the meaning that they confer to it and the capacity of cyberspace to create opportunities for changing societies. That is, it is necessary to articulate subjectivity and reality, and look to the different ways in which people identify themselves as belonging to the digital network in order to face changes, at a social and personal levels, and to their perception and consciousness of the role of cyberculture as a new cultural environment with an innovative power to concretize social transformation.

Methodology

When an individual narrates his/her life story or particular life episodes, he/she is using constructed complex cultural knowledge about the world. Thus, an individual report is situated within the social framing that the person brings in when reporting, which highlights the differences inherent to each person but also constructs an account of an historical reality, wrapped in social conventions and facts. The present research uses life story as a methodological resource to obtain information about trajectories of life. The poster presents a case study of Sara, a 54 year old retired woman enrolled in the first year of one of the new undergraduate programs offered by Universidade Aberta, Portugal.

Discussion

The discussion is organized around the following topics: 1) diversity within online courses' new publics; 2) learning attitude as a reflex of collective intelligence, and 3) this student's experience at Universidade Aberta.

Sara recognizes in online courses both a resource to acquire new competencies and capabilities, and a potential source of wealthy, and leisure. Thus, online courses function as a new way to improve and increase her participation in society. In addition, Sara's attitude toward knowledge and the meaning and power that she confers on learning might be interpreted as a readiness for *collective intelligence*. Her enrolment in the program represents a voluntary movement toward knowledge, thus showing a recognition of the role of learning as one of most basic human needs that develops new ways of thinking and behaving. This enrolment in online courses therefore may also represent a new culture of learning.

In conclusion, it is my claim that among the diverse publics that look for online courses some see it as an opportunity to continue to develop cognition and acquire competences to fulfil the social need for knowledge. This ultimately shows that online courses have the capacity to empower students in their sensitivity and willingness to continue inside the already present *Knowledge space* and its speed of social transformation which requires a continuing act of learning.

INDIVIDUALIZATION OF E-LEARNING PROCESS IN NEW LEARNING CULTURES

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ICT learning strategies for learning process

It is possible to distinguish some classifications of ICT aided learning strategies for new learning cultures. General classification comprises two types of strategies: primary strategies (direct transfer of knowledge to learner) and secondary strategies (completion and enrichment of didactical process). Primary strategies comprise material processing strategies and active learning strategies. Material processing strategies consist of four types: calling in memory, integration, organization and elaboration. Active learning strategies comprise message search mechanism and entire learning systems. Secondary strategies support learners in message processing (comprising system learning strategies).

Modern e-learning systems used in new learning cultures should consider pedagogical theories (concerning learning process) and ICT possibilities for support of intellectual processes in human brain facilitating knowledge creation ensuring creative, cognitive and individualized e-learning process. Teaching, according to primary learning strategies, can be of two kinds: passive teaching (ensuring passive receipt and passive assimilation of knowledge) and active teaching (ensuring creative learning process).

Other classification comprises drill and practice strategy, tutorial strategy, simulation strategy and modelling strategy.

Individualization of learning in e-learning systems

Modern e-learning systems should ensure high quality e-learning process (of creative, cognitive and individualized nature) for new learning cultures. I elaborated intelligent e-learning system and simulated learning environment.

Elaborated intelligent e-learning system ensures two ways of learning individualization: by learner selecting his own learning path (by the use of node points structure) and by Intelligent Computer Teacher continuously adapting to individual learners (their abilities and knowledge) in optimum manner.

Elaborated simulated learning environment is very useful for optimization of learning process. It comprises population of models similar to population of real learners. Big variety of models enables high quality individualization of learning process. Simulated environment ensures trials repetition from the beginning very useful for full investigations (impossible in real environment).

Experiments concerning simulated environment components, Computer Teacher performance and its optimization were carried on in simulated environment. It was noticed that learners models with the same ability have different ability distribution. Intelligent Computer Teacher considers this feature of learner model for better individualization of learning process. The learner model should be characterized not only by the ability defined as a maximum possible level of learner knowledge to be achieved by the use of settled number of pedagogical actions (specific for each individual learner model) within a course but also by the distribution of its ability determined by the frequency of the achievement of particular levels of learner knowledge (especially maximum and higher levels) by the use of sequences of pedagogical actions.

Investigations of Intelligent Computer Teacher, performed in simulated environment, enable determination of its features in order to its better design. Using different optimization criteria of Intelligent Computer Teacher performance it is possible to notice that better results are achieved by Intelligent Computer Teacher that teaches with individualization than Computer Teacher that teaches without individualization.

Modern intelligent e-learning systems used in learning cultures, adapting to individual learners, enables evolution of the society towards **Global Knowledge Society** based on knowledge and information as key resources to be used by anyone, anytime, anywhere.