

# **EDEN 2012 ANNUAL Conference**

## **Open Learning Generations**

Closing the Gap from “Generation Y”  
to the Mature Lifelong Learners

EDEN 2012 Annual Conference

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## **Open Learning Generations – Closing the gap from “Generation Y” to the mature Lifelong Learners**

The year 2012 is “European Year of Active Ageing and the Solidarity between Generations”, which serves as framework for raising awareness, generating innovative approaches and disseminating good practice. In the digital knowledge society, technology and social media should not divide, but foster cohesion amongst generations.

A frequent question has been: how to deal with the new generation of learners who have grown up with the Internet? The members of “Generation Y” are technology-immersed, easily adapting to technological developments, to the changing media and ubiquitous networks. They have developed critical thinking towards sourcing and judging information and even knowledge. Their expectations and behaviour are quite different from the previous cohort.

Promoting access of older persons to education and to information and communication technologies helps them to remain active and involved in the society, media and the Internet makes it easier to reach them. There is meanwhile a lot to do to avoid marginalisation of older persons: lowering of access barriers to ICT enhanced learning and remove cultural, technological, situational obstacles. Provision of e-learning products and services suitable for them is a bottleneck: it is important to care about their constructive embedding based on interests and ambitions.

Movements aiming to enhance openness of educational resources encourage institutional policies which support innovative pedagogical models. Helping to spread educational resources as digitised content which accommodate different learning pathways, widening participation and promoting shared learning experiences between generations contributes to closing the technology gap.

The EDEN 2012 Annual Conference is approaching the key questions of learning, focusing on the “Open learning generations”, the contexts of socially significant target groups: junior and senior e-learners, exploring their learning cultures, technology use patterns, and discuss new approaches in pedagogy and andragogy that respond to them. The changing technology dimension: development of networking tools, new platforms and standards, and interoperability questions, will be addressed from the perspective of different groups of users.

Themes addressed by the impressive number of submissions presented include among others non-traditional learning forms for non-traditional target groups, the use of emerging technologies to create new socio-economic value for learning for different generations, commonalities and distinctive features: learner styles, habits, expectations of distinctive age groups, technology skills and competences needed for ICT enhanced learning of older people, including the design of learning environments, web services and learner support and the measurement of learning success and student performance for different age groups.

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## **GENERATIONAL DIFFERENCES IN USING SOCIAL MEDIA IN POLITICS**

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What is common for wide street demonstrations in the Philippines in 2001, the election victory of Barack Obama in 2008, the renewal of the election in Moldova in 2009, the demonstrations of M-15 movement in Spain in Spring 2011, the events of the “Arab Spring” in 2011 and the camp activities of “Occupy Wall Street” in Autumn 2011? One definite common feature was the strong use of social media in organizing these movements and also the use of social media in communicating to the members and stakeholders their goals and activities.

Social media has been entering politics rapidly. Social media is becoming an important part of politics and every serious political campaign. In many recent elections – the French and American presidential elections as well as national and regional elections across various countries – social media has played a key role. In the recent political changes in the Arab world, the impact of social media was elementary in the revolutions made by the people.

The power of social media is based on the nature of social media: their nature is based on social ties, reciprocity and participation. Although only a minority of the users of social media actually produce content, the strong element of involvement is essential. In election campaigns, the well-known feature since the research in the 1940s has been the “two-step model”. The voting decisions of individuals according to this approach are not based on a one-step information flow (such as reading leaflets or listening to TV advertisement), but rather on a two-step information flow, in which the discussions and communications with friends and colleagues are essential for the voting decision. Social media environment is thus providing new tools for individual voters to communicate with their friends, colleagues and peers, but also to follow the discussions of various opinion leaders.

However, the use of social media is not even across the population. The young users are more active in their use of internet and use also it in several different ways. In social media applications, the younger generations are clearly more active: they also create, edit and mix various contents provided in social media. Thus they are altering from being an audience towards active interpretation, evaluation, creation and distribution of digital content.

Social media is mainly used by the younger age groups, and it has been providing them new avenues for political activism and political participation. Although generational differences are obvious, it has also been obvious that the wide use of social media in politics has opened opportunities for younger generations for political work and thus partially involved them more closely to political activism.

The generational differences are obvious and great in the use of social media. It is important, however, that the use of social media is not assisting in creating different and varying political subcultures – rather it should be seen as admirable that social media can be used for real empowerment of all citizens towards political interest and action.

## **CAN WEB 2.0 BRIDGE THE GENERATION GAP?**

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In the model of the digital native / digital immigrant, children growing up today are born into a world of new technologies and are thus “natives” to technology, while those who were not born into the digital world are “immigrants” who work to adopt varying levels of technology. This divide is frequently given as rationale for why it is less important to include educational technology, including Web 2.0 tools, in instruction for adult students. This paper will explore why that is not true and why using Web 2.0 tools in education is important for students of all ages.

We cannot make the assumption that because younger students may be digital “natives,” then they must be instantly comfortable with all technology-related tasks we give them. Consuming media on a personal level does not mean that students know how to use these tools in a way beneficial for education. Regardless of our preconceived ideas about what younger students are or are not doing with Web 2.0 technologies, it is still essential that we teach our students about them because they are too powerful to ignore. And if it is important to provide opportunity and guidance for younger students who are already engaged with these technologies, then why would not it also be important for adult students who might not otherwise use these tools? Web 2.0 tools utilize skills that are important in today’s workforce, and it is essential that we teach all students, regardless of their age, to use these valuable tools.



## SENIORS AT A VIRTUAL OPEN EDUCATION UNIVERSITY: A WEB 2.0 LEARNING SERVICE FOR INTRODUCING SENIORS TO SOCIAL WEB

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This paper presents a project concerning a Web 2.0 training service to introduce senior learners to ICT and to the Social Web. The paper traces the coordinates of the European Year 2012 “Active Aging and Solidarity between Generations” and contextualizes the project within the Portuguese Open University framework – Universidade Aberta (UAb). In order to address the subject matters mentioned, the paper describes the level of digital literacy of Third Age people in Portugal, which is low and constitutes a barrier for the successful adoption of Lifelong Learning (LLL). The overview of the institutional context, whose mission is to find educational solutions to adult populations, highlights some of its structural components.

One of the four main principles of the Pedagogical Model adopted by the Portuguese Open University is digital inclusion. This project intends to promote and put into practice this digital inclusion by using the Local Learning Centres (LLC) and the students’ voluntarism. These centres, which emerged from partnerships between the Open University and the local civil society, provide a physical space to introduce ICT and elearning to senior learners.

The authors of this article put forward the creation of a training facility service for senior learners, primarily directed to the LLL courses. This service envisages extending, and strengthening the mastery of specific digital skills needed to participate and successfully accomplish LLL courses but also, in a wider perspective, to promote the senior learners inclusion in the Knowledge Society.

For the training course, the authors propose the *Partner4Web* figure that, while being under the coordination of a faculty professor, will be responsible for the implementation of the training plan. The *Partner4Web* will be selected from the student community and rewarded for their participation with digital badges attribution and with the intrinsic development of broader skills, such as participation in active citizenship by bridging the gap between generations.

The guidelines of the service training course design will be suitable to the specific characteristics of the public and to their particular objectives. The course will be delivered in b-learning mode and the instructors in charge may include LE@D (Laboratory of Distance Learning and Elearning) partners, volunteer students and/or researcher students and LE@D-UAb associate members. Emphasis will be given to communicative, inter-relational and socializing dimensions. The methodology applied is based on UAb’s Pedagogical Model. Support material in various digital formats will be displayed throughout the course. The evaluation of the of trainees’ progress will be done in a continuous and formative way. The service training plan is outlined as follows:

- Title – Digital Tools for Senior Dummies.
- Description – Online course supported by the official LMS of UAb; two face-to-face sessions, combined with five online modules, with the presence of the *Partner4Web* for learner’s mediation.
- Workload – 50 hours (40 hours online + 10 hours at a Local Learning Centre); 5 modules (2 modules at a LLC) for a period of 10 weeks.
- Target Public – (Potential) Trainees enrolled in LLL programmes at UAb.
- Access Conditions – Being 55+ years old, attending face to face sessions at the LLC network or at other institutions associated to this programme; having an Internet connection and using it according to the recommendations.
- Main Goal – Provide senior learners with the development of skills that enable them to expand and consolidate their digital literacy in order to promote and enhance their integration in the Knowledge Society.

By designing this course we envisage to go beyond the mere intention of goals set by the European Union in general and UAb in particular. We aspire to enhance adults’ learning skills, to contribute to seniors’ personal development, expanding exchange skills and perspectives and jointly develop cooperation, benefit local communities, promote interrelationship with different age groups and capitalize knowledge, competences, skills and experiences in favour of older learners.

## **VIRTUAL MOBILITY AND LIFELONG LEARNING: THE NEW CHALLENGE FOR HIGHER AND CONTINUING EDUCATION INSTITUTIONS**

*Barbara Class, Ahidoba De Franchi, University of Geneva, Switzerland, Alfredo Soeiro, University of Porto, Portugal*

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European universities are faced with important issues, in particular an ageing population, a decrease in the number of learners per institution, globalization and competition. At the same time, physical mobility represents one of the most successful projects of the European Union. Since physical mobility is rather demanding in financial and organizational terms, only 4 % of learners from European higher education institutions can benefit from the programme today. European higher education and continuing education institutions have to develop their offers, taking into account the paradigm of an ageing population and the need for professional reconversions or specialisations. The case of the University of Geneva's continuing education courses is discussed – with a majority offered in a face-to-face format. Starting from there we move to the European context in terms of LLL and virtual mobility. Scenarios, taken from the VIRQUAL – Virtual Mobility and European Qualification Framework – European project (VIRQUAL website, 2010), show how it could all work and fit together across countries, across generations and across contexts.

Virtual mobility is defined in comparison to physical mobility in order to refer to known concepts and practices. The European Commission defines it as follows: “A complement; or as a substitute to physical mobility (Erasmus or similar) in addition to a type of independent mobility which builds on the specific potentials of on-line learning and network communication” (European Commission, 2008). It has already been documented that physical mobility is rewarding in many aspects besides knowledge acquisition. Physical mobility fosters the development of transversal skills, such as other languages, intercultural skills, autonomy, and self-awareness. All these skills are essential to the education of European citizens who really understand what it means to be part of Europe. Furthermore, many employers value stays abroad: physical mobility thus increases a student's possibilities for future employment (European Commission, 2012). Like physical mobility, virtual mobility is certainly rewarding in many ways over and above pure knowledge acquisition. Of course there is the immediate benefit of digital literacy and the experience of learning with technology. The acquisition of this skill involves discovering digital learning environments and related pedagogical practices and can also promote familiarity with mobile learning through mobile devices like tablets or smartphones. More traditional skills related to human values are also developed within digital environments. Distributed communities of practice (Wenger et al., 2011), networked learning (Dirckinck-Holmfeld et al., 2009; Goodyear et al., 2004), transcultural learning (Nisbett & Masuda, 2003) and collaborative learning (Dillenbourg & Fischer, 2007; Rienties et al., 2009) are the most well-known additional outcomes that can be fostered by virtual mobility. These are a source of high added value and can contribute to international citizenship in the same way that Erasmus programmes contribute to European citizenship. Technology is a determining factor in the shift from standardised to customised learning.

The VIRQUAL project “proposes to help educational and training institutions to achieve Virtual Mobility and to guarantee EQF implementation through e-learning, aiming at finding specific obstacles in institutions and proposing concrete and innovative solutions”. The following instruments have been considered to constitute a framework to develop virtual mobility because they are common denominators of European universities and are recognised as a solid basis for exchanges: 1) The European Qualifications Framework (EQF) and the respective National Qualifications Frameworks (NQF). The EQF is a common European reference system that links different countries' national qualifications systems and frameworks together. In practice, it functions as a translation device, making qualifications more readable. 2) Using learning outcomes to define curricula and courses. 3) Evaluation of learning outcomes using the European Credit Transfer System (ECTS) or the European Credit System for Vocational Education and Training (ECVET). To make the project's outcomes practical and real-life oriented, three profiles of potential users of virtual mobility have been identified: learners, teachers and institutions or stakeholders. For all three profiles, scenarios are suggested and ready to be experimented.

## **PERSONALISATION IN E-LEARNING – THE KEY FOR SUCCESS IN LEARNING IN LATER LIFE**

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Senior citizens built a highly heterogeneous learner group. Understanding their learning needs is very important for designing suitable learning concepts. Older learners need flexible course solutions that allow learning from home, in their own time and in their own speed. Thus, flexible e-learning programs can provide a good learning possibility, especially when the senior user is supported by experienced tutors.

This paper presents a study that firstly aimed at investigating how individual characteristics – age, gender and previous experience – impact the e-learning process and secondly how different support approaches in e-learning courses effect learning satisfaction with the learning experience. In detail, 157 participants (mean age 67.8 years) of different e-learning courses in the scope of the eLSe (e-Learning for Seniors) program filled in a questionnaire after participating in a basic e-learning course (105 participants) or an advanced e-learning course (52 participants). They answered multiple-choice questions about the usability, utility and quality of different aspects of the course and reported on their overall satisfaction with the course. The courses differed in the type of the support provided, more specifically the tutors had different backgrounds, and they were either volunteers or salaried tutors.

As expected, due to the flexible learning possibilities of the eLSe e-learning courses, no age and gender differences were found regarding satisfaction, quality, utility and usability of the different courses. Small differences between advanced and basic course participants were found, which indicate that advanced learners are able to benefit slightly better from the possibilities of the course and are therefore a little more satisfied. As assumed the different support forms had some influence on the satisfaction with some aspects the course. Participants of courses with support from university staff were more satisfied with the support in general and the support of their tutor and also with the design of the learning platform. All other ratings were also slightly better for courses supported by university member, but not significant. These findings undermine the hypotheses that these tutors were able to invest more time in giving feedback and support and were also better trained than the voluntary senior tutor and therefore this support is rated better. These findings underline the importance of professional support as a key factor for successful e-learning.

## CROSS-GENERATIONAL APPROACH FOR THE INTEGRATION OF FORMAL, NON-FORMAL AND ACADEMIC EDUCATION ESPECIALLY AS AN EDUCATIONAL MODEL FOR GENERATION Y AND X

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### Lifelong learning

Knowledge and learning has been recognised as an important intergenerational asset during the last years. New dimensions for new study forms were opened in the field of education by the latest technological achievement in relation to the computer and internet world. Digital Media and Web 2.0 set new standards for dynamic learning systems. The opportunity for lifelong learning is enabled for vocationally qualified people. All those interested persons with individual work experience and different prequalification should be trained and educated together on new platforms, in new networks, by new media and informal learning systems and with practical relevance. Especially the integration of the learning worlds of the Generations X and Y in distance and continuing education is a challenge for educational providers to generate the educational system more flexible and more complex.

### The different stages of education

There is a huge diversification of educational ways and learning forms by reason that each human pass different periods of training and education. Some people prefer to complete non-academic higher courses of extra occupational education at first. The decision to switch to an academic career will be made in the next step depending on the professional development, prospective for success and career. Recently, a remarkable number from the Generation Y is representative to seek for a bridging transfer from non-academic to the academic education. For this purpose was a new model generated to consider the special situation of the target group and to integrate the formal, non-formal and academic education especially for the Generation Y and X.

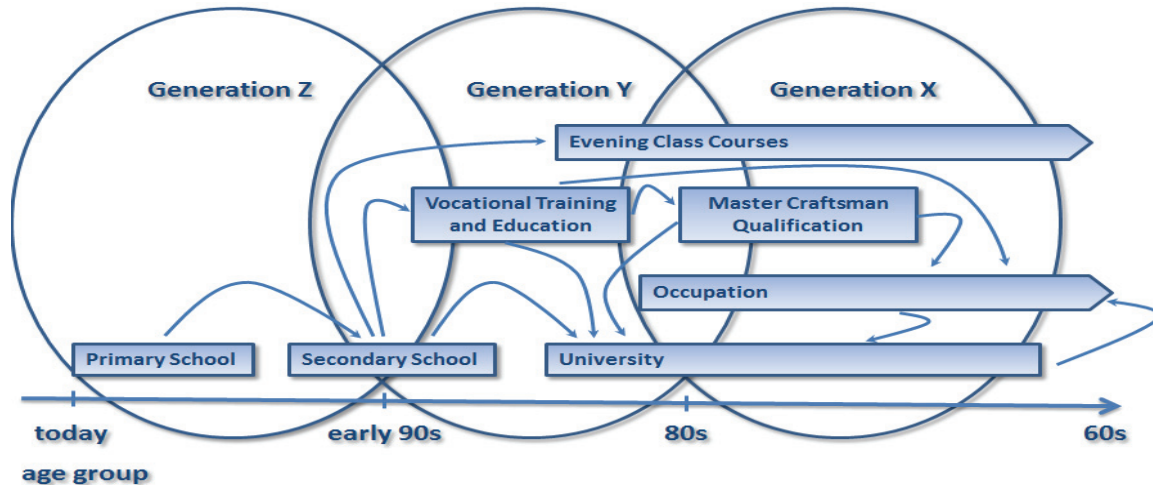


Figure 1. Kinds of education and their cross-generational utilisation

### The integration model for non-formal and academic education for Generation Y and X

The integration model should permit the individual floating change from the non-academic to the academic education. The model was developed, implemented and tested. It is used in the framework of the cooperation of universities with academies for administration and business as providers for the non-academic qualifications. The cross-generation model is characterised by the systemic realisation of the maximum of friendliness for participants and program acceptance as well as ensuring of high quality and the cross-generational approach opening the offer for people of different generations. The program is exposed to a continuous evaluation and improvement process. That is why; a new project with a scientific accompanying program was started in the last year. In the context of this project is to be analysed and investigated how the integration of knowledge acquired by school, profession or self-improvement can be improved and how the model can be transferred to other education fields.

## **ANALYSIS OF DISTANCE LEARNING MASTER'S DEGREE STUDIES AT VILNIUS GEDIMINAS TECHNICAL UNIVERSITY (LITHUANIA) WITH SPECIAL EMPHASIS ON DISTINCTIVE STUDENTS AGE GROUPS**

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E-learning in the broader context of using technology meets society's needs for learning for lifelong and rapid learning. Information technology has created both opportunities and challenges for education. According to Watkins (2009), for most online students the development of effective study habits and learning skills is also critical to their academic achievement and retention. It also requires understanding that adult learners have psychological needs and demands that e-learning must address (Cercone, 2008; Cohen, Nycz, 2005; Omar et al., 2011). It is therefore important to choose the best teaching strategy and actively involve students in problem solving.

Parallel to the world, there is a growing interest in online education in Lithuania, as well. In 1993, Lithuania joined the PHARE Multi-country Programme for Distance Education. Currently, Lithuania uses the Academic and Research Network LITNET (<http://www.litnet.lt/index.php/apie-litnet>), which opens a door to the state-of-the-art world of IT and information repositories. Creation and development of the portal "Lithuanian Virtual University" (<http://www.lvu.lt/cms/liedm/app>) is part of the programme of the Ministry of Education and Science of the Republic of Lithuania "Lithuanian Virtual University 2007-2012", which carries on and expands activities of the previous programmes and attracts new institutions to such activities (Lithuanian Virtual University, n.d.).

The e-learning courses at the Department of Construction Economics and Property Management of the Faculty of Civil Engineering of VGTU were introduced in September of 1999. 27 students from all over Lithuania were accepted into the Real Estate Valuation program. Since 2000 students can enrol in Construction Management e-learning course selecting Construction Economics and Management as a major subject (Rimkuvienė, Lepkova, 2004).

The present paper analyses the problems of the e-learning process, the social, economic, moral issues related to the labour market integration of trained professionals with special emphasis on distinctive students age groups. In order to clarify a number of issues related to the study process and paying special emphasis to distinctive age groups, the questionnaire based survey was conducted. The research has been fulfilled in 2011 year. 73 respondents took part in a questioning. The age of respondents ranged between 21 and 55 years. For further analysis the respondents have been divided into two main groups: 1) Young respondents – until 25 years old (total number 41); 2) Mature respondents – more than 25 years old (total number 32).

Currently at the Department of Construction Economics and Property Management we are exploring the implementation of virtual learning space – Moodle. The questionnaire-based results are received by using Moodle and additional scripts, programmed and applied to the Moodle learning space.

The respondents were asked to answer the questionnaire which contained the following three main parts: Information about the respondent; Information about the studies; Social and economic aspects of studies.

After the completion of the research, the following conclusions have been made: 1) The number of students enrolled in e-learning courses at the Department of Construction Economics and Property Management of the Faculty of Civil Engineering at VGTU have been increasing from 1999 up to 2009, due to the economic crisis this number have been decreased in recent years; 2) The overwhelming majority of respondents are employed in construction sector. And this is corresponding to the concept of distance learning. It shows that they made a choice of specialisation related to their job field; 3) These are the main advantages of distance learning: Convenient form of studies; An opportunity to get acquainted with new information technologies; Saving of time; Fast communication; Flexible choice of academic subjects; Good professional training.

Those who are in pursuit of education are accepted positively in their social environment. Only some employers sometimes think that studies have some negative aspects. This could be due to competition, and fear of the drain of employees.

## **TRAV – INTEGRATING LEARNING OBJECTS IN SOCIAL COLLABORATION AND DEVELOPING USER SUPPORT**

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In emerging conditions of contemporary socio-economic transformation, mobility and learning have been identified as key factors underpinning both shared intercultural values and options for sustained economic expansion in the years ahead. This paper shows how interactive M-learning can be addressed to both young and mature lifelong learners (MLLL) via their own personal mobile phones. There has been disagreement in recent years whether ageing population constitute a crisis, or represent an opportunity for meeting demographic challenge with creativity. The aim of this article is to show how young people can help MLLLs adapt and learn differently using M-learning (mobile learning). M-Learning, or "mobile learning", is distinct in its focus on learning across contexts and learning with mobile devices. M learning is based on the following concept:

- Almost everyone has a mobile phone and carries it with him/her.
- Mobile phones require no previous knowledge of technology.
- Although mobile phones have many sophisticated features, their primary focus is still for talking.
- Mobile phones can present audio, video and high graphic interface allowing rich user experience.

The aims of the research undertaken by the authors with a selected group of students in Israel and Ireland are:

- To utilize technical features of mobile phones and apply it as a learning platform for MLLL and youth.
- To utilize the knowledge and "attachment" youth have with mobile phones and transfer it to MLLLs.
- To gain experience to new learning opportunities within the community of MLLLs.
- To make contact between MLLLs and young adults via language learning and travel.

The plan focuses on a learning community of MLLLs and young adults planning a trip and learning a language together. The planning is done by using online internet travel sites, maps and travel blogs. Language components are acquired and learned via interactive courses purchased from the app store. The combination of intergenerational learning and acquisition of elementary elements of language competence is additionally focused on developing intercultural awareness and sensitivity to cultural diversity.

The project has evolved around the idea of learning about places and languages. The project will be divided into two phases: planning a trip online (via mobile phone) and learning "travel tips" and phrases from a course that will be downloaded from the app store. The second stage of the project focuses on existing travel courses: English, Spanish, Portuguese, Italian French and Turkish.

Teaching and learning processes in the project are set on a non-linear structure. Users can jump around from one unit to the other. The roles of teachers and learners shift throughout the various stages depending on the language item being learned and the kind of practice both populations are involved in. The project delivers a model of how to engage both young and MLLLs in M learning with a focus towards travel and language learning. M learning serves as a tool that allows us to identify factors that perpetuate exclusionary practices. It enables both populations to recognize and understand how attitudes towards age differences, learning habits, and use of technology can change at any age. By addressing such underlying factors the M learning project is able to adapt behaviours that facilitate inclusion, recognize the richness diversity can offer and imagine alternative ways of intercultural interaction. This project is designed to facilitate equality of access to hospitality/tourism services by sharing the learning across generations.

The EU is faced with an unprecedented demographic upheaval. Over a third of people aged over 75 have disabilities that restrict them to some extent. Furthermore, these numbers are set to rise as the EU population ages. Special adaptation of services has to be planned / implemented in the future to meet the challenges of an older population who is living longer and with every expectation of active participation. This project is designed to facilitate equality of access to hospitality/tourism services by sharing the learning across generations.

## **GENERATIONAL DISTINCTIVENESS IN THE TIME USE OF WORKING DISTANCE LEARNERS**

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Profiling student characteristics is a necessary task in designing programmes of education and one that is more necessary but more complex for distance study involving mature students. Since the middle of the last century various ways have been used to group individuals based on their demographic. Although these have provided useful tags it can be questioned whether these have value when considering the needs and expectations of a group of mixed age students studying the same course.

This paper examines the generational distinctiveness of students commencing a postgraduate course drawing upon research conducted into their use of time. The data was collected from an intake of 705 working students and their time use was established from a 24 hour diary kept for one week during their first module. Associated with this was a pre-course questionnaire that provided background details of students and their anticipated use of time; and an end of module questionnaire that established their feelings about their actual use of time.

The paper reports the main findings from the research in respect of the three generations of student currently within the workforce – Generation W, otherwise known as baby boomers, born in the years 1946-1964; Generation X born 1965-1979 and Generation Y born 1980-1994. Specific findings are considered under the headings lifestyle, work, technology and study. The paper also contrasts the weekly time use of Generation X and Generation Y students that reveals that the differences between them are minimal; but with certain exceptions such as Generation Y favouring social networks and mobile technology.

Overall the results in this paper highlight that there is little value in using averages to identify the characteristics of students from any particular generation. It concludes that whilst generational differences are evident these are not so significant as to require a bias toward one age group over another. The critical factor is the formative experience of each person that shapes their approach to work, life and study. It is this shift in the student characteristic and their attendant lifestyle which is significant, but often unrecognised by designers of courses of study.

## **THE GAP BETWEEN “GENERATION Y” AND LIFELONG LEARNERS IN PROGRAMMING COURSES – HOW TO BRIDGE BETWEEN DIFFERENT LEARNING STYLES?**

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Programming courses' outline and their pedagogy are as many other phenomena of evolutionary nature and even if computer science is a relatively young discipline several shifts has already been seen. When Generation X took programming courses at university level the older and more pragmatic programming languages were replaced in the 1990s by the more well-structured Java language and object-orientation became an integrated part of most Computer science curricula. But during the relatively short history of Computer science and system development education the pass rate has often been low in programming courses. Still in the 21st century novice students have had severe problems in the understanding of even basic programming techniques. This has not only been related to more theoretical concepts and there have been problems with the practical parts of programming as well. In the current situation at Swedish universities where the course batches often is a mix of Generation Y and Lifelong learners the approach to pedagogy and course content design is not an easy choice. The aim of this study is to describe and discuss the shift of heterogeneity in the student batches in university programming courses during the last decade. Which are the main challenges of the different generations and their learning styles and how could they be addressed? The study is a combination of a literature study and an analysis of 12 years of work with programming courses at university level. My observations and notes have been compared with students' answers in about 25 online questionnaires for course evaluation and the assessment during the last decade. Findings show that there is a difference in learning styles and a need for updating the courses in an overloaded manner where students with different learning styles could chose to learn the same basic programming in different ways. Another idea discussed in this article is to omit object-orientation in the first programming course and introduce basic programming in a traditional straightforward imperative style. The tested approach where programming courses are given without object-orientation and with multi-modal content in a virtual learning environment seems to reduce the gap between Generation Y and Lifelong learners, but there are still a lot of challenges like plagiarism and lack of commitment amongst students. Feedforward instead of feedback and an iterative approach in the presentation of course material seem to support both the discussed student groups. If a high intake is the aim distance education will increase the enrolment. If a high pass rate is the measurement of success blended learning and overloading of multi-modal course content online could be the key to success but with an extra initial cost for the development of digital content. In online courses with a student mix of Lifelong learners and Generation Y there is no 'One design Fits All' and to support mass individualisation and decrease the drop-out rate the recommendation is to provide multi-modal content over in a well-structured learning environment. The drawback with an overloaded multi-modal approach is that course development will be time consuming and costly but return on investment will be in the increased pass rate and lower drop-out rate. Lack of motivation will always be a problem for students from whatever generations and a general problem seems to be that many programming courses are too boring and without any real world connection. For Generation Y it might be worth trying to implement more activities with Game Based Learning and to increase the motivation for Lifelong learners an interesting idea could be to develop teaching sessions and assignments where real world applications should be constructed. However, it sometimes seems to be a contradiction between preventing plagiarism and constructing challenging programming assignments and projects.



## **GAP BETWEEN GENERATIONS IN USING NETSPEAK AS A NEW LANGUAGE FORM OF INFORMATION AND COMMUNICATION TECHNOLOGY: WHAT IS REALLY GOING ON AT ZAGREB SCHOOL OF ECONOMICS AND MANAGEMENT**

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### **Introduction**

The new language form of the online communications, popularly called Netspeak slowly but confidently erase the boundaries between formal and informal communication leading its way toward the global language. One can think that the use of Internet and social media, and with it the adoption of Netspeak rules is reserved only to the generation born with all those new technology. We are talking about the generation so called Z, but what about the generations X, Y, and the older one. In order to examine if there is any gap between generations in using the Netspeak elements in their discussions the authors analyses the use of following Netspeak elements in open discussions between professors and students at Zagreb School of Economics and Management (ZSEM): the use of slang, the omission of diacritical marks, the use of acronyms and abbreviations, the use of emoticons, the proper use of openings and salutation, the nonstandard use of punctuation, the use of upper case and the use of prolonged graphemes. Open discussion represent different kinds of discussions within the course and are not strictly attached to the teaching materials. They can be discussions between professor and student, student and professor and also between students.

### **Is there any gap between generations in using the Netspeak elements?**

The authors analyze if there is a gap between generations in the use of Netspeak elements. The poll was conducted among the faculty and students at ZSEM. The polled faculty and students have been asked to estimate the frequency of using each Netspeak element within the formal and informal communication. In the sample of 40,70 % ZSEM faculty the youngest one is 25 years old and the oldest one is 63 years old. The average is of 38.1 years. The same poll on using Netspeak elements has been filled in by 106 students (56.99 %) attending the first year (mostly students aged 19).

By analyzing the data the authors compare the average use of Netspeak elements within the formal and informal communication. Results show the more frequent use of written Croatian language in formal communication rather than in informal communication by faculty and students. As expected the older faculty assume they use the written Croatian language both in formal and informal communication. Average results of using the diacritical marks shows that the students use more frequently diacritics then the faculty. Acronyms and abbreviations are more frequent used by the faculty both in formal and informal communication. Emoticons are used much more frequently within the informal communication. In formal communication the emoticons are used more by the students rather than faculty. The results in informal communication are different, showing the much more frequency of use of the emoticons by faculty.

Authors assume that professors at each course use more Netspeak elements rather than students, and that there is a positive correlation in using the Netspeak elements within the online discussion between professors and students. The overall results of using the Netspeak elements by professors and students show the statistically significant difference, and it is obvious that professors use Netspeak elements within the discussions in their courses much more frequently than students. Results of using Netspeak elements show the strong and significant correlation in using the each element between professors and students. That's why the authors prove and accept the hypotheses that there is a positive correlation in using of Netspeak elements within the online discussions between professors and students.

### **Conclusion**

Although the authors expected to detect a great gap between generations among faculty and students at Zagreb School of Economics and Management, it appears that this is not the case. Not only that professors use the Netspeak elements in greater amount but also they persuade and influence the students to do so. Especially it can be said for the use of slang. Not only the generation Z submits their communication to the Netspeak rules but also the generation X, Y or also the older one adopted the rules almost naturally. This fact can be explained by the frequent use of new technology and systematic use of e-learning at ZSEM.

## **E-SCOUTS: INTERGENERATIONAL LEARNING IN BLENDED ENVIRONMENTS AND SPACES (ILBES) FOR SOCIAL INCLUSION**

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### **e-Inclusion as a European challenge**

The last few years have seen a growing interest in e-Inclusion policies (i2010, Riga Declaration 2006, the EU Ministerial e-Inclusion Conference of Vienna 2008, the Gdansk 2011 Roadmap for Digital Inclusion: a Hub For Social Innovation) considering information and communication technologies (ICT), with specific reference to the easily accessible social media, as a vehicle for *social inclusion, ageing well, youth employability and social innovation*.

### **Blended learning environments and spaces for ICT access and social integration**

In Europe there is a wide variety of blended learning environments and spaces (BLES) addressing social integration and lifelong learning, mediated by ICT-driven learning opportunities and tailored to disadvantaged groups: examples can be found in public and third sector libraries, educational or cultural centres, and other spaces with digital services. In a strand of three EU-funded projects, our international team has contributed to the evolution of BLES as inclusion catalysts by addressing staff professionalization, developing key competences curricula for vulnerable groups.

### **ILBES: building and testing a methodology for ICT-supported intergenerational learning**

In the EU LLP project 2011/2012 “eScouts – Intergenerational Learning Circle for Community Service” ([www.eScouts.eu](http://www.eScouts.eu)), the ILBES methodology (Intergenerational Learning in Blended Environments and Spaces) was developed and is currently implemented to facilitate the socio-digital inclusion of elderly and the youth joining the labour market and adult life, while improving local community life by means of intergenerational dialogue and support. Thus, the learning circle enables youth to support elderly people in ICT usage and, in return, seniors mentor the youth in their efforts to access the labour market and to face the challenges of adult life, completing in this way a circle of learning, exchange and conviviality, mediated by ICT, social media, and BLES.

### **Preliminary conclusions and perspectives on how to facilitate intergenerational learning**

Backed on two consolidated learning methodologies, Community-Service Learning (CSL) and Participatory and Appreciative Action and Reflection (PAAR), and supported by a group of EU third sector organisations and telecentres, the ILBES is being fruitfully tested in 6 EU MS, demonstrating to be relevant to its scopes of including the two target groups via the intergenerational dialogue mediated by the ICT and the identified BLES.

In terms of future prospects, we believe it is necessary to further professionalize BLES staff and supply them with methods and know-how to address intergenerational learning. This includes more elaborated job profiles and recognized sets of competences, local and regional competences for identifying digital and social inclusion needs, social innovation opportunities, increased good practice exchange and international models of reference, and sustainability over time.

But apart from this “internal professionalization perspective”, we think that we also have to take the next step to integrate e-Inclusion as a transversal field of activities into lifelong learning policies and thereby promote digital literacy on the European and regional policy agenda as a means to strengthen social cohesion.

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<sup>1</sup> The information and views set out in this paper are those of the author(s) and do not necessarily reflect the official opinion of the European Union.

## PAST AND PRESENT – HISTORY, ICT AND INTERGENERATIONAL LEARNING

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### Building on past and present

The question of historic memory is a critical one for the interconnected learning processes between diverse generations. The recollection of past events is a process of narrative construction, which can bind communities in a shared enterprise of discovery and communication. In equal measure, historical narrative may be about highly contested issues and disputed spaces. Whatever the dimension, each society faces the question of relevance in terms of preservation of memory and experience. For older generations, there is the need to preserve and record experiences, which have been both valid and central to their lived experiences. For younger generations, there is the deepening of meaning involved in exploration, enhanced through contact with those who have actually lived through historic events. The very process of joint exploration of common themes and experiences creates powerful new learning paradigms. The process of shared historic reconstruction enables a series of innovative pedagogical elements to emerge – all of which take on an additional resonance with the availability of advanced ICT supports and methodologies.

The *MyStory* project commenced in 2011 with a specific mission to implement activities meant to bring the two generations closer together with the help of history and technology. Intergenerational learning is bi-directional. Seniors share their life stories with the young people and the young generation introduces seniors to the basics of ICT and computer use. During the three years of the project implementation permanent collaboration between teenagers and senior citizens – especially grandparents and grandchildren – is envisaged with different foci.

At the same time, senior citizens are provided with the opportunity to update their competencies and learn how to use the PC and access the internet. The fact that there is a sharing of information binds the two generations and blurs the traditional distinction around the roles of teacher and student. There are no power strings which might inhibit. What remains is just curiosity, the source of information and the added value of the human who is beyond it. Intergenerational learning within *MyStory* builds a bridge first and then transfers knowledge, develops abilities and creates competencies.

The *MyStory* project addresses real needs around learning, intergenerational contact and the pedagogy of history teaching in contemporary society. This is done by setting a dynamic action path which bridges the gaps in between and offers a wider context for beneficiaries to activate within, both from social and professional perspectives. Activities in the project are mainly developed around and with the support of the virtual, technical environment.

The project process is undertaken using a Moodle platform. This has been customized by the *MyStory* project team for the use of the international team of story collectors in participating countries. The materials on the platform have been jointly developed by the partnership. They are assembled and utilized under a number of key activities: to inform story collectors on the main aspects of story collecting and material processing; to present collectors with communication opportunities within the international team in regard to processes around sharing, learning and collating; to motivate and engage them in wider *MyStory* project activities.

*MyStory is a KA 3 ICT project (project no. 511641-LLP-1-2010-1-RO-KA3-KA3MP) implemented with the support of the European Commission. The project is being implemented within an international partnership including members from five countries: Finland, Lithuania, Romania, Slovenia, UK and Ireland with the role of external evaluator. More on MyStory project and opportunities to become involved in the project can be accessed through the project website at [www.mystories.eu](http://www.mystories.eu).*

## **“I HAVE NO IDEA HOW TO USE THE KEYBOARD”: CHRONOTOPES OF THE DIGITAL DIVIDE**

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### **Introduction**

The expansion, dissemination and development of skills for the use of digital technologies is characterised by great optimism, rupture and discrimination, according to social and age groups, levels of schooling or geographical areas of reference, among others. This asymmetry is not limited to disparities in the use of technology skills; it is associated with the paradoxes of a fragmented globalisation, of identities of resistance, of a multiculturalism often instrumentalised by superficial social policies that tend to ignore contextual and historical-cultural specificities.

Taking into account the digital divide in the processes of social participation, we propose an approach to this construct within the systems of locally situated cultural practices (Scribner & Cole, 1981; Reder & Davila, 2005; Warschauer, 2002). Consequently, the purpose of this paper is to reflect on the spatio-temporal dimensions of the digital divide present in the narratives of individuals with low levels of schooling, in particular on the family and school experiences with technologies.

### **Method**

The methodological approach used in this study is of an interpretative nature. The sample consists of 17 individuals with low levels of schooling – 16 have attended the 1<sup>st</sup> cycle of basic school, and 1 attended the 2<sup>nd</sup> year of schooling. Of these, 13 are women and 4 are men, and the average age is 59.3 years. This sample represents a group of individuals with lower levels of schooling, from the two members of each of the 64 families that participated in the project “Inclusion and digital participation. A comparative study of the use of digital media by different social groups in Portugal and the United States”, coordinated by Ponte, Azevedo and Straubhaar (2009-2011). We used the semi-structured interview.

### **Analysis**

The analysis of oral information collected in the interviews was done in two related levels. In the first level of analysis, we explore the narratives of the individuals based on the concepts of techno-capital, techno-competencies and techno-dispositions (Rojas et al., 2010; Aires et al., 2011). We used content analysis (Bardin, 1977) and identified the three major categories: 1) Family Experiences; 2) School Experiences and Skills; 3) Uses of Technologies (Aires et al. 2011)]. In a second level, we deepen the analysis based on a historical-cultural approach of chronotope (Lemke, 1995, Bakhtin, 1981; Hannan, 2011). In this second phase we identified 4 chronotopes: 1) Rural families in the *Estado Novo*. 2) School and women/ school and the elderly; 3) Discovery of audiovisual; 4) The Digital World belongs to the “younger generation”. From this spatial-temporal matrix, we recover macro elements of social and educational policies that have marked the experiences, in particular childhood, youth and the entry into adulthood by respondents (Bakhtin, 1981; Hannan, 2011).

### **Final Remarks**

The research on the phenomena associated with the digital divide brings us to a broader framework of social exclusion. The analysis of the narratives by individuals with low levels of schooling leads us to similar issues arising from the digital exclusion of older people, especially women. This reality emphasises the role of Public Pedagogy in promoting literacy and digital inclusion (Sandlin, O'Malley & Burdick, 2011).

## **MUSIC FOR TWO GENERATIONS: INTERGENERATIONAL INTERVENTION THROUGH MUSIC AND INTERNET TECHNOLOGIES**

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As part of the course “Creating Digital Applications”, belonging to the curriculum of the MA program “ICT For Education” of the National and Kapodistrian University of Athens, a group of seven academic students was formed with the purpose of creating applications that would propel the matters of Intergenerational Communication and Education.

Our intervention is based on the notion that generational gap, as far as the use of digital applications is concerned, can be reduced to a certain extent, by bringing close together members of different age groups. We claim that children and seniors could be guided in the use of “every-day” digital applications, by dealing with a subject of mutual interest, a subject such as music. Music was chosen as an “axis-topic”, a topic we could rely upon, in order to realize an activity that would bring members of the First and the Third Generational Groups close together. The above intervention aimed to propel matters of Communication and of Technological Literacy with reference to ICT programs in general and specifically with reference to ICT Educational Programs that can be held in School, the latter regarded as an Institution of Lifelong Education and Training.

## **GENERATION Y – MYTH OR REALITY? REFLECTIONS ON TECHNOLOGY PEDAGOGY AND ACADEMIC IDENTITY**

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This paper seeks to explore the idea of intergenerational differences in terms of educational provision designed to prepare university lecturers to teach on-line. The specific cases under discussion are derived from a module developed for academic staff within a Master's level programme. Intergenerational differences are explored through the lens of reflective accounts (provided by teaching staff) of their own practices and in particular changes made in practice to support learners on their own courses. Although this method has several limitations, the data derived suggests that intergenerational differences do not present teachers with indomitable challenges and, whilst significant differences may exist between learners and teachers in their everyday usages of technology, the uses of technology to support or enhance learning are not bound by these histories. A short discussion follows as to the extent to which this data can be used to support the significance of intergenerational differences or, alternately, whether, given the success of the teachers, more attention should be paid to the learning process and its outcomes rather than variations in familiarity with technologies.

Drawing on case studies of specific projects created by academic and professional staff studying on a Masters in Academic Practice programme, part of the discussion focuses on how the use of learning technologies constructs both the teacher and learner, but also recognises a wider set of influences which frame the teacher-learner relationship. The privileging of technology in the use of phrases such as Generation Y and its application to the higher education is thus problematised.

## THE CLASH BETWEEN GENERATION X AND GENERATION Y: MORE MYTH THAN FACT!

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### The background

According to the 2011 barometer on the use of ICT put out by the AWT, 99 % of Walloons aged 15 to 29 are Internet users. The MediaPro 2011 survey conducted simultaneously in nine European countries, including Belgium, provides more details and goes further, specifying that 58 % of young Belgians download music and games, 57 % listen to online radio, 56 % often use instant messaging and 38 % have a private blog or run their own personal website. These figures place Belgium in the middle section of the European ranking but well behind the Scandinavian countries.

In 2011, 4 million Belgians, i.e. 40 % of the country's population (43 % of French speakers against 34 % of Dutch speakers) had a profile on the social networks. In terms of Internet users, 55 % have at least one profile. The average age of social media users is between 18 and 34 years of age.

On the other hand, Walloon businesses tend to be more wary about the new media. Only 27 % of Walloon companies are present on a social network. As to access to these networks from the workplace, 4 Belgian businesses in ten say they have blocked access to these media between 9 am and 5 pm. (source: *Smart Business Strategies*, 2011). As such, a discrepancy is seen to unfold between the digital tools used at home and those allowed in the workplace.

### Rising above the stereotypes ...

Young people may well be familiar with ICT but this does not mean they are exactly computer whizzes either! Barely 32 % of young people are able to sort a problem with their computer or correctly install a piece of software, whereas 27 % are capable of logging onto a computer network (source: *Individual Computer* n° 227, May 2010).

Whereas the basic uses of the Internet (chatting, surfing), as well as the various audiovisual uses (games, music and video), are seen to be particularly widespread among 16 to 24 year-olds, it is less the case for its commercial and utilitarian uses.

Do young generation "Y" workers really have aspirations which are different from those of the previous generation? And are Walloon businesses ready to reform their working methods to fully integrate the "Y" generation's expectations?

The conclusion of this article brings a summary of the measures to be put in place by companies to promote the meeting of generations to the benefit of business.

The training of the "Xs" in the specificities of the "Ys" is unavoidable and the "Ys" will need to lower their demands at the outset of their career and understand that they too have a great deal to learn before they are anywhere near appropriately productive for the business in whose employ they are. In parallel with the training of the "Xs", the world of education will need to better prepare the "Ys" for the ICT requirements of the world of work.

## DIGITAL STUDENTS – IS THERE A GAP?

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### Digital Students and the Use of Technology

In the last quarter-century the digitisation of virtually all aspects of life - something Negroponte has called the "change of atoms into bits and pixels" (Negroponte 1996) has had an impact on us all. However, for the generation born after 1980, the digital world is even more present and pervasive than for the rest of us, for it is the only world they know. They are the "digital ones" or the "N-Gen – Net Generation" (Tapscott, 1998). They are also described as Millenials, the Internet Generation, Echo Boomers, the Boomlet, Nexters, Generation, Y, The Nintendo Generation and the Digital Generation (Raines, 2002). One of the first to identify this new generation was Marc Prensky who used the terms "digital natives" and "digital immigrants" (Prensky, 2001). In Europe research have been carried out mainly in Germany (Veen, 2003) and in the UK (Livingstone and Bovill, 2001) and in UK, Hungary and Romania (Andone, 2005, 2007).

### Digital Students and Learning

As a result of their powerful access to digital media and to the endless information on the Internet they have learned to access facts and to assess them in particular ways; and to be able to process so much data, they need to synthesize; they have abilities to multitask, a preference to learn from pictures, sounds and video rather than text and interactive and networked activities are their first choice (Andone, 2007). Even if several studies indicate that there is a connection between the use of technology and age several others indicate that "learning and technology has nothing to do with generational divides." (Ponterfact, 2010). Similar, Vaidhyathan states "there is no such thing as a digital generation", as he mentions that in every generation there is a similar bell curve for accepting technology (Vaidhyathan, 2008). But for others this "debate about digital natives represents an academic form of moral panic" (Bennett, Maton and Kervin, 2008) as justification for the divide, in some cases, between students and their teachers, between systems that are technologically influenced and other that are so advanced.

There is evidence which points to differences in perceptions or methods in which young people use technology inside and outside of standard educational settings, and suggests that limited use of the Internet in education can be frustrating, but there is little basis to conclude that these differences are causing deep and clear disengagement in learning. From this research we consider that to ground the characteristics of the "digital natives" simply on age basis is simplistic. There are several other criteria to be taken into account and our research in the last 6 years emphasised. Accesses to technology, education level, society implications, media exposure, etc are just some of the criteria that can influence the way of how the young generation mix technology in learning. To further clarify this analysis, and based on these previous results, the following table of digital students' characteristics may be helpful:

Table 1: Digital students' characteristics

Technology	Characteristics	Learning	Communication
Computers	Confident Tech-savvy	Constant use of technology	Write electronically (type)
Games	Strategic thinking Evaluation and 'reputation systems'	Learn from images, audio, videos Doing rather than knowing Motivated for achieving (winning)	Goal focused
Internet & Web	Search and browsing for information Networking Non-linear	Rely on the online data Danger of plagiarism	Permanently online Immediate response
Mobiles	Use of multiple tools and media 'Texting thumb' Meet and connect instantly	Share and exchange 'Push' information and knowledge	Instant communication

This table is an attempt to identify the relation between the use of a certain technology and the respective digital students characteristics. The introduction of these characteristics had an influence on the requisite the students require from learning and communication. From this perspective, 'digital students' are defined as young adult students who have grown up with active participation in technology as an everyday feature of their lives.



## **RECONSIDERING “GEN Y” & CO: FROM MINDING THE GAP TO OVERCOMING IT**

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This paper deals with the theme of the generational gap(s) in digital learning. The text is intended to show why it is necessary to adopt a perspective which overcomes the gap. In facts, both in theory and in practice, there is a growing number of significant evidences of the inappropriateness of the “generational divide” approach. In details, concerning the theoretical level, it must be said that the voices who dominated the debate in the last twenty years propose a vision of the topic which tends to replicate the gap itself. Recently, counter-arguments have been provided; and data coming from empirical level pointed out a reality in which the digital divide(s) is related to age issues very less than expected, or even not at all.

In the paper the LoDE (Learners of Digital Era) perspective is suggested as a valuable attitude of analysis, and data coming from a research project named “Learners’ voices” (run in university institutions of Ticino, Switzerland) are discussed.

Outputs of such research inform us about a very scattered reality, in which the age variable appears as completely inadequate to explain the digital gap. In details, the statistical treatment of answers is presented to an online questionnaire, which was set to observe attitudes, behaviours, and perceptions related to digital learning. The statistical relevance of age variable was inquired for 81 items of the questionnaire. Results put in evidence that, the age factor does explain – when it does it – just a very small portion of noted differences: overall, data indicate that the older the learners, they are 4.0 % more likely to ask for more eLearning, and 3.9 % more likely to declare that ICTs impacted on the way they collaborate with their peers. That is, quite the opposite than predicted by the generational approach.

In short, the paper is intended to claim that “minding the gap” is not enough to solve educational issues; this is why we need to overcome the generational gap approach. This paper offers useful pieces of knowledge for such goal.

## **LINKING SCHOOLS WITH SCIENCE: HOW INNOVATIVE TOOLS CAN INCREASE THE EFFECTIVENESS OF SCIENCE TEACHING IN THE CLASSROOM**

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Today's science teaching has to be engaging in order to raise young people's interest in science. Science educators are facing the challenge to provide praxis-related learning, to connect to scientific contexts and to enrich science curricula with authentic learning scenarios. Advanced information and communication technologies can play an important role in these scenarios, providing students with the opportunity to collect real "hands-on" experiences. They can provide access to real-life scientific data, allowing students to analyse social, economic and environmental problems from the world outside of educational institutions and foster the collaborative exchange and learning between schools and science organizations.

The project GLOBAL excursion (Extended Curriculum for Science Infrastructure Online), involves representatives from European schools and science institutes into a joined learning process that aims to improve current science teaching. The objective of this process is to develop a Virtual Science Hub (ViSH), which links European schools with the expert knowledge of European researchers and a range of science infrastructures, enabling students and teachers to access experimental laboratories and science resources. Thus 14 to 18 year olds can experience challenging learning scenarios and gain insights into authentic scientific work. Examples of science infrastructures offered in the project are the remote usage of a Nano-Microscope, access to real-time climate data and animal traces from a national park, or online discussions with biomedical scientists.

The challenge for the project is to combine two different worlds – schools on the one hand and scientific research on the other hand – on a virtual platform in a way that the scientific content is properly prepared for the different pedagogical requirements and learning scenarios of European schools. We address this challenge by applying a participatory design process, which involves teachers and scientists in the mutual development of this platform, the ViSH. The participatory design approach assumes that the users themselves are in the best position to determine how to improve their environment. In doing so, it turns the traditional designer-user relationship upside down, viewing the user as the expert and the designer as a technical consultant.

The initial steps of the participatory design approach helped the whole team to grasp the needs of the target groups in a very detailed manner and at an early point of the project. The participatory process was an important experience for all parties involved and contributed especially to the early adaptation of the ViSH and the pedagogical framework according to the real needs of the participating teachers. The overall relevance of a platform like ViSH was clearly confirmed by the participants. Some of the identified barriers, such as lack of time or organisational constraints will not be completely overcome, but the system will be designed in order to allow the requested flexibility for the teachers and the scientists.

If new learning landscapes should foster the critical and systematic knowledge on subjects such as science and provide students with the opportunity to collect real hands-on experiences with the "know-how" and "know-where" of science, then certain aspects have to be considered. That practical experiences with science infrastructures and the live exchange with scientists are highly motivating for students and increase the learning curve also for theoretical concepts is out of question. But to be successfully implemented, practical experiences have to be offered in a very flexible manner, provided as small content and activity units that can be individually adapted and integrated into existing didactic concepts and curricula of science teachers. Standardization of the provided content and integration with existing LMS is an urgent request in this regard that has not been solved yet. The trend for new mobile devices that are already used and adopted by students in their everyday life has definitely to be considered when developing communication technologies for today's school context. To facilitate the teachers' tasks like searching for, preparing and adapting new science contents and infrastructures to the different learning scenarios in class, an exchange between European teachers should be fostered as well.

The next phases of the participatory design approach and the real implementation of the system in schools will provide further feedback on the usefulness of the ViSH, but the presented process already revealed important aspects to consider when designing to improve science teaching.

## PROFESSIONAL LEARNING ON-THE-MOVE: TIME TO MOVE-ON

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### Introduction

Adult learners' re-entry into the learning environment, in many instances, requires a leap of courage, and yet their learning success is integral to the health of communities and the economy. These learners, whether busy parents, young adults or seniors who would like to stay professionally active, can only (re-)enter or stay in the workforce by becoming life-long learners.

Learning on-the-move holds a promise for providing opportunities for adults to stay in-line with their career, personal and educational goals, to keep pace with professional and societal changes and with the new formal requirements in the modern labour market. Learning at the "non-place" refers to learning which takes place in spaces of temporary, transient activity (such as airports, supermarkets, hotel rooms, highways, waiting queues, etc.), generally in time and place that would normally be mostly "downtime" for a person. On the other hand, the tendency of more and more adults carrying powerful portable devices provides a well-exploitable opportunity for learning.

The MOVE-ON project (under the LEONARDO DA VINCI Lifelong Learning Programme (LLP) of the European Commission, Education and Culture DG) aims at designing, developing and validating new vocational education possibilities ready to be offered in short episodes (max 10 minutes each) during "non-place" events with the goal to increase the overall volume of participation of adults in vocational education.

The present paper presents the overall goals of the project, the basic MOVE-ON educational model, the architecture and user roles supported by the system. The project started in January 2011 and expected to end in December 2012.

### More Information about the Project

For more information on the project's progress, related events and publications, and to get involved in the MOVE-ON community, please visit our website: <http://move-on.exodussa.com>, or our Facebook page [facebook.com/MOVEON.LLP](https://www.facebook.com/MOVEON.LLP) and register to our Newsletter.

### Project Partners

- EXODUS S.A. (Coordinator) – GR ([www.exodussa.com](http://www.exodussa.com))
- ALBA Graduate Business School – GR ([www.alba.edu.gr](http://www.alba.edu.gr))
- COREP – Consorzio per la Ricerca e l'Educazione Permanente – IT ([www.corep.it](http://www.corep.it))
- Institute of Technology and Development Foundation – BG ([www.itd-bg.eu](http://www.itd-bg.eu))
- EDEN – European Distance and E-Learning Network – UK ([www.eden-online.org](http://www.eden-online.org))

### Disclaimer

This project has been funded with support from the European Commission under the LEONARDO DA VINCI Lifelong Learning Programme (LLP) of the European Commission, Education and Culture DG. This communication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

## **QUIZ EM MOVIMENTO – A GAME TO STIMULATE THE INTELLECT WHILE FIGHTING A SEDENTARY LIFESTYLE**

*Barbara S.R. Amorim, Pedro M.O. Martins, Universidade do Porto, Portugal*

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### **Introduction**

*Quiz em Movimento* is an educational game and tool to oppose sedentary lifestyle by promoting physical activity. Intended to children, but easily adaptable to other audiences, this work, beyond the playful, may be a platform to support projects development in different areas, including cognitive, socio-emotional, physical and artistic areas.

At a time when social interaction is constantly associated with new technologies and is often associated with sedentary practices, regardless of face-to-face interaction, it is imperative to develop technological tools that encourage interaction and physical activity, promoting healthy lifestyles and providing leisure time fostering the human relationship. The use of multimedia tools in education enriches the teaching-learning process of students, making themselves active elements on their education. These mechanisms are an asset in classes' preparation, and a motivating tool to students in their study. Through them, students develop skills such as autonomy, creativity and critical sense. However, the media should always be used as a supplement to training and educate children, not allowing them to take refuge, only and exclusively, on a digital world and abandon socialization and human interaction.

### **Multimedia as a learning resource**

This is a game that aims to highlight the potential of multimedia as a teaching resource, dynamic and communicative. Each question is presented along with four response options. Players must move to the default locations to validate their answers in the shortest time possible. These points are marked in advance and are visible on the screen of the game so their location in space is known by the participants. Once a question is raised, the players have a range of time to choose a hypothesis and move to the corresponding point of their choices. When time is up, the developed application analyzes the coordinates of each player and validates the answers. The questions are generated randomly within a defined range for the age group chosen initially.

The main objective of this work is to develop a dedicated web platform, allowing competition both inside the same school and between different schools and promote individual competition and team work. When played individually, each participant should be able to make decisions, abstracting from their colleagues choices, fostering their self-esteem and self-concept. When played as a team, it becomes necessary to define strategies to achieve the best score, thus stimulating the mutual support and social interaction. Since this is a project intended for children, the interaction with the technologies used in this project must be studied in order to shape its implementation to the needs of different groups of students.

### **Applications in other research areas**

This project will have a positive impact in educational multimedia games and applications due to its versatility, easy rule assimilation and gameplay. It may also provide support to the development of studies and projects in other areas further than education. It may be applied in cognitive studies (variations on study motivation and scholar results), artistic projects (creation of graphics through movement/speed among many other), social analysis and research (player's behaviour, influences' analysis and decisions making) and physical and healthy life style studies (speed analysis, calories, heart rate).

**BLENDED-LEARNING APPROACH IN CAAD: PAST EXPERIENCE AND LITERATURE REVIEW FOR RD&T PROJECT MODULE ON ARCHITECTURAL REPRESENTATION AND COMMUNICATION FOCUSED IN TEACHING ARCHITECTURE AND ART**

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This paper is the result of a research project that began in 2007-2008 in the Faculty of Architecture of Porto University (FAUP), which had as aim to adopt a blended learning approach integrating the Centre for Spatial Communication and Representation (CCRE) (<http://web.ccre.arq.up.pt>) for teaching CAAD to students of the 3rd year. The objective is first to evaluate critically how the use of a collaborative platform can work as a catalyst for approaching the students and teachers towards the emergent problems of their city, public spaces and proposed design. Second, to understand how this technology has helped to create a new teacher/student interaction, making communication much easier and giving the students a more active role in the learning process. The paper begins with a short introduction of the program and pedagogical strategy in CAAD then describes the strategy and model applied in case study for teaching and the type of digital material and learning tools that were used. Finally the most significant results for each case study are discussed and a set of conclusions will be drawn in the light of last case study.

The results, besides other things, will try to highlight how the learning process that rises from the creative use of an open collaborative platform as CCRE with a blended learning approach strengthens the teacher's capacity to work as a team and helps to open the university to its city and people. Finally, these results are used to inform the first stage of I&DT project Digital Architectural Representation and Communication (DARC) that aims to create a software platform capable of fulfilling the needs of identified market areas directed to the creative industries, design communication and architecture. The focus here is to the diverse interactive computer visualization possibilities and interactive collaborative work for the E-Learning industries for Arts, Design and Architecture.

## A DELPHI STUDY ON THE COMPETENCIES OF 21<sup>ST</sup> CENTURY TEACHERS

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### Introduction

21<sup>st</sup> century society requires individuals to equip new skills and abilities for adapting economic, cultural, technological, and environmental shifts, and participating fully in today's and tomorrow's world. The teacher professional development in line with the societal needs for 21<sup>st</sup> century skill becomes more important than ever. Also, the goal of teacher professional development should be aligned with the competencies required for 21<sup>st</sup> century teachers who will teach 21<sup>st</sup> century learners. Fragmented and episodic workshops for teachers are no longer effective to meet the needs (US Department of Education, 2010). Therefore, in this study, researchers claim that the teacher competencies should be revisited and examined to provide directions for teacher professional development. As an initial attempt this study aims to identify general competencies requires for 21<sup>st</sup> century teachers in primary and secondary schools.

### Method

The design of the study incorporated the key features of a modified Delphi process (Keeney, McKenna, & Hasson, 2011). The first round of the Delphi in the study was replaced by a focus group meeting and behavioural event interviews. As a preliminary identification process a focus group meeting was conducted to discuss about essential abilities of 21<sup>st</sup> century teachers, and current states and future directions of education. Behavioural event interviews were also conducted to investigate the characteristics and behaviours of leading teachers. 6 teachers who were awarded as a 'Best Teacher' at elementary and secondary schools in Korea were selected for the interview. The researchers developed a list of potential factors in teacher competencies based on the results of the focus group meeting and behavioural event interviews, and literature reviews. The list was used to develop a survey questionnaire for the second round. The experts of the Delphi panel in Round 2 were asked to rate the importance of each competency and performance indicator on a 6 point Likert-type scale from 'very important' to 'unimportant', and state personal opinions for revision and improvement. Once returned, descriptive statistics for the group ratings were calculated and minor revisions on competency description were made based on the experts' suggestions. The level of consensus was set at IQR (interquartile range) $\leq 1$ . In Round 3, each Delphi panel expert receives a questionnaire that includes descriptive statistical information about how the group responded in the previous round. They were asked to review each item's ranking and their own judgments or to specify the reasons for remaining outside the consensus. Also, they were asked to re-rate the importance of the revised items. At this stage, it was decided that further ranking rounds would not be required. Twenty experts in education field were selected for the Delphi panel. Five experts among them participated in the preliminary identification process of the first round. All experts completed both Round 2 and 3, which indicated 100 % response rate.

### Results

As a result, 15 sub-competencies and 74 indicators were identified for the core competencies of 21<sup>st</sup> century teachers. The competencies were grouped into two categories: fundamentals and field practice. Among the suggested competencies, Rapport Building with Learners, Communication, Expertise in content, and Evaluation and Reflection received higher rank, meaning that the panel experts perceived they were important for 21<sup>st</sup> century teachers. Mean scores were above 5.00 except 2 competencies with lowest rank, Network Building and Performance Management. These competencies will prove very useful in redefining tasks and roles of teachers for present and future education, and setting clear objectives for their personal and professional development.

For further implications, the suggested competency should be elaborated as a diagnosis instrument of teacher competency. The diagnosis instrument can be used in assessing teachers' current competencies and discerning competencies need to develop and enhance. The competency set will be also refined and validated through the process of developing the instrument.

## THE PATHWAY TO INQUIRY-BASED TEACHING

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The objective of the three-year EU-project PATHWAY (2011-2013) with its 25 partner organisations is to set the pathway toward a standard-based approach to teaching science by inquiry. The project aims to (i) support the adoption of inquiry teaching by demonstrating ways to reduce the constraints presented by teachers and school organisations, (ii) demonstrate and disseminate methods and exemplary cases of both effective introduction of inquiry to science classrooms and professional development programmes, as well as to (iii) deliver a set of guidelines for the educational community to further explore and exploit the unique benefits of the proposed approach in science teaching. In this way, the project team facilitates the development of communities of practitioners of inquiry that will enable teachers to learn from each other.

The idea of teaching science by inquiry has a long history in science education. Inquiry based learning has been officially promoted as a pedagogy for improving science learning in many countries. Inquiry can be defined as “the intentional process of diagnosing problems, critiquing experiments, and distinguishing alternatives, planning investigations, researching conjectures, searching for information, constructing models, debating with peers, and forming coherent arguments”. It is often touted as a way to implement in schools the scientific method: “The crucial difference between current formulations of inquiry and the traditional ‘scientific method’ is the explicit recognition that inquiry is cyclic and nonlinear”. Inquiry learning has been previously classified as learning science as inquiry and by inquiry. Learning science as inquiry includes learning about the way in which the scientific endeavour progresses, and analyzing the inquiry process performed by others, sometimes using historical perspectives. Learning by inquiry, or learning “the abilities necessary to do scientific inquiry” involves the learner in raising research questions, generating a hypothesis, designing experiments to verify them, constructing and analyzing evidence-based arguments, recognizing alternative explanations, and communicating scientific arguments. Teaching science by inquiry, the report explains, requires imparting not only scientific information but also the abilities to do inquiry and, more deeply, an understanding of what scientific inquiry is about.

The project aims to add its contribution towards the improvement of the science teaching quality. The proposed approach is based on three main axes that could facilitate the uptake of IBSE: It a) proposes a standard-based approach to teaching science by inquiry that outlines instructional models that will help teachers to organise effectively their instruction, b) deploys a series of methods to motivate teachers to adopt inquiry based techniques and activities in their classrooms and c) offering access to a unique collection of open educational resources and teaching practices (linked with the science curricula) that have proven their efficiency and efficacy in promoting inquiry based education and that are expanding the limitations of classroom instruction. Such an approach enabling all stakeholders (teachers, teachers’ trainers, curriculum developers, policy-makers) to examine their own practices in the light of the best performing approaches that set the standards on what can be achieved and provides them with a unique tool to bring about improvements in their everyday practice. The PATHWAY consortium team collaborates closely with teachers to develop a set of support services which help teachers to implement the necessary changes, to develop the diagnostics and intervention skills necessary to best plan and then diffuse innovation in their own contexts. An effective training approach already provides the starting point for equipping teachers with the competences they need to act successfully as change agents, developing a language/ terminology necessary to describe the dynamics of change processes, and making them able to recognize different forms of resistance and addressing it in their own context. At the same time, it provides a common basis/experience for “connecting” teachers across schools, within and across national boundaries.

To begin shifting toward a more inquiry-oriented classroom, we consider five essential features: (i) learners engage in scientifically oriented questions; (ii) learners give priority to evidence in responding to questions; (iii) learners formulate explanations from evidence; (iv) learners connect explanations to scientific knowledge; (v) learners communicate and justify explanations.

(For further details, see proceedings EDEN 2012, Porto).

## **DIGITAL LITERACY IN THE EUROPEAN UNION: A CONTRIBUTION TO THE STATE-OF-THE-ART**

*Eliana Santana Lisboa, Clara Pereira Coutinho, University of Minho, Portugal*

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Digital Literacy is one of the skills needed to promote inclusion of people in the new social paradigm known as the Information Society. In the European case, inequalities in access to information are still noticeable and digital inclusion is still a subject of attention of the community policies authorities. In this communication we will start by examining the concept of literacy, and then we will discuss the concept of digital literacy which is not synonymous with technological equipping. It is much more than this, i.e., it is about knowing to take advantage of the potential of information and communication technologies to form a responsible citizen in the twenty-first century, a citizen that is aware of the fact that digital inclusion is essential to promote the principles of lifelong learning in society.



## **FUTURE CHALLENGES FOR ELECTRONIC PERFORMANCE SUPPORT SYSTEMS TO FACILITATE LIFELONG LEARNING OF BOTH DIGITAL NATIVE AND DIGITAL IMMIGRANT ADULTS IN THE SAME WORK SETTINGS**

*Muhterem Dindar, Mehmet Kesim, Anadolu University, Turkey*

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We are living in a century where knowledge is growing exponentially. Information itself is a product of economies and being traded every day. Competencies, skills and requirements in work and organizational societies are changing more rapidly than they ever have in the past. Additionally, the world population is becoming older and economies of developed and developing countries will depend on their adults and mature adults in future. People are expected to adapt themselves to these swift changes in knowledge. Moreover they have to update and improve their job skills and abilities to keep adding value to their economy.

There are new learning theories emerging to help people in coping with the issues aforementioned above. "The Connectivist approach to these changes provide us with a better understanding of what is changing, why it is changing, and how we can keep up with the change" (Kesim, 2008). In light of the Connectivism Theory, lifelong learning programmes are necessary to guarantee the continuous improvement of individuals. HPT is the new area of study dealing with the performance improvement issues of adults in work settings and offers both instructional and non-instructional methods to solve performance problems.

Electronic Performance Support Systems (EPSSs) have become common in complex work environments after the emergence of HPT. EPSSs – if designed well – are powerful systems to support workers at the right time, with the right amount of information without the help of others. With their distinct features such as providing on-the-job learning, in future they can effectively be used to secure the lifelong learning or training of working adults.

However there are two big challenges to fulfil this duty. The first challenge is that EPSSs should be designed to fill the technological literacy gap between digital immigrants and digital natives who are present in the same working environments now. Embedding systems which present the same content with different strategies and interfaces such as Intelligent tutoring Systems (ITs) would be a good way to empower EPSSs as learning ecologies. The second challenge is the flexibility, time and cost efficiency issue of creating learning contents for EPSSs. Learning objects (LOs) are increasingly being used in e-learning environments to create learning content. It is expected that the addition of LOs in EPSSs will have great advantages in the design and implementation of the learning content of EPSSs.

To conclude, with their distinctive tools EPSSs are offering decentralized and individualised learning opportunities for organizations to improve performance of their members. In future, empowering EPSSs with systems like ITs and using LOs in producing reusable learning contents for EPSSs would be a good solution to facilitate lifelong learning of both digital native and digital immigrant members of complex organizations.

## **COMPUTER SCIENCE TEACHING CERTIFICATE VIA DISTANCE LEARNING: CAREER RETRAINING AND FURTHER EDUCATION**

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### **Introduction**

The entire world is focusing on the establishment of life long education enabling career retraining and further education. The Open University of Israel (OUI) offers a program of study for Computer Science (CS) graduates towards a high school Teaching Certificate in CS. The CS Teaching Certificate Program has two main goals: preparation of CS educators and professional career retraining. There are many CS professionals employed in the high-tech industry who feel insecure in their workplace and therefore want to prepare an alternative career as CS educators. The distance learning, self-study and flexible study load practiced at the OUI is especially suited for students who want to pursue the CS Teaching Certificate Program in parallel with their current employment and other responsibilities. The program consists of two components: courses and practical training. Some of the courses are in CS and others in education and pedagogy. In the paper we describe the CS Teaching Certificate Curriculum.

### **The study**

The data presented in the paper is based on the data of 96 past and present students who were or are enrolled in the CS Certificate Program. We present some statistics regarding the program, such as: the number of students enrolled in the program, age and gender distribution. In addition, we conducted a study including a questionnaire which was emailed to all past and present students in the program. The questionnaire included questions involving reasons for selecting to study towards the CS Teaching certificate, current teaching positions, attitudes toward the program, etc.

### **Discussion**

Most of the students (77 %) took 3 years and more to complete their studies. This is not surprising because the students usually combine their studies with family and career obligations. The average number of CS Teaching Certificate graduates is about four to five per year. The small number is due to the fact that the majority of people who wish to take on an educational career do so through teaching colleges which provide B.Ed. degrees while our program is intended for those who already have an undergraduate degree in CS or related field and wish to retrain towards education.

We found that the percentage of female students in the Program is 65 % while the percentage of females enrolled in the undergraduate CS programs at the OUI is 20 %. This difference can be explained by the fact that a teaching career is much more attractive for females than a high-tech career. We found that the average age of the females (29.9) when starting the program was significantly lower than the average age of the males (33.3). At this age, it is common for Israeli females to raise families and it is more difficult for them to work in the high-tech industry and therefore they select to retrain towards a teaching career. We also found that the females' grade point average was higher than the males' grade point average, although this difference was not found to be significant.

From the questionnaires we found that 62 % of the respondents started the program after working for at least one year in a variety of CS related jobs. All these students tried a professional CS career and then decided to shift to a new career. Most of them indicated that they were interested in working in education. All of the respondents indicated that the distance education method of study suited them because it enables to combine studying with their other obligations, studying from home and selecting flexible workload of courses.

To conclude, we found that about 70 % of the respondents are currently working as CS teachers, and 82 % of them claimed that the program was beneficial or very beneficial.

## **ASSURING BEST PRACTICE IN TECHNOLOGY-ENHANCED LEARNING ENVIRONMENTS**

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Natasha Hard, Charles Sturt University, Australia*

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### **Introduction**

This paper describes the outcomes of a meta-analysis of 33 projects focussed on technology-enhanced learning and teaching funded by the Australian Learning and Teaching Council. Our approach to the development of the commissioned *Good Practice Report: Technology-enhanced Learning and Teaching* (Keppell, Suddaby, Hard, 2011) involved a meta-analysis of the 33 projects to determine best practice. We initially developed a matrix for the comparison of projects as well as a means to thematically analyse the 33 projects. The analysis determined ten outcomes that represent best practice for technology-enhanced learning and teaching. A subsequent phase involved subsuming each of the projects under relevant outcomes. Projects that traversed multiple outcomes were considered exemplary projects. This paper will discuss the ten outcomes of the project and their implications for higher education.

### **Best Practice in Technology-Enhanced Learning and Teaching**

The ten outcomes represent the predominant themes related to best practice that surfaced from the analysis of the 33 two-year multi-institution projects. The outcomes comprise:

1. A focus on learning design allows academics to model and share good practice in learning and teaching
2. Authentic learning provides a means of engaging students through all aspects of curricula, subjects, activities and assessment
3. Successful academic development focuses on engaging academics over sustained periods of time through action learning cycles and the provision of leadership development opportunities
4. Engaging teaching approaches are key to student learning
5. Technology-enhanced assessment provides flexible approaches for academics to provide feedback to students
6. Integrating technology-enhanced learning and teaching strategies across curriculum, subjects, activities and assessment results in major benefits to the discipline
7. Knowledge and resource sharing are central to a vibrant community of practice
8. Academics require sophisticated online teaching strategies to effectively teach in technology-enhanced higher education environments
9. Academics need a knowledge of multi-literacies to teach effectively in contemporary technology-enhanced higher education
10. Exemplar projects focused on multiple outcomes across curricula integration, sustainable initiatives, academic development and community engagement.

The analyses of the 33 ALTC technology-enhanced learning projects have identified a number of inspiring approaches and pedagogies that have informed or been developed through the projects. In analysing the projects and investigating the literature, we concluded that there was a range of conditions and factors which contributed to successful project outcomes addressing one or more of the overarching values and principles of: excellence, sustainability, inclusiveness, diversity, and collaboration as articulated by the ALTC. These factors led to the development of a set of recommendations representing a framework for success for implementing technology-enhanced learning initiatives. The recommendations reflect the underlying pedagogies implicit in the projects as noted above. They also reflect the explicit outcomes of the projects.

## INVESTIGATING THE EFFECTS OF LEARNING MANAGEMENT SYSTEMS ON STUDENT AND FACULTY OUTCOMES

*Beth Rubin, Ron Fernandes, Maria D. Avgerinou, DePaul University, United States of America*

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### Research Study Overview

This ongoing study examines affordances of two different Learning Management Systems (LMSs) and their effects on faculty and student satisfaction and the elements of the Community of Inquiry (CoI): social presence, teaching presence, and cognitive presence (Garrison, Anderson & Archer, 2000). In this presentation, we shall share the initial results of the study. Although still ongoing, initial findings describe faculty perceptions of different affordances of these tools leading to different support for effective and efficient teaching, the effects of faculty tool use on student satisfaction and CoI, and the effects of student satisfaction with the LMS on satisfaction with the course.

In many fully online courses, all instruction takes place through the mediation of the LMS (e.g., Blackboard). Coursework is organized and paced, learning resources are accessed, work is shared and feedback is delivered through the system (Lohr, 2000). An effective LMS must support active engagement, access to elements of the course, communication, and the provision of formative and summative feedback. Actions that are made easy by the system are more likely to occur, while those that have barriers are less likely to.

An integrated multi-step study was designed to assess impact of the affordances of the LMS, and resulting structures and tools used by faculty, on faculty and student perceptions of social presence, teaching presence, cognitive presence and satisfaction (Rubin, Fernandes, Avgerinou, & Moore, 2010). The study was conducted in four colleges within a large private University in the United States. The university used the Blackboard LMS; an alternative LMS, Desire2Learn (D2L), was obtained and faculty were invited to participate in the study.

We found that faculty prefer teaching online courses in an LMS that they perceive to have more tools that support communication, feedback and integrated course content. However, even when provided instruction and support, faculty vary widely in their use of teaching tools to communicate and provide feedback. Initial comparisons across different courses and different instructors did not find a significant difference between the satisfaction of Community of Inquiry experienced by students taking online classes in two different LMSs. However, these comparisons included different faculty and different courses; the effect of instructional style and course design are known to be significant. For example, using an LMS that makes feedback easy will not modify the behaviour of faculty who are disinclined to provide regular feedback. However, when faculty are inclined to provide feedback, an LMS that facilitates the process should lead to more feedback.

The study also provided evidence that the technology used to teach does affect outcomes. First, faculty use of teaching tools had a significant effect on student satisfaction, teaching presence and cognitive presence, such that faculty who used more tools had more satisfied students who engaged with the concepts and felt the teacher was more supportive of their learning. In addition, student satisfaction with the tools had a significant effect on satisfaction with the course, independent of other critical factors. This supports the notion that further examination of the technology used to teach an online course is worthwhile, and the technology has a significant effect on students.

Since the submission of our proposal, the new LMS has been implemented across the university, and faculty have learned how to use it. As a result, we have continued with data collection since the summer of 2011. This next stage of the study has enabled direct comparisons of the same faculty teaching the same courses in two different platforms. As originally anticipated, controlling for course and instructor has indeed allowed a strong assessment of the effect of the LMS affordances on learning outcomes.

## COMPETENCE MODELLING FOR LIFELONG LEARNERS

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“An agenda for new skills and jobs” to modernise labour markets and empower people by developing their skills throughout the lifecycle is one of the seven flagship initiatives of the strategic framework for the European Digital Agenda (DAE) and core focus of the long-term framework for the European cooperation in education and training (ET 2020). The on-going development and management of knowledge, skills and competences at the individual and organisational level is therefore set as a clear priority and challenge for the EU and its Member States, for vocational education and training, for companies, employees and learners. The presentation, the sharing and re-use of skills and competence information is an important and necessary step towards outcome-based education and training, which ensures higher transparency, mobility and employability of European lifelong learners. To achieve the ambitious targets to increase labour participation as well as labour mobility and better match labour supply and demand, competences, skills and learning outcomes for individual jobs, training and employment opportunities have to be described: These definitions should be done in a harmonized and standardized way.

To facilitate a better relationship between the professional and work life, skills and competence needs and their implication in vocational education and training have to be identified and anticipated. Competence Modelling is getting more and more crucial not only for business success but also for the European society and citizens. It will become an integrated part of both organizational and individual lifelong learning strategy (cf. Stracke, 2006 & 2011). The current challenges are to address learning outcomes and competences (and their modelling) within the frameworks of national and regional education systems and regulations focused by the European standardization committee CEN TC 353.

Thanks to the Bologna declaration learning outcomes and competences are already integrated in Higher Education, but just at the beginning in Vocational Education and Training (VET). Therefore European projects in the VET field like AGRICOM, ARISTOTELE, COMPATeGov, eCOTOOL, SIMBASE and WACOM are most important for the promotion and sustainable establishment of Competence Modelling: A first comprehensive competence model for the water resources management was developed by the WACOM Project ([www.wacom-project.eu](http://www.wacom-project.eu)) and has built the core input for the integration of competences in the EU policies EQF and Europass and for the development of the appropriate e-competences tools by the eCOTOOL project ([www.ecompetence.eu](http://www.ecompetence.eu)).

Competence Models can offer a wide versatility in many purposes. They are developed to lighten and accelerate processes. The development of competence models is still in the fledgling stages, but on a rising path. To mention is that a large demand exists on the part of the economy that considers the field of competence modelling as one of the most important challenges in the future of human resource development. An urgent need to standardise competence modelling exists since no activities have been undertaken for a generic competence model and the existing specifications and outlines thereof have only been approached in a technical manner.

In the following two influential and important European research consortia in the field of Competence Modelling are presented: AGRICOM for the agricultural sector and COMPATeGOV for the Public Sector. The European AGRICOM project ([www.agriculture-competences.eu](http://www.agriculture-competences.eu)) advances the development of competence modelling in Europe through its application to one of the most important European vocational areas – the agricultural sector and in particular the fields related with the unitization of the water resources in irrigation, hydroponics and other agricultural fields whereas the COMPATeGov Competence Model ([www.compategov.eu](http://www.compategov.eu)) provides the first competence model for the European Public Sector in the field of e-government. The main products of AGRICOM and COMPATeGov are the Competence Model for the specific sector. A complete list of the core competences for each specific sector directly related to the requirements and needs of the sector, the working places and job profiles will be provided including templates for the application and adaption by each sector.

Competence Modelling is crucial for the success of lifelong learning, education and training. At the international level the development of an international ISO standard for a competency general framework has been started in SC36 (cf. ISO/IEC 20006-1). In a long-term view, a general EU framework for Competence Modelling needs to be established for all sectors of Lifelong Learning: to integrate competence modelling into employment, business and Human Resource Development (HRD) in enterprises, into all types of learning, education and training and into the European policies for the sustainable benefits of the European enterprises, public authorities, institutions and learning providers as well as of the European society, market and finally all European citizens and learners.

## **A RESPONSE TO DIVERSITY – MODELLING A NEW PEDAGOGICAL APPROACH TO FACILITATION**

*Janet Macdonald, Independent HE consultant, Anne Campbell, Open University in Scotland, United Kingdom*

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If Higher Education is to meet the needs of its learners, then it needs to be responsive to diversity, which may include different generations of students, or indeed a wide range of other factors. Arguably, to be cost effective, flexibility must lie in the approach to facilitation rather than the content which is often produced for use at scale. This focus is particularly important for campus based institutions which are adopting blended approaches, where the planning of facilitation is less common practice than it is in distance institutions.

This paper describes the production of an online professional development resource for tutors who were learning to facilitate online. Its development prompted us to revisit the processes involved in tutor facilitation and to model a systematic approach to the design of facilitation which focuses on students' understanding of, or difficulties with course content, by making use of Troublesome Knowledge and Threshold Concepts. We found that staff appreciated this systematic approach, not only in identifying points in the course likely to require facilitation, but also in determining the aims and nature of the intervention. We believe this is a profitable approach for designing tutor facilitation to meet a diversity of needs.

There would seem to be a ready application for any online or blended course where university staff need ways of prioritising their time to provide the most appropriate support for students, particularly if they are able to work collaboratively with colleagues in developing an appropriate strategy.

## COMPETENCE DEVELOPMENT: FACE-TO-FACE VERSUS B-LEARNING ENVIRONMENTS

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The purpose of this study was to analyze and compare knowledge and skills acquisition in Virtual Learning Environments (VLEs) versus Face-to-Face Environments. This paper presents a very small part of a much larger study, conducted between 2008 and 2011 at the Polytechnic Institute of Leiria (IPL). This article describes two research objectives: 1) Check for transfer and/or acquisition of competences in VLEs and 2) Identify a form of measurement or quantification of the transfer knowledge and competences in VLEs. This is an exploratory study that begins by clarifying some concepts related to the development of competences, making a brief allusion to the changes imposed by the Bologna process. This is a recent reality in Portugal, existing only in two Higher Education Institutions, in the beginning of this research (in the academic year 2008/2009) – Universidade Aberta and IPL, where IPL has played an important role. The research strategy adopted was triangulation, by combining different research methods: quantitative and qualitative methods.

The decisive factor for determining the scope of the study was the implementation of four degrees in Open and Distance Learning (ODL) – b-learning by the IPL, and the existence of those degrees in Face-to-Face. Thus, it became possible to make comparisons between students who attend graduation in two modalities (Face-to-Face and b-learning) and the various systems (daytime and after-work). The degrees launched in distance education in the school year 2008/2009 were: Basic Education (BE), Mechanical Engineering (ME), Marketing (MK) and Tourism Marketing (TM). These degrees are distributed by the IPL three schools. The courses ME and TM run in the systems Face-to-Face in day time (FFD), Face-to-Face in evening (FFE) and in ODL and BE and MK in two systems FFD and ODL, resulting in a total of ten classes. In this research, qualitative data were collected between 2008 and 2009 and those figures are related to all students of the ten classes presented above, in the three school years. There are two specific types of quantitative data analysis. In June 2010, a questionnaire was carried out as well as biographical data and results of students' evaluations which were assigned by the Academic Services of the IPL in May 2011.

The results show that the acquisition and transfer of knowledge is completely consensual, but the question of competences is a little more controversial. Most of the interviewees agreed that it is possible to transfer competences in VLEs, but indicated that it is not always done. The majority of students has the perception that the ODL allows the acquisition of competences and admits that the mode in which there is greater acquisition of knowledge and competences is in the FFD. The suggestions to make more effective transfer of competences were: realistic activities, putting the students to do things, with practice, simulating the world of work through role-playing, i.e. by solving real problems. The type of competences to be developed should be of various kinds, depending on the technical area and should take into account the Dublin Descriptors, to include instrumental, interpersonal and systemic competences. With respect to the second objective of this investigation, the identification of a way of quantifying the transfer in knowledge and competences in VLEs, it was found that the method will depend on the type of activity involved. Most subjects in the assessment component include the development of practical work; therefore it is considered that the final mark will reflect, to some extent, the students' competences.

Through this study, we conclude that regardless of context (Face-to-Face environment, VLE, etc.), it is possible to acquire effective competences and this is similar in the different education systems, ODL, FFE and FFD. The context is just one of competing factors to success in learning. The evaluation results show that the ODL students are older, mostly female and mostly working students. The best means of assessment relate primarily to their personal characteristics (leadership and self-discipline). The competences that students perceived more developed are curiosity about the area and ODL students also considered to develop enough instrumental competences (technological, methodological and cognitive). The way to measure and quantify the students' competences must take into account the effective practical demonstration of their ability to do something and it is recommended the analysis in all its dimensions, as it is played in Dublin Descriptors. With the need for lifelong training and personal and professional commitments, the ODL is the most likely choice. Although it is a recent reality in Portugal and just little rooted, the ODL has a very flexible format, and after experiment, students revealed they enjoy the school system, recommend it and will repeat the experiment in the future. Therefore, there is a high probability of growth in ODL in the Portuguese universities.

## INNOVATION ALLIANCE

*Stina Meyer Larsen, Susanne Tellerup, University College Lillebaelt, Denmark*

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Project *Innovation Alliance* is designed and conducted in a partnership of six municipalities (Kolding, Vejle, Fredericia, Billund, Vejen, Middelfart), a higher education institution (University College Lillebaelt/UCL) and a NGO (TRIN). It arose from a strong need for new ways of documenting, sharing, studying and presenting knowledge and addresses some of the challenges related to Ambient Assisted Living (AAL) as a result of the demographic changes and the aging European population.

It is crucial that the students within the bachelor programs in social work and healthcare learn about and get involved in the implications, the challenges and the opportunities related to AAL. In Denmark, we do have a dual system, so all UCL-students participate in internships for more than six month. However, the students also have to work with authentic realistic problems in the more traditional parts of the education. Here, the Internet provides possibilities to deliver content of high relevancy, complexity, and quality.

*Innovation Alliance* illustrates how regional development and educational development can be connected within a partnership. It focuses on organizational knowledge creation, and how the innovative processes in work-life practice can be linked to Higher Education (HE) and the learning of students. Nonaka and Takeuchi's (1995) SECI-model provides a dynamic perspective on knowledge creation with focus on both individual and organizational processes.

In *Innovation Alliance*, it is demonstrated how web-based video-recordings can support knowledge creation in work-life and in HE. With a video-record some of the complexity of and the processes in everyday life can be captured, showed, studied and shared. So, video-records from innovation projects can provide authentic and meaningful examples to the traditional courses and enhance motivation and learning in the educational programs. Of course, it is not the video-record in itself that provide learning for the students. It is the way the students interact with the video-record that is important when video shall enhance learning.



## **I-SPACE – LEARNING BY DEVELOPING ACROSS ORGANIZATIONS, EDUCATIONS AND GENERATIONS**

*Karin Bryderup Jensen, Anna Maj Stride Geyti, Susanne Tellerup, University College Lillebaelt, Denmark*

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Project *I-Space* illustrates how University College Lillebaelt (UCL) works with learning by developing (LbD) to develop new technology, new work-processes, and new flexible learning environments across organizations. LbD is defined as an action model (Rajj, 2007) based on open learning labs (OLL) where professionals, citizens, researchers, lecturers, young students, students in postgraduate programs, educational and technical developers collaborate and learn from the activities, and the changes they generate in work-life.

Project *I-Space* is a research project designed and conducted in a partnership of two higher education institutions (HEI), four small and medium-sized enterprises (SME), two municipalities, and a non-governmental organization (NGO). University of Southern Denmark (SDU) is lead partner. The purpose of the project is to develop new technologies, which can enhance learning and motivation of mentally impaired adult citizens. So, *I-Space* is part of an overall regional strategic action related to ambient assisted living.

Firstly, the project is characterized by complex processes because more than nine different stakeholders and user-perspectives are involved.

Secondly, the three main user-groups: the mentally impaired adult citizens, the students from three different bachelor-programs, and the professional social workers interact in new ways with the aim to develop new technology and innovative processes. The collaboration illustrates how pedagogy and andragogy can be linked in new ways so that the approach turns out to be of high relevance and flexibility for the young students, the adult learners as well as for the involved citizens. The need for developing higher education to enhance life-long and life wide learning is increasingly important because of the globalized information society. The project illustrates how a heutagogical approach supports students for lifelong learning by providing the students with control of the learning plan and learning process.

Finally, the project shows the potentials of the collaboration between lecturers, consultants, and researchers across the new universities of applied science (UAS) in Denmark.

## **THE CHALLENGES FOR MATURE LIFE-LONG LEARNERS: INSIGHTS FROM VIDEO DIARIES OF FIRST-TIME DISTANCE STUDENTS**

*Mark Brown, Helen Hughes, Massey University, New Zealand, Natasha Hard, Mike Keppell, Liz Smith,  
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### **Introduction**

Distance Education has its roots in opening access and providing educational opportunities for diverse and geographically dispersed learners. The convenience and flexibility of distance education has historically provided an important pathway into higher education for mature life-long learners who often face significant issues in accessing such educational opportunities. However, in recent years the relatively low retention and completion rates of distance learners have come into sharp relief. Set against this backdrop the paper offers insights into the challenges of opening access to higher education through a research project investigating the experiences of first-time distance students.

### **Research design**

This research adopted a mixed methodology. The primary investigation had a strong phenomenological dimension where the experiences of first-time distance were recorded from their own point of view using video diaries for data collection. From a population of 750 potential participants enrolled for the first time at the beginning of Semester Two, 2011, 140 first-time distance learners volunteered to participate and a sample of twenty was purposively selected to broadly represent the demographic and geographic diversity of first-time distance learners.

### **Research findings**

The video diary data presents a unique window into the backgrounds, motivations and aspirations of twenty participants. In keeping with the social inclusion and life-long learning agenda the paper reports four case studies to illustrate how distance learning is not the 'easy option' or 'simple solution' for opening access to higher education. Indeed, the selected case studies show that for certain groups of students, distance education is not as flexible or convenient as much of the literature and institutional promotional material would have us believe.

### **Discussion**

Over the course of the semester the participants revealed 'in their own words' a complex web of motivating factors which influenced their decision to study by distance. It was apparent from their diaries that numerous predictable and unpredictable challenges created pressure on both time and mental energy that distracted from study. Although there were plentiful reports of good intentions, many of the participants lacked the cultural capital and strategic knowledge of how to be a successful distance learner. In this section, reflections relating to employment, family, technology and feedback from academic staff are discussed.

### **Conclusion**

From the 'stories' retold through these diaries, the flexibility and convenience of distance learning was perceived as a means of advancing personal and career goals whilst balancing other family and life commitments. However, 'in reality' the university experience was a struggle for these students as they grappled with internal motivations and external pressures. Albeit a small sample the findings show the importance of making explicit what is required to be a successful distance learner. Also support services for distance learners must be available at the point of need and be more deeply embedded in coursework if the potential of distance education is to be realized as an important vehicle for inclusion and life-long learning.

## LEARNING BY REMIXING: SUPPORTING THE DEVELOPMENT OF SCIENTIFIC MULTIMODAL LITERACY IN THE NEW MEDIA AGE

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Situated within the socio-constructivist perspective on teaching and learning, this paper is based on my doctoral study and draws on theories of multimodality, social semiotic, mediated discourse, new media and remix culture to investigate the strategies that learners use to create multimodal responses to academic problems using the web and how the learning outcome can be improved. The purpose of the study is to design, test and evaluate a “learning by remixing” pedagogical approach to support the students’ learning of scientific concepts and development of multimodal literacy practices within the scientific semiotic knowledge domain. And the aim is to develop a pedagogical model for learning by remixing which supports the students’ development of multimodal literacy for knowledge construction in the new media age. The study adopts Bannan-Ritland’s (2003) design experiment methodology – integrative learning design framework and uses a repeated measure design. First an informed exploration study (Bannan-Ritland, 2003) was conducted with 142 secondary school science and history students working in pairs from 7 schools to examine:

- What are the different approaches the students employ to find, evaluate and use web resources to problem solving and learn by remixing semiotic resources to create a digital artifact as their response to academic problem tasks?
- What kind of support do the students need in order to develop the skills and literacy in order to problem solve and learn by remixing semiotic web resources to create digital artifacts employing different semiotic resources as their response to academic problem tasks?

Qualitative video research techniques were used to collect and analyze the data. Multivariate statistics were used to identify 3 different student profiles: superficial engagers, seekers and evaluating constructors. And qualitative video methods were used to identify the support the students need to be able to learn by remixing. Based on the results from the informed exploration, an enactment and evaluation study (Bannan-Ritland, 2003) was conducted during one school semester in 7 schools. This study uses the data from one year 8 secondary school science class. A new learning environment was designed with teaching strategies, student support and learning activities. Using the semester syllabus the planned teaching was re-designed for four of the topics into four academic problem-solving tasks. The enactment and evaluation study examines:

- What strategies do the students use to find and select semiotic resources on the web to learn scientific concepts to construct knowledge?
- What strategies do the students use to remix sample semiotic resources from the web into their own interpretations and designs of meaning?
- What different configurations of designs of meaning do the students remix in their digital artifact as their response to the academic problems?

Qualitative video research techniques were used to collect and analyze data from eight learners working in pairs during four repeated learning tasks. The first and last task acted as comparison tasks in which the students were given no support. In task 2 and 3 various scaffolding was provided for the students while in task 4 all support were removed. Thus, it was expected that in task 4 they would be able to do such a learning task without support, which they managed to do within a normal lesson (45 min.).

This paper is based on a doctoral dissertation by publication with 4 articles. The study concludes by proposing a pedagogical model for learning by remixing to support the students’ development of multimodal literacy for knowledge building in the new media age. Since it is an ongoing study the results from the analysis of the data will be presented alongside the proposed learning by remixing model and presented in depth during the presentation at the conference.

## **INTERACTION EQUIVALENCY THEOREM AND DESIGN OF ONLINE COURSES – A PRELIMINARY RESEARCH PROPOSAL APPROACH**

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### **Introduction**

There are various conceptual frameworks concerning the concept of interaction. It is upon the interaction as an instructional exchange between four elements (student-content, student-teacher, student-student and student-interface) that this study focuses, more specifically in Anderson's "Interaction Equivalency Theorem" (2003), an extension of Moore's model, where other forms of interaction are identified and postulate, at its core, two hypothesis. 1) Deep and meaningful formal learning is supported as long as one of the three forms of interaction (student-teacher; student-student; student-content) is at a high level. The other two may be offered at minimal levels, or even eliminated, without degrading the educational experience; 2) High levels of more than one of these three modes will likely provide a more satisfying educational experience, although these experiences may not be as cost or time effective as less interactive learning sequences.

According to Miyazoe and Anderson (2010), the three published studies on the hypotheses of equivalency support the first thesis, whilst the second thesis is only partially supported. Given the importance of the Equiv Theorem and its theses for the design of online systems and courses, as well as for pedagogical practice, we consider it relevant to analyse and test the two theses in greater detail.

### **Research Proposal Context and Methodology**

This investigation takes place in a higher education virtual learning environment in a 2nd year course of a distance education undergraduate degree at the Universidade Aberta. The faculty members of this course consist of a leading teacher and three tutors. Each one will follow a different class, although the leading teacher will supervise the work of each tutor. In this study each class will have a different interaction setting so that we are able to test the two theses proposed by Anderson (2003).

The use of a mixed methodology of data collection and analysis is most adequate for this investigation. In terms of the methodological strategy, we will move towards transformative mixed methods procedures (Creswell, 2003). In this type of approach, we begin from a theory, in order to structure all the collection of data, with both qualitative and quantitative characteristics. Until this moment a questionnaire was applied to support the decision upon the learning scenarios settings.

### **Preliminary Results and Perspectives**

In one class we will have the subject structure intensely centred in student-teacher interaction with the other types of interaction at a low level; in the second class we will have a structure that is geared towards a strong student-content interaction with the others at low levels; finally, the last class will be design based on the responses of a questionnaire given to 96 students of the subject that will be intervened, but of the previous academic year to that of the intervention.

The results of the first questionnaire point to a greater importance, attributed by students, of the interaction with content and with the teacher and less relevance of the interaction with classmates. This data coincides with that obtained in previous studies on the Interaction Equivalency Theorem (Rhode, 2008; Miyazoe, 2009; Bernard et al., 2009) that focus on the importance given by students in the interaction with content and with teachers in online education context. Therefore the last class will have a structure intensely centred in student-content and student-teacher interaction.

With the results that will be found and conclusions to be drawn, this study intends to systematize relevant information based on the Interaction Equivalency Theorem, allowing the support of decisions related to the design of online courses.

## **THE COGNITIVE PARADIGM OF EDUCATION FOR THE INFORMATION SOCIETY: MODELS, COMPETENCES AND COGNITIVE GAPS**

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Nowadays, almost every human being and mankind as a whole live in the World of Information (Info-world) and de facto are already active information objects but they still do not think of themselves as such objects. This discrepancy ultimately leads to the gaps in addressing contemporary global challenges, comprising those in education. We interpret these gaps as cognitive ones. It is generally admitted that the main source of development and prosperity of the Information Society are informational (cognitive, creative and spiritual) activities; the main resource and wealth are knowledge, meanings and ideas; and their creator and storage media is an Informational (cognitive and creative) Subject. These features are particularly noticeable in a Knowledge-based Society and emerging Smart Society which we regard as new quality of the Information Society.

The conventional perceptions of themselves and of the world, the dominant models of the world and methodological tools turn inadequate to modern challenges. Existing perceptions should be reconsidered and it's necessary to form new models and new post-non-classical methodologies where human activities should be interpreted as the informational ones and, accordingly, to change the fundamentals and principles of activities. The fact is that the informational activities as such (which are broadly comprehended and comprise cognitive, creative and spiritual components) cannot be adequately described in classical and non-classical methodologies, since the informational activities are not reducible to any communicative or, specifically, to the objective activities. This is valid en bloc, and perhaps primarily for education.

The complete paper presents new post-non-classical methodology which, in particular, distinguishes the Subjects (as actors) of education, educational environment and educational content; considers actors of education ("Teacher" and "Student") as the Informational Subjects; and based on the concepts of informational activities of the Subject and their exemplifications.

This methodology allows forming the post-non-classical model of educational processes (PNC MEP) and its presenting in the form of a double upward spiral (called PNC MEP spiral) which binds 7 available basic educational paradigms (from imitation through learning to co-creation at the level of ideas) and describes each paradigm by the main characteristics: the roles of two Actors ("Teacher" and "Student"), parameters of common learning environment and field of achievable outcomes as well as nature of the actors' relationship of mutual influence and transformation of the Actors.

In the post-non-classical model, a "gap" is not only an inter-generational gap and not a substantial gap between the Subjects but mostly a gap in the characteristics of a Subject's knowledge. The cognitive gap is a mismatch between potential knowledge (content) and accessible knowledge which is resulted from the absorbing the meanings.

From this perspective, the problems of modern education should be classified as a cognitive gap. The nature of modern challenges in education is that they relate directly to a Subject and are not soluble in the paradigms presented at levels 1-4 of the PNC MEP spiral. Treating these problems as institutional (at the level of standardized environments) or, more over, methodical (normative) ones cannot lead towards the adequate solutions. The undertaken research allows drawing a conclusion: the Subjects of educational activities should themselves formulate a problem, make a choice of alternatives, take decisions and implement them within the paradigms at levels 5-7.

There are three interrelated ways of overcoming the cognitive gap in education:

- The Subjects to be transformed (to shift to another educational paradigm, namely to a higher level of the spiral),
- The educational environment to be altered towards creative one, and
- The educational content to be changed in quality (towards transition to education at the level of knowledge, meanings and ideas).

## **CHALLENGES FOR POLICIES, STRATEGIES AND LEADERSHIP IN AN INCREASINGLY MORE OPEN WORLD**

*Gard Titlestad, Nick Moe-Pryce, International Council for Open and Distance Learning (ICDE), Norway*

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### **The International Council for Open and Distance Education**

The International Council for Open and Distance Education (ICDE) is a non-governmental organization (NGO) with consultative partner status with UNESCO, and shares that agency's key aim – the attainment of quality education for all – as stated in the Declaration of Learner's Rights and Responsibilities (SelfDesign, 1996).

ICDE is the leading global membership organisation for open and distance learning, and is open to institutions, educational authorities, commercial actors, and individuals. ICDE members throughout the world have unique knowledge and experience in the development and use of new methodologies and emerging technologies in higher education.

*“Openness is the breath of life for education and research.” (Hylén, 2006)*

### **Trends and challenges for ODL**

Nine observed global trends, which also can be regarded as opportunities and challenges for ODL, are listed below:

- Easier access to higher education
- Learning workforce
- ICT access
- Economics of higher education
- Institutional developments and impact
- Quality
- Open educational resources – OER
- The learner
- Use of technology in learning

### **Policies, strategies and leadership**

The trends, opportunities and challenges observed above, many of which demonstrate rapid and diverse global growth, increase the pressure on the demand for relevant, firm policies by governments to facilitate a wanted development, but also the demand for firm strategies and strong leadership by higher education institutions, to develop high quality open and online higher education.

One could also observe that the private and public sectors, which demand relevant and timely knowledge supply, need to play an active role in future policies and strategies.

### **Conclusion**

The trends, opportunities and challenges for higher education and governments coming from a more open and online world, need to be met by a “Partnership for high quality open and online higher education”

## THE PUSH-PULL EFFECTS OF EDUCATIONAL POLICY, E-LEARNING AND THE EVOLUTION OF PLATFORMS AND DEVICES: REFLECTING ON TEN YEARS AT THE HELM IN A SMALL HIGHER EDUCATION INSTITUTION

*Jim Devine, DEVINE Policy / Projects / Innovation, Ireland*

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It is something of a paradox, as devices and connectivity have become affordable, reliable and deeply embedded in society at large that expected large-scale or systemic change in our educational systems is not yet evident. Why, if change is so visible in other domains, are our schools and higher education institutions so resilient in their adherence to traditional approaches? Have we under-delivered on the promise of increased flexibility? Why do so many young people and adults remain marginalised? Such anxieties are evident among European policy makers, captured for example among the priority action items in the Digital Agenda for Europe (2010-2020) and reflected across a number of European working groups, research groups and through countless innovation projects funded more in hope than expectation of finding a route to scale and sustainability.

How does this look from the other side? After more than ten years developing and delivering open and distance learning programmes in a university setting, the author had the opportunity of leading a small specialist higher education institution (IADT: Institute of Art, Design and Technology, Dun Laoghaire, Dublin) over a ten year period. In this paper he describes the paradox of everything changing and nothing changing, during period dominated by public policy goals that were constantly in tension and never in equilibrium.

There is a broad consensus among policy makers that attempts to resolve the 'iron triangle' dilemma of cost, quality and access rely to an increasing extent on the deployment of a panoply of technologies. There, however, agreement stops! Technology is never neutral and tensions about '*what technology*', '*for whom*' and '*for what*' are all too evident, mirroring the ebb and flow of sociological, pedagogical and managerial forces at play in every higher education institution. Bottom-up pull factors, grounded in emerging and innovative teaching and learning practices, can be found everywhere and many are well documented as case studies of good practice. Forces, when simultaneously acting top down and bottom up are, however, difficult if not impossible for leaders to resolve.

It is argued that the acid test of change, for better or for worse, is the lived experience of students. In an analysis, grounded in Rittel's concept of 'wicked problems', an institutional leadership perspective is explored, focusing on four mutually interacting factors that shape the student experience:

- Technology: the short innovation cycles of platforms and devices;
- Academic staff and departments as the gatekeepers of curriculum, (teaching, learning and assessment) and modalities of delivery;
- Evolving internal and external quality assurance regimes;
- Non/random design of physical learning spaces and virtual, online spaces.

The paper concludes that we are just completing the *first system-wide iteration* of institutional quality enhancement aligned with the embedding of eLearning, a process that has brought incremental improvements, but at a cost of unnecessary homogeneity. It goes on to suggest that the *second iteration*, now underway, must find a way to 'do better things', accommodating both systemic diversity and more personalised learning pathways; the future will no longer be primarily about incremental improvements.

## **OPEN LEARNING GROWTH: OVERCOMING THE EUROPEAN “AUSTERITY OR GROWTH” DILEMMA**

*Policy reflection paper by Professor Roberto Carneiro and Dr. Nikitas Kastis,  
Members of the Board of the MENON Network*

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The paper is referring to the broader challenges that the European societies and economies are facing, in the course of their painful transition to the post-industrial status and to a more coherent unification scheme, while experiencing a looming international financial crisis, and then, to which extent these challenges are related to the learning curve of the individuals and of these societies – as with collective experiences.

The authors claim that a sophisticated approach to education policy making, facilitating the re-invention of learning at the micro-, the community, the regional/national and at the European level, can provide a robust framework for collaboration between the various European stake-holders, including the state authorities and the European institutions, the national and regional actors, the communities of citizens and the other clusters of interests, a framework which will overcome the emerging dilemma as it regards the policy priority, i.e. whether we need to focus rather on austerity than on growth or vice versa.

This re-invention of learning can provide for (a) increased effectiveness and cost efficiency as it regards the running of social services infrastructure, the education systems included, and the implementation of cost effective and austerity compatible policies, as well as for (b) growth policies' enhancement, by maximizing the returns of investment through a set of sophisticated human capital development measures.

It is from the competitive blends of (top-down) education policies, matched with innovative bottom-up, community driven initiatives encompassing open learning experiences, ensuring transparency, multi-interoperabilities, good learning practice and the lifelong learning perspective, that the re-invention of learning will come. And it is this re-invention of learning, which will (a) drive towards increased effectiveness of education systems as well as towards cost efficiency in other public goods' sectors, especially in long periods of public spending cuts, and (b) provide for long-term sustainable growth, to manage for the minimum turning around period, from contraction and recession to growth and employment.

Finally, the paper claims that an “*open learning growth*” agenda, adopted at both regional, national and European level, will provide the foundations to reach coherency and maximum effectiveness for the innovation, smart growth and social inclusion targeting policies, thus successfully addressing austerity periods, with minimum defections, while speeding up the turning around point in severely hit by the crisis European societies – being either already under bail-out status or in the previous phase trying to avoid it.



**THE CAMBRIDGE CONFERENCE ON OPEN, DISTANCE AND E-LEARNING:  
PROFESSIONAL DEVELOPMENT ACROSS THE GENERATIONS**

*Anne Gaskell, The Open University, Roger Mills, St Edmund's College, University of Cambridge,  
Alan Tait, The Open University, United Kingdom*

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This paper sets out the history of the Cambridge International Conference on Open and Distance Learning, which ran from 1983-2011, and in association with the conference paper archive, to be launched at the EDEN Conference in 2012, offers a rich resource for study of professional development across the generations in that 25 year period. The paper sets out the range of topics examined over time, and suggests ways in which the archive can contribute to discussion about distance learning across generations.

## LEARNER CHARACTERISTICS IN ONLINE DISTANCE EDUCATION

*Joachim Stöter, Olaf Zawacki-Richter, Carl von Ossietzky University Oldenburg, Christine von Prümmer, FernUniversity Hagen, Germany*

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### **eLearning and Open Universities – Implications for Traditional Universities**

In the last ten years, eLearning and distance education have developed rapidly in the higher education sector. This development is enhanced by the growing importance of lifelong learning (LLL) and the change in characteristics and needs of diverse groups of students who slowly converge with the profile of non-traditional students (NTS) (cf. Alheit, Rheinländer & Watermann, 2008). In this situation the individual is challenged to actively create its biography, to reorganize its life reflectively and to continually learn, to orientate itself responsibly in the dynamically changing world (Henze & Kellner-Evers, 2009). Hence, LLL keeps emphasizing the following key competencies: self-directed, autonomous learning and the competency to reflect on the individual learning process and the individual biography (Kraul & Marotzki, 2002).

Universities should also open for non-traditional target groups to enable a “mass higher education”. Charles Wedemeyer (1981) emphasized the importance of open and distance learning for the access of non-traditional students. Worldwide there are over 49 open universities (Peters, 2008a) and universities can benefit from the experiences they made through the last years regarding the use of open and distance education (ODE). The following paper tries to reveal some aspects, which could be useful for universities to cope with the specific needs of different target groups, which will be tomorrow’s regular students.

### **Adult Open and Distance Education in Lifelong Learning and Profiles of Distance Learners**

The concept of LLL defines the frame in which these new target groups can be allocated. A definition of the of LLL was developed by Dave (1976) who suggests, that education is a process during the whole life span, which aims at the “... fullest possible development in different stages and domains of life” (Dave, 1976, p. 34). In order to strengthen time-scheduling and didactical flexibility, teaching and learning supported by new media can make an important contribution: “[Distance education] will be a powerful tool for supporting lifelong learning” (Daniel, 2005, p. IX). Peters (2008b) even views distance education as a predecessor of LLL and observes: “It promotes learning in the lifespan, advocates a new understanding of learning and enables students to become self-regulated autonomous learners. This is one of the reasons why distance education students will make good lifelong learners” (p. 232).

The widely common distinction between traditional, distance and nontraditional students (NTS) is getting vague (e.g. Teichler & Wolter, 2004; Kerres & Lahne, 2009) and right now there are not only more students, they are indeed more diverse than ever (e.g. Wolter, 2012; Guri-Rosenblit, 2011). In the meantime, traditional students develop similarities towards NTS in terms of everyday life commitments, for example 78.5 % of campus-based students have to work at least part time during the semester (Wilkesmann et al, 2012). Although there are differences in the composition of the student body in different countries and online distance learning (ODL) institutions, distance learners in the educational system share some characteristics, which set them apart from students in traditional higher education.

### **Conclusion**

If yesterday’s non-traditional students are the lifelong learners of today and tomorrow, this means a fundamental change of the universities’ target groups’ characteristics and needs. Alheit, Rheinländer & Wastermann (2008) come to the following conclusion: “Should this group [of non-traditional students] stay within the focus of education politics – [...] – it will become necessary to develop institutions of distance education modelled after the British Open University or the FernUniversität Hagen. [...]. The individualized ‘non-traditional student’ could become the regular profile of a future student [...]” (p. 599f.)

This being said, a further expansion of flexible, internet-based study programs for diverse target groups can be expected, especially in view of the developing international education market: “Distance education continues its advance from the margins to the epicentre of the knowledge and information age” (Beaudoin, 2006, p. 19). With universities facing a great demand for higher education, internet-based study programs can lead to an increase of alternatives and therefore afford opportunities for lifelong learners. The experiences of the open universities during the last 30 years serving the needs of NTS, which will be very similar to the new target groups, which will come to the universities in the future, can be very helpful to cope with the challenges, universities will face.

## **STUDENTS' AND TEACHERS' PERCEPTIONS OF AN INNOVATIVE BLENDED LEARNING ENVIRONMENT – CASE PORVOO CAMPUS**

*Kitte Marttinen, HAAGA-HELIA University of Applied Sciences, Teemu Patala, Context Learning, Elina Ketonen, Reijo Ruusunen, Kirsti Lonka, University of Helsinki, Finland*

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Porvoo Campus of HAAGA-HELIA University of Applied Sciences represents a highly innovative approach to blended learning design – it is a new and creative concept for learning, business and culture and a concept that integrates modern design of physical environments and cutting-edge learning technology. Porvoo Campus started its activities in January 2011 as a result of five years planning. When constructing and planning the new Campus it was realized that it is not possible to move into new learning premises with old ways of working. A new pedagogical approach, inquiry-based learning, was adapted on Porvoo Campus. The background of this approach is in the idea of investigative learning (Lonka & Ketonen, 2012). The new approach on Porvoo Campus also acknowledges the philosophy of open learning in an environment where educational resources are made available through digital tools and channels, and which encourages the whole learning community for sharing of knowledge and experiences.

The aim of this study is to explore how students and teachers perceive the new and innovative blended learning environment and do these perceptions differ from each other. On Porvoo Campus concept teachers and students are considered as equal learners. The inquiry-based learning approach and the new learning environment challenge all learners (Generation Y -learners as well as mature learners) to a joint learning and development process.

Another aim of this study is to find out how new learning technology on Porvoo Campus has impacted the learners and teachers. The ability to adapt to new technologies is expected to be better among students than among teachers. This assumption is based on the fact that most teachers in our schooling system have educated themselves during an era when the level of technology involvement in learning was not as high as it is today. Respectively, young student generations are more capable of processing information and adapting to new technologies than their predecessors (Prensky, 2001:1). They have grown into a digital world in which communication and working practises are continuously shaped by emerging technologies. However, as more and more technology is involved in our lives, our understanding about how to use it for learning increases too (Bruce, Patala & Pirttiahho, 2011:33).

An online questionnaire (Webropol) with open questions and statements was sent to all teachers and students on Campus. According to the results the experiences of the first year on Porvoo Campus were mostly positive and inspiring for both students and teachers. The environment was described as supportive for the new learning methods. The teachers agreed that they should use more the existing technology. They also expressed their wish to be better trained in the use of learning technology and social media. However, not only the teachers identified the need for further training in the use of learning technology. The students in their own answers mentioned often that the teachers themselves should learn more about how to use learning technology. Students who could be labelled as digital natives (Generation Y-learners) were more critical on their views of technology use on Porvoo Campus. The new digital learning environment LeaP was not in use when doing the research. However, the new LeaP system will be presented for the conference audience as an example of new digital learning environment for all generations.

Although contrary opinions between students and teachers were not found, the study revealed still a number of statistically significant differences between the generation Y-learners and the mature learners (teachers) in how they perceive the new learning environment. Teachers seemed to have more positive perceptions while students were generally more critical in such statements as teaching is student-centred, learning is collaborative, guidance of project work is well organized and that learning is work-life oriented. These differences reflect some of the most critical challenges for the future development of Porvoo Campus.

The new digital learning and cooperation platform LeaP will be used in all learning projects in the future. This is a great opportunity for teachers to implement technology that supports the learning processes and sharing of information and knowledge. All teachers should adapt the platform in their teaching processes, and thus cooperation between learners, teachers and work life shall improve. The philosophy of open learning and learning from each other – between and within the different generations of learners – can answer many of the challenges Porvoo Campus will face during the coming years.

## PERCEPTIONS OF PROGRESS: LEARNING ANALYTICS AND SOCIAL LEARNING BEHAVIOURS

*Deborah Everhart, Georgetown University, United States of America*

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This presentation provides context for an important problem to be further explored, how social interactions can be combined with learning analytics in ways that positively influence students' perceptions of progress and lead to more authentic learning experiences.

Learning analytics can help learners visualize goals, progress, and achievements in ways that positively influence the development of communities. This presentation provides multi-disciplinary perspectives on analytics and social learning, applying research on social exchange theory to how learners become self-aware, allocate their attention, and develop collaborative behaviours.

Achieving value from analytics is not dependent on large institutional initiatives; it can be fast-tracked by providing social contexts, such as badge and reputation frameworks, that leverage common human tendencies toward goal achievement and peer recognition, without necessarily providing complex technology solutions. Participants will visualize the value of combining analytics with social contexts.

This presentation emerges from three projects:

1. University of Maryland, Baltimore County's learning analytics tools allow students to compare their activity and grades to class averages, making students more aware of their time on task and its impact on grades. Exposure to learning analytics is a powerful motivator that allows them to make comparisons with their peers' behaviour and make better-informed decisions about how to use their limited time.
2. Research at Georgetown University is applying social exchange theory to how people allocate their attention, based on the premise that the time and effort it takes to develop trust and learn how to cooperate are balanced against the benefits of acceptance, support, and shared outcomes.
3. The Mozilla Open Badges initiative provides a framework for the assessment of skills, recognition of learning, and development of reputation in learning communities. In students' worlds of numerous information streams, goal visualization can be extremely important for motivation and focused attention. The badges framework defines badges that represent accomplishments, methods for peer and mentor assessment, badge endorsement by experts and authorities, badge display as part of learners' identities, and the use of badges to evaluate learners for employment, education, and other opportunities. In this "connected learning ecology", the value of the badges is derived from their social context, including who grants, who receives, and who recognizes these badges.

In this presentation, participants will gain a multi-disciplinary understanding of the dialogue between learning analytics and social learning. Participants will leave with a concrete understanding of how specific technologies *available today* can be leveraged to help learners understand their progress toward goals and improve learning. Perhaps most importantly, participants will have new perspectives for examining the practices at their own institutions, the intrinsic motivations of learners, and the power of learning communities to bridge technological and pedagogical gaps.

## **DOES FAMILIARITY BREED CONTEMPT? EXAMINING DISTANCE LEARNING STUDENTS' PERCEPTIONS**

*Dale Kirby, Memorial University of Newfoundland, Canada, Michael K. Barbour, Wayne State University, United States of America, Dennis B. Sharpe, Memorial University of Newfoundland, Canada*

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The use of distance education and online learning for the delivery of post-secondary education are growing substantially and becoming part of the long-term strategy of many institutions. Results of several meta-analyses and other research of factors affecting distance education student satisfaction conducted over the last decade suggest that student success is impacted by environmental, technical and personal attribute factors. Some of this research also suggests that the majority of distance education students show a slight preference for face-to-face learning environments.

The purpose of this study was to investigate post-secondary students' perceptions of, and preferences for, distance education learning environments, specifically to determine if there were any relationships between the number of university distance courses completed and students' perceptions, preferences, expectations, and satisfaction levels. A total of 160 fourth-year undergraduate students at Memorial University of Newfoundland, Canada were included in the study sample. Each of these students had completed at least one distance education course at the university between 2006 and 2010. Of those in the sample, 127 were contacted and surveyed for a response rate of almost 80 percent. The survey contained a number of multi-item scales representing latent constructs. A series of one-way analyses of variance were conducted to compare composite scores for participants who completed fewer than the average number of university distance courses with students who had completed more than the average number of distance courses.

The average number of distance education courses completed by students in the sample was 3.35, with a standard deviation of 2.78. With only one exception, that being the "self-evaluation" variable, the mean scores for each of the survey constructs were somewhat lower for students who completed a larger than the average number of distance courses. The ANOVA results indicated no differences between students who completed a lesser or greater than average number of distance courses in terms of the composite variables related to self-regulation, self-evaluation, environment structuring, time management, and student perceptions of distance course communication and collaboration. There were, however, significant differences between the comparison groups for the remaining four composite variables: students who had taken fewer distance education courses were more satisfied with their distance education experience, had greater expectations for distance courses, were more likely to set out goals for their distance courses, and also reported higher levels of self-efficacy. A possible explanation for this may be found in the reasons why students enrolled in distance education courses.

It should also be noted that in each of our previous studies with this group of students, some aspect of their secondary school distance learning experience has proven statistically significant. However, with this particular investigation there were no statistically significant differences found when the students' overall data were analyzed or when that data was controlled for the average number of university distance courses completed.

In summary, the shift towards more online distance education is not just an American, or even North American phenomenon. If universities are shifting to offering more courses at a distance, and students' satisfaction with their distance education experiences is declining, post-secondary institutions need to examine their students' expectations – along with the way in which their distance education offerings are designed, delivered and supported. However, we should note that this was a single study conducted at a single university. Our findings that the more distance education courses a student completes, the lower their self-efficacy, the less likely they are to set out goals, and the lower the expectations they have for their distance education course is important, at least for the specific institution involved. The results of this study should give that institution cause for reflection. Other institutions would be well advised to collect their own data before assuming that similar results would be found in their own situation. We would therefore recommend that researchers replicate this study in other contexts, but particularly in public institutions where distance education is supplemental to the university's normal face-to-face instructional mission. Institutions of this nature would allow for better comparisons with the results presented in this study.

## **PODCASTING – CLOSING GAPS BETWEEN LEARNING AND TECHNOLOGY**

*Cristina Almeida Aguiar, Universidade do Minho, Portugal*

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Education is facing great challenges nowadays. Higher education in particular is experiencing huge changes, opening its doors to a whole new public. Lifelong learning programmes try to attract people with non-traditional academic profiles, often elderly and with some sort of professional experience. These new learners reveal interests, ambitions, expectations and behaviours that are enormously different from the ones displayed by the “habitual” students of such institutions, being necessary to avoid their exclusion, marginalization and abandonment. It is urgent to remove educational, cultural and technological obstacles to close the gaps between these different generations of learners.

On the other hand, learning today needs to be challenging. Learning needs to adapt to a new generation of “digital native” students but learning needs also to be flexible. Access to educational resources should ideally be possible wherever and whenever wanted by the users, according to their needs, wills and paces. The inclusion of technology in this context seems to be particularly promising due to the portability and mobility it offers and because it has been shown that its pedagogical use can be a strong motivational factor, a tool that facilitates and promotes students engagement. Though, there is still the need to evaluate and consolidate such results at a didactic and pedagogical level.

Podcasts are digital audio media files that are delivered through the Internet and that can be downloaded to a computer or to mobile devices. Besides the audio component, podcasts can also integrate video (vidcasts), combine pictures and still images (enhanced podcasts) or add captured images from a screen (screencasts). More recently, a new category is being proposed: the pencasts, an audio record combined with a PDF file, which is visualized as being “written” at the same time the audio record is listened. Students can be attracted by the format, not only due to its portability and availability (ready to use in any (free) time) but also because functionalities such as stop, start, replay pause, forward or skip allow users’ control of the pace.

This work reports the use of podcasts in higher education and concerns the episodes created in 2009/2010 for Genetics and Evolution, a course of the Master in Psychology of Universidade do Minho, and the evaluation of its acceptance by the students enrolled in that cycle of studies. The experience was conducted with three main objectives: (i) to introduce podcasts as pedagogical tools in a new course; (ii) to explore different podcasts types, length and purposes in the teaching/ learning process and (iii) to evaluate students’ receptiveness to this pedagogical use of podcasts. The results herein presented together with the ones that have been obtained in similar studies (1-3) show that students consider podcasts implementation in higher education a clearly positive initiative and they show acceptance of this new tool as well as receptiveness to its use in other courses.

## **DESIGNING SUSTAINABLE ONLINE EDUCATION ENVIRONMENTS: A DEPARTMENT PERSPECTIVE**

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The research on online education has been extensive and given insightful knowledge about the role and experience of the teacher, the student and the course design. Nevertheless, the research on online education seen from a Departmental perspective is more limited in its scope. The research in the field identifies, however, a couple of factors related to successful implementation. Hillman and Corkery (2010) suggest that a solid infrastructure is necessary for online educational programmes such as the online learning system environment. In this article we contribute to previous research regarding online education from a Department perspective by describing and analysing the development and implementation of an online learning environment, supporting online students, teachers and administrators at the Department of education. The aim is to focus on the online education environment and its relation to developing sustainable online education at a Department. The article takes into account the experiences of the operations and practice behind the development of an online environment and highlights the development process; from an initial pilot course 2005 to a battery of online courses. The description and analysis in this article derives from data collected from the learning environment (Moodle) between 2005 and 2010 and from focus group interviews with ICT educationists, administrators and teachers involved in the online education. The collected data from Moodle (general courses in pedagogy) has been categorised according to communication and interaction possibilities, forms of distribution, administration of courses and user interface design issues. The Department had previously used First Class but was replaced in 2005 with Moodle administrated at the department (in-house solution).

The results from this study show that the online environment for all courses in general education; serving 100's of students at the Department was developed during a short period of time. The pilot course of 2005 was simple and had a clean structure. The communication with the students was carried out via discussion forums in Moodle. The course material was textual. During 2006 more courses started to use Moodle. The course material was, although textual communication was foremost used, also distributed via PowerPoint slides, movie file lectures and audio files. In 2007 the forum structure changed to be more course-specific than before. The course material was distributed via text files, streamed lectures, power point slides and audio files. As a result of the increased student population between 2007 and 2008 standardization of forums in the courses evolved. In the teaching recorded/streamed lectures and audio lectures were used in higher extent than previously. 2005-2007 the student registration was done through a web form which created a mail that went to the study administrator. To make it easier for the study administrative staff to handle all students a tool for registering students was developed in 2008. The developed tool for registration in Moodle has made it easier to administrate several hundreds of online students. To manage the increased student population a tool was developed that compiles the grades that the teachers report for the students in Moodle (earlier the teacher reported it to the study administrator by e-mail or on paper). In 2005, 2006 and 2007 no actual design was applied. The inbuilt Moodle interface was used but was gradually replaced. In the autumn of 2008 labels were started to be used in the courses to structure the information and to avoid scrolling. In the spring of 2009 the design was standardized for all courses and at the same time we also began to use more pictures on the Moodle interface.

In conclusion, the experiences show that the tight connection between the teachers, the administrators and ICT educationists has been a key factor for the establishment of the online learning environment. Likewise, Lawler (2011) found in his case study that *"...having valuable and credible LMS staff was more relevant to the implementation's success than the adherence to the structures of traditional project management."* (p. 1117). The ICT educationists at the department have closely worked with the teachers and study administrators to understand the needs of the users in order to establish an online environment that both is easy to work with and reduce the workload, for example by using templates and standardization. The solution to own the technology and cooperation between different functions, as teachers, administrators and ICT-educationists, has been a prerequisite for establishing a sustainable high quality online environment serving 100's of students.

## **READINESS OF STUDENTS TO USE MOBILE TECHNOLOGIES FOR LEARNING AT EURASIAN NATIONAL UNIVERSITY**

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The process of e-learning implementation at universities of Kazakhstan increased significantly in recent years. This process not only depends on the use of new technologies and equipment in teaching, but also due to the necessity of improving access to educational resources for students. Over the past few years, Kazakhstan has a good opportunity for development of mobile technologies, including the wide spread of mobile Internet. Process of mobile learning implementation depends on development of electronic learning at Kazakhstan universities. Many Kazakhstani scientists study the using of information technology in education.

We have prepared a paper based questionnaire. This questionnaire included two closed-ended question and eight open-ended questions. We conducted a survey in an anonymous form. The purpose of this survey was to investigate students' readiness to implement of mobile learning at Eurasian National University (ENU). We tried to interview students to find out their opinions about mobile learning. In most cases, the successful implementation of mobile learning at universities depends on the attitudes of students. In our study, we attempted to determine the technical and pedagogical conditions for the successful organization of mobile learning. For this aim, we have compiled a students' questionnaire to reflect the readiness to use mobile technology in educational process. The participants in this survey were 100 students from 7 different faculties (63 female, 63 %) at Eurasian National University in Astana. Students were in two age groups (97 % under 21; 3 % from 22 to 31) and they defined 8 different specialities. The survey was conducted in the period 8-16 of September, 2011.

The results of student survey have shown us that the most common mobile device is a mobile phone. This is due to the fact that mobile phone has a rich functionality and affordable prices, depending on the models. Therefore, the using of mobile phone for learning has a stable future. Also students use a mobile phone in any free time, so we assume that students are constantly using it all day long (permanently). In case to create an enabling environment (such as continued access to educational information online and offline), learning with a mobile phone is carried out without any time limits. However, we also found that students are increasingly using mobile phone at home (indoor) than outdoor. We assume that students fill out a mobile phone by multimedia content at home. Then students use mobiles for viewing and listening of downloaded content (music, video) and for communication (phone calls, messaging, Web browsing).

According to survey data the most commonly used mobile application is mobile instant messenger. It should be noted that mobile instant messaging is very widespread in Kazakhstan; especially on a mobile platform Symbian (it needs GPRS-connection). The using of instant messaging service for mobile learning has great communicative potential for all participants of the educational process. As we expected the most commonly used wireless connections turned out Bluetooth and Wi-Fi. We assume that Bluetooth is often used for transfer different types of files from a mobile phone to another one (especially for a video and audio content). At the same time the use of Wi-Fi is limited, mainly for mobile Internet traffic (Web browsing, downloading content, social networks). This type of communication is mainly used at University and in other Wi-Fi access places (cafes and malls).

Obviously students very often use Short Message System (SMS). According to survey results most of the students send from 1 to 5 messages per day. We identified that SMS remains the most preferred method for communication among students, rather than phone call. This is because sending SMS costs significantly cheaper than phone call. It was very important for our study to determine the common types of files that are transferred by students between their mobiles. The data show that these files are an audio and video. We can argue that students have experience in transferring these types of file, and they have suitable mobile phones for watching video and listening audio. These formats are very appropriate for deliver mobile learning content.

Most of the students, as expected, do not have any problems in using a mobile phone. This is primarily due to the fact that students participating in the survey were younger than 21. This generation of students has good mobile communication skills. We found also that students in most cases have not ever heard about using mobile technologies in education. Nevertheless, almost every third student had already heard about this form of learning. This data indicates a good awareness of the students in this sphere that remain still not so spread in Kazakhstan universities. And in general, students have positive attitudes to receive mobile learning content to their mobile devices. We suppose that the implementation of mobile learning will be successful at Eurasian National University.



## **DO MEN LEARN IN ORDER TO EARN? MOTIVES FOR LIFELONG LEARNERS TO CHOOSE WEB-BASED COURSES AND THE RELATIONSHIP WITH AGE, GENDER, PARENTHOOD AND RATE OF STUDIES**

*Ron Mahieu, Simon Wolming, Umeå University, Sweden*

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Our globally connected world is characterized by growing social mobility and diversification of life trajectories. In the light of recent societal and economic developments people more often change careers. Individuals even have multiple career paths and they are expected to engage in lifelong learning. Universities are also called upon to make students more employable and to enhance their flexibility in the labour market, while Web-based learning also may open access and widen potential markets for the universities, motivating a larger and diverse group of students to participate in higher education. Due to these changes there is a growing need for flexible deliverance of education. Distant learning and adult learning take an important part in this. In a lifelong career perspective the need for people to participate in education may differ, as well as the educational choices that students make. This variety makes it necessary to study what factors are important for the educational choices of students. In this paper, different factors, such as age, gender, rate of studies and parenthood was analysed in order to see how these relate to different motivational factors for choosing a web-based course. The research focuses on the questions: Which students choose web-based courses and what are their motivations to do so?

The present study was based on a sample of 1,270 beginner students during the spring semester 2011 at web-based courses at the department of education, Umeå University. The data was based on a questionnaire covering the student's background characteristics and a number of items focusing on the motives for choosing a distance learning course. The motives could be categorized into four different motives: 1) Format, 2) Content, 3) Economic, and 4) Curiosity. The results showed that Format was regarded as the most important factor for choosing an Internet-based course. The second most important motivational factor was Content, followed by Curiosity and Economic. Group differences were investigated with respect to age, gender, parenthood and rate of study. Mature students had higher ratings on the Format motivational sub-scale than younger students. However, for the Economic motivational sub-scale younger students had higher ratings than mature students. There were no age differences with respect to the Content and Curiosity motivational sub-scale. Females had higher ratings on Format motivational sub-scale than males. Similarly, females had also higher ratings on the Content motivational sub-scale than males. However, for the Economic motivational sub-scale males had higher ratings than females. There were no significant gender differences with respect to the Curiosity motivational sub-scale. Moreover, we examined whether there were differences in motivational ratings between students with and without children. Students with children had higher ratings on the Format motivational sub-scale than students without children. Similarly, students with children had also higher ratings on the Content motivational sub-scale than students without children. However, for the Economic motivational sub-scale, students without children had higher ratings than students with children. There were no differences between students with or without children on the Curiosity motivational sub-scale. Finally, we examined whether there were differences in motivational ratings between students admitted to half-time or full time studies. Students enrolled in full time studies had higher ratings on the Economic motivational sub-scale than students in half time studies. Similarly, full time students had also higher ratings on the Curiosity motivational sub-scale than half time students. There were no differences between full-time and half-time students with respect to the Format and Content motivational sub-scale.

The findings show that distant education fulfils an important function for mature students, women and students with children. These groups presumably consider the flexibility that web-based courses provide advantageous. Family situations or working-life obligations may contribute to this. Changes in people's working lives are likely to continue, which presumably increases the demand for flexible learning situations. It would be of interest to collect and analyse more data that relates to the lifelong career development of students, covering the wide range of ages as suggested in the theme for this conference. Further studies may therefore also incorporate data that extensively shows what choices students make by adding more socio-economic factors for analysis.

## **ONLINE LEARNING AND COLLABORATION IN THE CLOUD**

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As in many distance-learning institutions, University of Maryland University College (UMUC) students are primarily adult professionals of varying age. At the graduate level, students are mostly managers with a significant amount of real-world experience. Specifically in the field of information technology, students are interested in leveraging technology to facilitate business processes, taking on higher managerial positions in their current organizations, or changing careers in search for more technology-oriented positions. Having this particular population as a target, this work takes on an action-research approach and focuses on experimenting with a cloud-based application (i.e., Google Docs) to enhance student collaboration, engagement, and sharing. The use of such technologies has therefore a two-fold pedagogical purpose within this scenario: to help students enhance their collaboration skills working as virtual teams and learn about the use of cutting-edge technologies through hands-on experience and problem solving. The observations indicate the learning experience of the students was improved but some shortcomings were noted. This research describes the process and preliminary results of using this collaborative application and suggests best practices on how this technology could be used effectively. The needs of online faculty in order to fully utilize the application are also discussed.

## COLLABORATIVE LEARNING FOR UNIVERSITY STUDIES

*Airina Volungeviciene, Margarita Tereseviciene, Kristina Mejeryte-Narkeviciene,  
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This paper discusses how the concept of collaborative learning changes concerning university studies. The attitudes of teachers and students towards collaboration using Facebook are highlighted. Facebook is becoming an important part of studies, and a large majority of students share, use and exchange information and educational resources using Facebook purposes. What about teachers? What kind of social networking tools do they need, if any? The aim of the research is to define the Facebook phenomenon for collaborative learning at university studies among teachers and students – two different age groups. The objectives of the research are: 1) to define the concept of collaborative learning in university studies; 2) to discuss the shift of conditions for collaborative learning in university studies using Web 2.0 tools; 3) to characterise open educational resources as artefacts of collaborative learning in university studies; 4) to describe the Facebook phenomenon at different levels using the experience of Vytautas Magnus University; 5) to identify the point of view of students and teachers to the use of Facebook facilitates for collaborative learning in university studies.

### Research methodology

Qualitative research method was used. The instrument for the interview was a structured questionnaire prepared for the research, and was made following three criteria: 1) collaborative learning in university studies; 2) students' collaboration in Facebook and factors in participation; 3) collaboration in Facebook through OER. The respondents' age of the two focus groups ranged from 21 to 23 years old, and 90.5 % of them were females while only 9.5 % were males. A survey was implemented among teachers who participated in online teaching and learning to define their needs to use web 2.0 tools to organize collaborative learning for online groups in university studies. All the teachers had experience in online learning and teaching and worked with international student groups in bachelor study program. Their age ranged from 31 to 58 years old.

### Research results

After completing the research on Facebook phenomenon for collaborative learning at university studies among teachers and students, the following conclusions can be drawn:

1. Collaborative learning is an educational approach to teaching and learning that involves groups of learners working together to solve a problem, complete a task, and create a product and to work toward a common goal. Also collaborative learning is asynchronous online learning among learning communities.
2. Conditions for collaborative learning are based on group composition, task features and communication media. Online learning is based on web 2.0 tools expanding the group composition drastically in terms of geographical, cultural and national scope, and might depend upon communication media used, as online communities might be built using different web 2.0 tools and might belong to different online community sets, but also might be interlinked and mingled by technological solutions.
3. Learning is about developing capabilities to think and to act. Learners using social networking tools for collaborative learning, act, provide feedback and peer-review, asses and rate information. University students collaborate online and learn by using and exchanging OER, as well as developing them as the artefacts of online collaborative learning. They influence task design by creating "educational resources" themselves.
4. Facebook is used for collaborative learning in formal and informal studies among students, but not among teachers. It provides not only a possibility to communicate with friends but also enables online community building with all registered users, to establish new contacts, view personal profiles, learn about various types of events, plan meetings with the help of a calendar and see how many people are planning to attend them. Students indicate negative aspects of Facebook use, such as "dislike, no need, lack of certain functionality and too high involvement of users". Students indicated Facebook social network having a positive effect on their university studies when students find benefits in sharing information on curriculum requirements, examination content, and performing tasks. Students also find permanent access to data important. Students show the need for more active and involving teaching and learning experiences and environments.
5. Teachers who participated in the survey and interview did not express their favour for Facebook use and did not see the need to use Facebook in university studies. They indicated "e-mail" collaboration as important or very important, but Facebook as "not important" or they had no opinion.
6. Students need Facebook as more active media for communication and collaboration, while teachers do not see the need for Facebook, they prefer communication tools in university virtual learning environment and consider them as sufficient offer.

## **HIGHER-ORDER THINKING STRATEGIES IN LEARNING BLOGS**

*Gila Kurtz, Noemy Porath, The College for Academic Studies, Israel*

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This paper describes a study of a blog, a web 2.0 application, as a tool for promoting higher-order thinking strategies. The study was conducted at the College for Academic Studies in Israel, in a Master Program's on ICT and Learning. Data were collected from a sample of students' blogs and from students-bloggers survey that examined experience and perceptions of the students of blogs as personal learning environment. The results show that students' postings indeed displayed evidence of higher-order thinking processes as well as students responses were in favour of blogs. The study discusses implications for instructors wishing to add blogs to their teaching toolbox.

## LEARNING WITH FACEBOOK GROUPS

*Hagit Meishar-Tal, The Open University of Israel, Gila Kurtz, The Center for Academic Studies Or Yehuda, Efrat Pieterse, The Open University of Israel, Israel*

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### Introduction

Facebook is a very popular social networking site in Israel and all over the world. Like any new web environment, Facebook groups were not developed for learning and teaching purposes. Nevertheless after a while Facebook began to be used in the academic context. Studies found that social networks are used by students to adjust and meet other students before and during school. Facebook is also used as a channel for expressing difficulties in learning so as to gain moral support from friends and for sharing humorous aspects related to the learning experience studies That have explored the possibility of instructor – student interaction online found unwillingness of instructors to be “friend” of their students and vice versa. The merging of the social with the educational environment is perceived as a violation of privacy in many cases. In light of these findings, it seems that Facebook is not a suitable environment for formal learning activities that require instructor – student.

With the advent of “groups” on Facebook, which do not require members of the group to be “friends”, it became possible to create a “study group” in which students and instructors participate without being “friends”. Under these conditions, the possibility of using the Facebook group as in course context is relevant again.

### Case study in using a Facebook group as a course site

The course “International Aspects of ICT in Education” is taught in the graduate program in Education in one of the colleges in Israel. There were 50 students registered for the course, all of them computer literate. The students had opened a Facebook group for social goals before the course. This group was informal and registration was voluntary, not required. The Facebook learning group was opened at the beginning of the course. The students were required to register for it as part of the course, as the course tasks were published in the group and were part of the final grades in the course. Using the Facebook group included uploading course presentations, performing online collaborative tasks, discussing and clarifying course topics and general information transfer between the instructor and the students and among the students.

### Students’ assessment of the Facebook group activities

After completing the activities, the students performed a summative assessment task. In this task, the students were asked to reflect on their activities in the Facebook group and to report on the difficulties which had occurred during learning. Analysis of the responses shows that the students experienced the learning in Facebook as contributing in three regards: interaction with their colleagues, communication with the lecturer and correlation with their personal learning style. A fourth theme was also reported, expressing intensity and immediacy as a major experience at all three levels.

The findings demonstrate that design and operation of a learning activity within a Facebook group is possible and yields positive results. The unique dynamic structure of the Facebook group can be leveraged to carry out learning processes that require interactivity between learners and between learners and the instructor. The Facebook group is not just “another discussion group” but a unique environment that can serve as an interesting alternative to traditional learning management systems.

## **AN E-ASSESSMENT MODEL FOR SUPPORTING COLLABORATIVE KNOWLEDGE BUILDING IN A SOCIAL SOFTWARE**

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Since its origin as a monochromatic text-based collection of hyperlinked pages, the World Wide web (web) has evolved into a multimodal visual and aural experience and the techniques of previously separate media have been united in a common environment (Manovich, 2006). The term web 2.0 is used as a metaphor for a number of technological possibilities that have emerged as Internet applications. These functions support communities and collaboration, together with manipulation and sharing, rather than simply accessing information. Thus, the social software supported in web 2.0 enables consumers to become producers. Learners can contribute to the resources and not just consume them. Technology-based teaching strategies can exploit a media-rich web 2.0 to engage students and support them in working with ideas and making links between sources. Learners can add and remix their own interpretations into web 2.0 tools that enable modding of existing products and collation of multimodal information from multiple sources through mashing (Hedberg & Brudvik, 2008). The spaces of knowing are changing; no longer are learners constrained by institutional boundaries, but they can explore in virtual and cross-cultural settings (Owen, Grant, Sayers, & Facer, 2006). Weinberger (2006) use an analogy that describes knowledge as no longer being organized as trees, but as "pile of leaves". Weinberger questions whether the knowledge structure has been determined by previous technologies, such as organizing things on paper. He suggests that the organization of knowledge in digital forms allows the same knowledge to be organized by many people in many ways through different digital constructions. Learners' relationships with ideas can be determined by the context, and each change in context can result in the ideas being reworked to meet the particular need. Thus, the same idea might change its modality of representation and its structure at different times in different places (Siemens, 2006). Thus, we are working in spaces that are more complex and rely on meaningful artifacts that are interpreted and constructed, and that can be variously interpreted through different frameworks to produce different understandings from what might be seen as a common starting point.

This paper presents an e-assessment model for learning by knowledge building (Bereiter & Scardamalia, 2003) with the social software Diigo, a social content network with both individual and shared spaces for sampling resources of various modes and tools for reorganizing, editing, representing, mixing, sharing and interact with, or on top, of the web resources. It is a complete social research and Information tool for multimodal resources. In this study the students use the educational feature Diigo Groups as the place to collaboratively work with a problem-based knowledge building learning task and its browser add-on from where one can do such actions as bookmark, tag, annotate and share to a Diigo Group. The purpose of the e-assessment model was to evaluate the students' competences to use the Diigo tools to engage with knowledge building processes. Thus, this study investigates:

- How does the e-assessment model support the students' use of social software for knowledge building tasks?

### **Methodology**

The study was conducted over a period of 10 days with 4 students from both the generation Y and the generation X. The participants worked on the task only virtually by only using the Diigo space on the web. The participants were purposively sampled based on the argument by Owen and colleagues (2006) that no longer are learners constrained by institutional boundaries, but they can explore in virtual and cross-cultural settings. 4 participants from different institution, cultures and generation cohorts that volunteered for the task participated. The data was collected by taking screenshots regularly during the period of the learning activity and the final work was stored in the Diigo Group. Each of the students' contributions to the learning activity was interpreted and scored according to the e-assessment model.

### **Results & Findings**

A discussion of the results and findings from testing and evaluating the e-assessment model for learning through knowledge building with social software is presented with suggestions for further use of this e-assessment method.

## **FEAR OF F-LYING: AN AGEING TEACHER QUESTIONING HER ROLES USING FACEBOOK TO CREATE A COMMUNITY OF AUTONOMOUS LEARNERS**

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In this paper I first describe what happens when you move from a teacher- and content-driven Blackboard course to a student-focused secret Facebook group called “Flipped Class”. Next I reflect on the teacher’s roles you can adopt in a “whenever, wherever and whatever” information society.

Within fourteen weeks I had to teach professional communication skills to fourteen paralegal students. I opted to focus on their learning paths and so adopted a “Flipped Class” approach. Facebook offered a needed extension of class time.

However, after a few weeks I faced votes of distrust both from the students – only three showed up – as well as from the head of department. I was asked to sign a contract committing myself to the course contents and ways of evaluation as described in the curriculum guide. By the end of the semester, however, my students were very enthusiastic – they set up Facebook groups for three other courses and I was asked to share my experiences with my colleagues. Also only one student flunked out.

Yet this whole experience made me question what kind of teacher I am entering in this unknown territory Facebook offers. To reflect on my experiences I adopted the theoretical framework of Przbylska who discerns traditional and modern teacher’s roles.

Wandering through our Flipped Class group I argue Facebook made it possible for me to perform not only the roles of modern educator, carer and didactic, but also those of animator, culture promoter, creator, researcher, intellectual, guide and friend. I will discuss both positive and negative aspects, showing there is no need to be facebookphobic.

## THE FUTURE OF ICT FOR LEARNING AND ITS IMPACT ON OPEN LEARNING GENERATIONS

*Stefania Aceto, Claudio Dondi, Daniela Proli, SCIENTER, Italy*

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Evolution in learning and in education is a key area of interest for policy and research, as it deals with human development, social interaction, knowledge production and society advancement. With the spread of ICT at the end of the past century, education has been affected by outstanding changes which research has tried to grasp and understand in the last decades. Speaking of education today means also speaking of ICT for learning as technologies have gained increasing importance in the education scenarios – starting from the informal sector – by enabling new forms of learning and transforming traditional paradigms. However, a shared understanding and vision of how ICT in learning can support innovation and lifelong learning and serve new societal goal is still missing.

The VISIR project – visions, scenarios, insights and recommendations on ICT may help making lifelong learning a reality for all – builds smartly on the work of Learnovation and its predecessors to advance in the effort of understanding change and use this understanding as a basis for building a new long-term vision for ICT in learning supported by innovative and viable mechanisms to upscale innovation in ICT for learning.

VISIR analyses the challenges linked to the role of ICT for education in supporting the achievement of the European Knowledge society in a broad perspective that takes into consideration exogenous and endogenous factors influencing change and that works on three level of analysis and actions: the macro level (E&T systems), the meso level (organization which provide teaching and learning opportunities) and the micro level (teaching and learning opportunities themselves). The domains of change developed by the VISIR project transversally cut the traditional sectors of lifelong learning, providing for a new set of criteria to identify and interpret current change trends.

A set of critical reflections arise when reading identified trends in education at the light of the domains of change elaborated by the VISIR project. First of all, while a passionate attention concentrate around new creative possibilities in learning, the assessment side does not seem to have yet found adequate approaches to keep pace with the changes occurring in the learning scenario (Cachia, Ala-Mutka, Ferrari, Punie, 2010; Eurydice: 2011). Furthermore, in looking to future evolution one should never go too much ahead and lose eyes in the present, where learning still largely corresponds to formal education and traditional, consolidated models and – as such – is deeply suffering outstanding cuts in public spending which make it difficult to experiment and upscale innovation. Being aware of that, VISIR is combining its vision building activity with the investigation of existing micro innovation good practices concerning the use of ICT in education with the aim of elaborating effective approaches to scalability. Although the narrative of the autonomous learner is suggestive, emancipatory and one which is worth pursuing, it is important to be aware of the several factors which prevent its full unfolding as well as of the risk connected to the “open learning generation” as rhetoric sometime presents it.

These are certainly related to the still persisting issue of the digital divide, one which has not been yet solved in its merely technical understanding while having assumed a worrying aspect of educational divide (Johnson, Adams, Haywood, 2011), referred to the lack of those digital and transversal skills (and the absence of mechanisms to develop them) which are essential for all learners to become owner of their education process.



## **NETCU: ANALYSING E-LEARNING NETWORKED CURRICULA IN EUROPE: THE IMPORTANCE OF LEGAL AND QUALITY ASSURANCE ASPECTS**

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A successful modernization of the universities and the improvement of their curricula as well as the provision of high-quality, state-of-the-art, internationalization and innovative knowledge to their students is a common goal of all the universities. Virtual mobility and networked curricula are a good way to contribute to this modernization but their quality assurance and legal constraints can be an obstacle for their implementation if not properly issued

Within the strategic framework for European cooperation in education and training ('ET 2020') it should be enhanced the creativity and innovation, including entrepreneurship, at all levels of education and training. Well-functioning cooperation using new, transparent ways of networking is needed not only between the relevant EU institutions but also other international institution.

The project NETCU curricula endorses a set of combined activities, and approaches, guidelines and tools for successfully creating internationally networked curricula in open and distance education (OED) and blended learning. These products will facilitate the establishment of such curricula. Close collaboration is also an integral part of the project leading to mutual trust between the partners laying the structures on which further collaboration can be set. All together these guidelines and activities of the NETCU project will help a) to enhance the quality of the curricula and programme structure of European higher education institutions by providing more and more diverse study opportunities, b) to strengthen the national and European position of the partner's course offers, and c) to create a European identity of study programmes in open and distance education and blended learning.

The aim of this paper is to present the importance of legal and quality assurance aspects when setting distance learning networked curricula in higher education, highlighting the main steps to take and decisions to make about those aspects. This work is being developed within an Erasmus project – Networked Curricula where guidelines are being developed to set an e-learning Networked curricula.

In this work we present the importance of legal and quality assurance aspects when setting distance learning networked curricula in higher education, and list the main steps to take and decisions to make about those aspects. These guidelines were defined within an on-going Erasmus project – Networked Curricula where a handbook is being developed to set an e-learning Networked curricula where issues like general model, goals target group, models, and design will also be discuss. This handbook will be evaluated by internal and external workshops with several stakeholder.

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## **SHARING GOOD PRACTICE FROM EUROPEAN SCIENCE EDUCATION PROJECTS: XPLORE HEALTH AND UNISCHOOLABS AS PART OF THE SCIENTIX PLATFORM**

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Scientix is the web-based community for science education in Europe managed by European Schoolnet on behalf of the European Commission's Directorate-General for Research and Innovation (DG RTD). Scientix collects teaching materials and research reports from science education projects financed by the European Union (EU) under the 6th and 7th Framework Programmes for Research and Technological Development of the European Commission (FP6 & FP7, DG RTD), the Lifelong Learning Programme of Directorate-General Education and Culture (LLP, DG EAC) and various national initiatives. Registered users may request translation of the teaching materials into any of the 23 languages of the EU. The portal allows for interaction among the registered users in the public profiles directory and for searching and rating the resources.

The purpose of this article is to present the Scientix project and its potential for creating science and maths education community that would share and exchange digital content for learning and teaching STEM subjects. To demonstrate the options and services offered by Scientix, the second part of the paper focuses on two concrete examples of the use of the Scientix platform: the science education projects Xplore Health and UniSchoolLabs which have developed guidelines for remote and virtual labs, and innovative multimedia modules on health research.

Xplore Health (<http://xplorehealth.eu>) is a European educational portal on cutting-edge health research that offers innovative multimedia and hands-on experience to young people through the internet, schools and science centres and museums. The main aim of the project is to bridge the gap between research and education, to inspire future researchers, to promote scientific literacy and stimulate dialogue between the public and researchers.

UniSchoolLabS (<http://unischoolabs.eun.org>) aims at promoting collaboration between universities and schools in the provision of remote access to science laboratories for primary and secondary schools through internet-based services. The project selected 12 Good Practices (GPs) of remote access labs and developed a toolkit explaining how to use them, including pedagogical scenarios which will be tested in 10 partners schools.

All three projects focus on distance learning and high-quality digital content, each from different perspective: Scientix supports dissemination and exchange of digital content; Xplore Health and UniSchoolLabs promote collaboration between research and education and exploit the possibilities of remote access and virtual experiments.

## **THE NATIONAL TEACHER TRAINING BETWEEN 2005 AND 2010: THE NEW CAPES AND THE OPEN UNIVERSITY OF BRAZIL**

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This study presents challenges and solutions as related to the management of the Distance Education System at Brazil's Open University (Universidade Aberta do Brasil – UAB, in Portuguese), between the years of 2005 and 2010. We are going to describe its operational system, focusing on the way it integrates with CAPES, the country's federal agency for the support and evaluation of graduate and postgraduate education. We are also going to address the benefits and disadvantages inherent to this system, when it comes to teacher training and graduate studies in Brazil.

The inauguration ceremony for the UAB System took place in December 2005, when the Ministry of Education's Department of Distance Education (SEED/MEC) released a public notice inviting city and state governments throughout the country to offer their proposals to host support centers for the new system. Public institutions of higher education were invited to propose distance education courses.

To account for the complexity involved in the registration and management of the UAB actions, the General Coordination for Information Technology (CGTI), in cooperation with the CAPES Coordination Center for Information Technology, developed a management system for the Open University of Brazil: the SisUAB. This support platform for the implementation, monitoring and management of UAB processes utilizes hyperlinks and search engines for data systematization and supporting management decisions. It registers extensively the actions of the institutions involved, and presents detailed information about the courses being offered, as well as a dynamic and comprehensive overview of the infrastructure at the support centers.

This joint venture aimed at consolidating a network of higher education institutions, and also of city and state governments, capable of providing quality higher education, especially in parts of the country where access to higher education is limited. Development and evaluation were important elements in the quality control of all UAB processes, highlighting the importance of the CAPES tradition in the quality control of Brazilian graduate institutions and courses. Also, UAB's executive director for Distance Education introduced a new model for public distance education, which tried to address both regional and institutional differences.

The Open University of Brazil has not established itself as a traditional institution of higher education in the strict sense, and could not be characterized as "open", since it did not have its own faculty or students, and did not follow standard regulations and pre-requisites when it came to offering degrees. For these reasons, it is more appropriate to consider the UAB System as a federated network for educational cooperation – one that includes city, state and federal governments, as well as public institutions of higher education.

The effectiveness of this joint venture depends on the harmonization of this complex and multi-branched system, and also on actions to be taken by the Distance Education board of directors.

It is in hope of drawing attention to this need of harmonization that we present our study at this conference.

## METHODOLOGY FOR STRATEGIC PLANNING OF E-LEARNING IMPLEMENTATION IN DEVELOPING COUNTRIES

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In this paper a methodology for strategic planning of e-learning implementation in pre-tertiary education is presented. The methodology takes into account context of developing countries as well as contemporary know-how in strategic planning of e-learning. The overall approach to strategic planning of e-learning implemented in Kosovo case had been tested before in higher education in Croatia<sup>1</sup>. Strategic planning of ICT and e-learning implementation in learning, teaching and administration consists of four phases: (1) intelligence, (2) design, (3) choice and (4) implementation.

During the Intelligence phase the central problem is identified and situation analysis performed. Central problem is to find appropriate, feasible and sustainable approaches for enhancing quality of education in Kosovo. The situation analysis included a review and presentation of key facts and major documents concerning the problem. The most important tools in this phase were questionnaire for e-readiness, case study analysis, focus groups and field research. The main instrument for collecting data for e-readiness of Kosovo was the questionnaire that was based upon Harvard University Guide called CID methodology (CID). There were 113 schools evaluated, almost 18 % of schools. Modified questioner and results of e-readiness assessment can be found in E-readiness report for e-learning in Kosovo, 2011<sup>2</sup>.

In the Design phase the background research of data was completed. A lot of documents and other sources were analyzed, one of important sources for examining and building upon the strategy are e-learning strategy documents and e-learning action plans which can be benchmarked. Further, data that were gathered during e-readiness survey were very valuable for designing strategic goals and raising awareness of situation in Kosovo schools. Results from qualitative analysis based on interviews during field research and focus groups were carefully systemized and examined. After background research an analysis and discussion of proposed criteria/sub-criteria and alternatives essential for strategic planning and decision making about the e-learning implementation were carried out.

In the third phase – Choice Phase the criteria and sub-criteria clarified in the Design phase served as an input into a multi-criteria decision making model. The developed multi-criteria decision model the AHP (Analytic Hierarchy Process) is used for defining priorities in strategic planning of ICT and e-learning implementation in pre-tertiary system education in Kosovo. The AHP is a powerful and flexible method for strategic planning and decision making, which helps people set priorities and make the best decision when both qualitative and quantitative aspects of a decision need to be considered. In this phase the second focus group meeting was held. The goals of the second focus group were development of decision making model (AHP) in order to prepare the Action plan; and preparation of recommendations as well as performance of group decision making on alternatives and prioritizing the actions.

The fourth phase of the methodology development involves integration of findings, building the Action Plan and the implementation of the Strategy and Action Plan. In this phase the E-learning action plan was developed based on the priorities obtained from the group decision making supported by the decision making model and defined in the E-learning strategy. In the Action plan, the priorities, measures and activities for implementation of e-learning, deadlines, indicators of success, responsibilities and costs are defined. According to the E-learning strategy in Kosovo the strategic goals are connected to the following six priority areas: (1) Human resources development as a necessary precondition for e-learning implementation, (2) Suitable infrastructure that must be provided, (3) Organizational and legal readiness as essential for systematic implementation of e-learning, (4) Development of curricula and e-content that must be worked out thoroughly in order to make sense of the whole process of implementation of e-learning, (5). E-learning Centre as a main coordinating centre for e-learning activities in Kosovo and (6) Wider e-learning environment that comprises other beneficiaries such as scientific and higher education community. The recommendation is that e-learning is implemented gradually, using step by step approach and progress from stages with less intense use of e-learning to those with increasingly greater utilization of e-learning possibilities. In that process a special attention should be paid to a considerable difference in absorption capacity for ICT application between primary and lower secondary schools on one hand and upper secondary on the other, as well between schools from bigger cities and those from rural areas.

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<sup>1</sup> Begicevic, N.; Divjak, B.; Hunjak, T. (2007). Prioritization of e-learning forms: a multi-criteria methodology, Central European Journal of Operations Research CEJOR 2007, Vol. 15, December 2007, Issue 4

<sup>2</sup> E-readiness report for e-learning implementation in Kosovo, 2011 (<http://www.itpilotproject.eu>)

## **RELATIONSHIP BETWEEN LEARNING STYLES AND LEADERSHIP STYLES A NEW PERSPECTIVE TO ENCOURAGE LEARNING IN THE WORKPLACE**

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### **Introduction and Motivation**

The paper reports from a research study on the possible relationship between leadership style and individual learning style in the workplace. Confirmation to the relationship could give some advice to management or team leaders, who seek effective leadership to optimize workplace learning and outcome of their subordinates.

The aim of this project is to find out, whether employees with different learning styles have preference to certain leadership style and what their potential could be, given they experience their favoured leadership style.

The question which leadership style is best to enable and promote individual learning in the workplace comes up. Furthermore the question which changes companies can expect if the employees would have leaders with their desired leadership style is also considered.

To explore this issue, an empirical study was conducted to find answers to the research topic. The target group was medium sized companies in western parts of Austria which are typical for the economic structure of this area.

### **Theoretical Background**

The theoretical background covers the main two areas of this paper, Leadership Styles and Learning Styles. The theories of transactional (rather task-oriented) and transformational (rather person-oriented) leadership style were used for this work.

Due to the fact that this work is in the field of workplace learning in a business oriented context it was necessary to use a classification of Learning Styles that originate in this area. The researches of Schrader and Geertschuis were based on adult education in workplace environment.

### **Empirical Study**

An online questionnaire was used in order to get detailed data about the attitudes and requirements of employees concerning their favourable leadership style that enables and encourages them to learn in the workplace in a self-motivated way.

### **Summary**

The results clearly show that there is a positive relation between individual learning style and a preference mainly to the transformational leadership style. Despite a higher popularity of transformational leadership, certain characteristic of transactional leadership was considered as important e.g. the standardization of business processes.

The findings also point out that, in order to create a positive atmosphere and to stimulate motivation for learning in the workplace, leaders must apply leadership styles according to the needs of the employees. If they experience their preferred leadership style, the employees can exert their innovation potential.

## **AN INNOVATIVE E-MENTORING PROGRAM FOR GRADUATE STUDENTS IN AN ONLINE PROGRAM**

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### **Introduction**

The Professional Science Master's Biotechnology program at the University of Maryland University College (UMUC) has developed a novel, web-based mentoring program ([psmmentoring.umuc.edu](http://psmmentoring.umuc.edu)) that can be replicated and customized to fit the needs of other programs or departments at any institution. The uniqueness of the UMUC mentoring program is that it bridges the industry-academe gap and brings the two together in what can be a powerful and productive partnership.

### **Web-Based Mentoring Program**

The novel, online mentoring program developed by UMUC pairs graduate students with mentors from the biotechnology industry, with the goal of improving student retention and students' career prospects. Each mentor/mentee pair is assigned a mentoring assistant (MA) who is an alumnus of the biotech program and acts as a liaison between the mentors and the mentees. The sustainability of the model is anticipated by graduates of the mentoring program themselves becoming mentors.

The mentors are volunteers and recruited through a variety of methods including social media tools. Students within the first 18 credits of the master's program are eligible to apply for the mentoring program. The applications are screened based on writing skill, clear articulation of reasons why they are pursuing their degree of interest, and justification for what makes them a good candidate for the program. Those selected are paired with a mentor, a biotechnology professional.

### **Evaluation of the Mentoring Program**

The effectiveness of the program is evaluated in several ways. Current measures include program growth, assessment of the program by the participants, academic performance of mentees, company assessment on capstone projects and follow-up questionnaire after graduation.

The program has grown from 19 pairs of mentor/mentee pairs in the Fall of 2009 to 46 participating pairs with 46 mentees and 42 mentors at the end of Fall 2011. Comments from the mentors and mentees in the end of the semester assessment forms indicate that they are both doing their parts and gaining from the relationship. The program ratings have improved through the five semesters of the program implementation. Since students are only now beginning to graduate, not enough data is available on these students' performance on capstone projects and success after graduation.

### **Conclusions**

Academic performance of the students who are participating in the mentoring program was found to be statistically better than the equivalent control group who are not participating in this program. The stable retention is indicative of students finding the relationship beneficial and the mentors feeling fulfillment at providing career guidance to these students. This model has also been successfully implemented by the Teacher Education department at UMUC.

In conclusion, this model is a good example of a student support service that can become a competitive advantage for the institution and also contribute toward the knowledge society by preparing graduates with the skills and knowhow to become integral members of the society.

## **EFFECTIVENESS OF TRAINING FOR UNEMPLOYED AND LINKS BETWEEN ICT TRAINING AND EMPLOYABILITY: THE CASE OF MOSCOW STATE UNIVERSITY OF ECONOMICS, STATISTICS AND INFORMATICS**

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### **Research goals**

This project examines the role of ICT training in the employability of the unemployed taken part in continuing education programme in Moscow State University of Economics, Statistics and Informatics (MESI) in 2010 and 2011. The programme provided education in the field of accounting and consisted of the following modules: accounting, audit, finances, analysis of financial statements and ICT skills training modules. Considering the performance standards in accounting and widely used accounting software (with application electronic document management systems) at firms and organizations in Russia it may be concluded that ICT skills are crucial competences for accountants. This is confirmed by the results of the research – the importance of a high level of ICT skills for the job was pointed by 80 % of the respondents. According to the data collected by self-assessment of the participants before the training, most of them did not have a sufficient ICT skills level (63 %) and required it to be improved.

The main goals of the study were: to identify the target audience profile, ICT competencies and readiness for e-learning; to evaluate the quality of the training programme; to evaluate the influence of the training programme and ICT component on employment status.

### **Research methods and data**

During the research the following instruments of collecting data were used:

- Questionnaires for self-assessment before the learning process
- Programme evaluation questionnaire at the end of the training to find out learners' feedback
- ICT skills direct observation by academic staff during the ICT educational modules followed by an interview conducted by the research team
- A telephone structured interview after finishing the programme

In 2010-2011 about 850 unemployed people were trained and in the first stage of the research 716 of them were surveyed. In January 2012, a telephone interview was conducted to explore employment outcomes. 717 responses were received (379 of the participants of the year 2010 programmes and 338 of 2011).

### **Conclusions**

As a result of the research some valuable information was received, which gave opportunity to get feedback and evaluate programme and modules. The research results demonstrate a high quality of ICT modules of MESI courses for unemployed people. After finishing the programme employed participants estimated sufficiency of ICT skills as 3.9 for participants of the year 2010 and 4.0 of 2011 on a 5-point scale. 80 % of the participants assert that the ICT component is an essential part of the programme. The results show a high level of job placement after the trainings (77 % participants of the year 2010 and 54 % participants of the year 2011) and participants estimated the impact of the basic ICT training on their employment outcomes as 3.8 (participants of the year 2010) and 3.9 (of the year 2011) on a 5-point scale. According to the research result, ICT skills level is decreasing with the transition to older age groups. Also 6.6 % of the participants who did not improve their ICT competencies are a source of concern. It points at the necessity of some programmes' redesigning. It may be efficient to pay more attention to older age groups providing additional face-to-face individual training. The research identified a low level of readiness for e-learning of the target audience and it should be taken into account in further programmes. E-learning can be used as a complimentary component to a face-to-face learning process to diversify possibilities for groups with different ICT skills. The result of the research will be used to redesign programmes in MESI and it may be useful for other Educational Institutions.

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<sup>1</sup> The authors would like to thank the research team for assistance: A. Shukenbaeva, A. Surkov, V. Nekrasova, E. Pak, K. Stroganova

## **CREATIVITY AND SOCIAL INNOVATION IN THE OPEN AND UNPREDICTABLE LANDSCAPE OF ICT AND LEARNING**

*Rina Østergaard, University of Southern Denmark, Elsebeth Korsgaard Sorensen, Aarhus University, Denmark*

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*“There appears to have been remarkable coincidence between the development of more open systems of knowledge production and the growth of complexity in society -and the increase of uncertainty in both. The climax of high modernity with its unshakeable belief in planning (in society) and predictability (in science) is long past. Gone too is the belief in simple cause-effect relationships often embodying implicit assumptions about their underlying linearity; in their place is an acknowledgement that many – perhaps most – relationships are non-linear and subject to ever changing patterns of unpredictability.” (Nowotny, 2005:16).*

This paper combines observations from educational research, creativity research and research in innovation in order to identify preliminary suggestions for ICT-based and open learning designs targeted towards creative and innovative skill development in students. Creativity research has established a number of observations on the nature of creativity, as well as factors that nurture the possibility of creative skill development. These factors include *diversity, flexibility, and (a balance between) personalization and collaboration*. Pedagogical and learning researchers in the social constructivist tradition, have also argued that these elements are of crucial value for learning processes just as a predominantly part of research and theories about innovation are based on the assumption that these factors matters. In this paper we try to benefit from these theoretical fields as inspiration and as an early step towards further understanding of the roles and potentials for using open learning contexts and -resources in support of creative and innovative skill development and social innovation in 21<sup>st</sup> century educations and society.



## **OPEN EDUCATIONAL PRACTICES: A BOTTOM-UP APPROACH IN LATIN AMERICA AND EUROPE TO DEVELOP A COMMON HIGHER EDUCATION AREA**

*António Moreira Teixeira, University of Lisbon and Universidade Aberta, Portugal, Cristobal Cobo, University of Oxford, United Kingdom, Marcelo Maina, Universitat Oberta de Catalunya, Spain, Ilaria Mascitti, Cristina Stefanelli, Università degli Studi Guglielmo Marconi, Italy*

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Open Educational Resources (OER) may be seen as a part of a larger trend towards openness in Higher Education (HE) and democratization of access to education. Nevertheless, even if a significant amount of OER is already available online, the number of open educational practices is still limited worldwide. The OportUnidad project explores the adoption of strategies and channels that leverage the principles of openness and reusability within the context of educational institutions in Europe and Latin America. This paper details the rationale behind OportUnidad, highlighting its challenges and agenda.

In fact, OportUnidad recognizes the need to embrace integral and also inclusive actions that will be meaningful and relevant for the local beneficiaries. That is why we have envisioned a multilevel and bottom-up intervention which articulates three key dimensions: contents, platforms and the cultural aspects. This action-research will focus on Latin America through a bottom-up approach aiming to develop a common HE Area among Latin American countries and Europe fostering the adoption and pilot open educational practices (OEP) and open educational resources (OER). Openness in HE seems to be the baseline for the equal and democratic access to knowledge. If universities really want to be competitive and to invest in better teaching and research, it is essential that the open sharing of resources is encouraged.

Based on the analysis of best practices worldwide, the project defines the “Open Educational Practices Agenda” which outlines policies and actions to maximise the benefit of the use and re-use of OER for university course development in Latin America as a means of the equal and democratic access to knowledge. Each partner University, including fellow universities, will define an institutional roadmap for the implementation of open educational practices at local/institutional level. It is a declination of the regional Agenda to the local, cultural and institutional framework. It is a local-contextualised plan in a global strategic plan.

It is expected to gain many roadmapping applications, from setting scientific research agendas to technology plans. Partners will also guide the construction of the institutional roadmap(s), making sure that it sets a clear future objective and answers the critical “why-what-how-when” questions that define and explain a clear action plan for reaching the objective.

Local teachers and educators and management staff will participate in an on-line training course designed to provide conceptual and operational tools for the use (and reuse) of OER, and organized in a logical sequence going from the presentation and framing of the OER and OCW movement, until the integration of open practices into mainstreaming activities. More than 60 teachers and educators will pilot the on-line OER course and will be assisted for the start-up of initiatives that integrate OERs into their own courses and practices according to their institutional roadmap.

As a long-term result, the OportUnidad initiative expects to foster the role of universities in providing knowledge not only to their on-campus students but also beyond the walls of institutions to disadvantaged groups (i.e. low income peoples, disabled, indigenous), adult learners, and students coming from non traditional routes. Additionally, an increased level of quality of contents is expected to result from this initiative in the long run.

The OportUnidad project is co-funded with support by the European Commission under the EuropeAid ALFA III Programme. OportUnidad multi-actor includes twelve Universities from Europe and Latin America.

## IDENTIFICATION OF STAKEHOLDERS FOR QUALITY ASSURANCE OF OPEN EDUCATIONAL RESOURCES (OER)

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Open Educational Resources (OER) are altering the educational landscape in the 21<sup>st</sup> century. OER are offering novel opportunities and innovations to provide learning for various audiences. OERs are challenging the conventional approach how educational content is created, validated, edited, enriched and updated, as they rely fundamentally on the users and user communities. The emergence of OERs is challenging conventional quality mechanisms and quality assurance of educational institutions. OERs will set new requirements to the quality assessment of educational institutions. Traditionally, the quality work has been built on internal quality assurance and quality control. By their open nature, OERs can invite to their quality assurance process many various actors. The quality assurance cannot rely on a single actor, but must rather be seen as a continuous negotiation process between different entities. The involvement of various stakeholders to the quality assurance of OERs is essential. The potential to utilize the educational community-at-large and “wisdom of the crowds” is providing revolutionary opportunities for the quality development of educational content. At the same time, it requires thorough identification of the various stakeholders as well as appropriate organization of their work and collaboration.

Although stakeholder management and stakeholder analysis have not been widely discussed in the context of educational institutions, stakeholder management concepts can be applied also to education. Stakeholder analysis is an approach, or an array of various techniques for generating knowledge about key ‘actors’ – individuals and organizations – so as to understand their behaviour, intentions, interrelations and interests. The wide variety of different stakeholders in higher education challenges quality development, as there is a lack of consensus among the stakeholders of the appropriate quality imperatives and measures. Thus identification and analyses of stakeholders are essential. Stakeholders can be categorized based on economic perspectives (employers, industry groups), societal perspectives (families of existing and potential students, community organizations), and educational perspectives (academic disciplines, other education providers). Stakeholders in higher education can also be articulated as the providers (funding bodies and community at large); users of products (students – both current and prospective); users of outputs (the employers); the employees of the sector (both academics and administrators).

In the paper, key stakeholders with interests in OER, and the emerging openness in the educational landscape in the 21<sup>st</sup> century are discussed. They can be grouped as the internal stakeholders (in our case learners, teachers, supporters, educational institutions, OER providers), the interface stakeholders (e.g. national quality assurance networks and quality agencies) and the external stakeholders (such as governments, employers, trade unions, European stakeholders etc.). However, our fundamental approach is that learners are the most important stakeholders of OER and thus their involvement in any quality work is essential.

Quality work is most often considered to be an internal function within educational institutions. However, we claim that OER as a phenomenon is changing this understanding in two ways. Firstly, by their nature the quality assurance of OERs cannot rely on a single educational institution, but rather it must be seen as a continuing negotiation process between different entities. Secondly, by their nature OERs provide wider width and depth of educational materials and thus their quality assurance must also include other actors than conventional educational institutions have been providing. The concurrent approach to quality in educational institutions focuses on the perspectives of only internal constituencies, students, faculty, and appropriate administrative personnel. OERs will change this picture radically. The involvement of various stakeholders into quality assurance work offers OER providers new insights and new resources, but also new challenges for the quality assurance work.

## **LIFELONG LEARNING AND THE DEVELOPMENT OF A CRITICAL TECHNOLOGY IN HIGHER EDUCATION**

*Antonella Poce, Annalisa Iovine, Laura Corcione, DIPED – Università Roma Tre, Italy*

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An important passage in the 2010 OECD report (Organisation for Economic Co-operation and Development) underlines the need for formal education to enter the workplace: “in the nations where work is organized to support high levels of employee discretion in solving complex problems, the evidence shows that firms tend to be more active in terms of innovations developed through their own in house creative efforts” (OECD, 2010, Theme 1, p. 10).

The key point is in fact that new skills are needed, because traditional skills learnt at school or at university are disappearing and are not deemed useful in facing the needs for innovation and growth that society today demands. The concept behind our project is therefore that of verifying the effectiveness of a model constructed to increase critical thinking skills, which is essential in environments such as those described by the OECD in the above-mentioned document, in order to apply this to settings where employed people are involved in training.

The present contribution aims to describe the results of a study carried out at DIPED – Dipartimento di Progettazione Educativa e Didattica (Department for Educational Design) at Roma Tre University, where the levels of critical thinking skills of students were assessed through an ad hoc content analysis protocol.

The following sections explain why content analysis is considered a valid and reliable technique in the assessment of critical thinking skills and how the procedure was used in the above-mentioned project.

The research, Contributions for the Definition of a Critical Technology, developed at DIPED, is set within this context and, as well as implemented in higher education, aims to project its results into different settings, so that the results can contribute to improving other areas, such as lifelong learning and enhancing development in various fields of knowledge.

The project principally aims to assess the hypothesis that, in providing further cultural insights according to well-defined models on which to undertake guided discussions coordinated by an experienced tutor, the critical thinking skills of students increase. This is made possible through the development of an ad hoc online module, *Critical thinking skills and reading of the classics*, available online to students in Education (Faculty of Education Sciences).

In order to assess the critical thinking skills, the students' written productions were treated with a lexicometric analysis using the Taltac software, and with content analysis, through an adaptation of the Newman, Webb and Cochrane (1997) model. The main categories of the analysis include relevance, importance, introduction of new ideas, information and solutions, reference to personal experience and opinions, clarification of doubts, new knowledge, elaboration of new solutions, critical evaluation, practical use of new solutions, and width of understanding.

The ability to think critically and therefore to make functional use of what is learnt is what the OECD report itself mentioned as vital if wanting to enhance the development of new skills and in particular skills that are effective for growth and innovation in complex organisations.

## **DESIGNING FOR ONLINE DIALOGUE AND REFLECTION AMONG ADULT STUDENTS IN COLLABORATIVE ONLINE LEARNING ENVIRONMENTS – WHAT IS THE SUCCESS FORMULA?**

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### **Introduction**

The title reflects a common request in online and flexible learning, namely a successful didactic-pedagogic approach to motivate and inspire busy adult students to engage and contribute in online dialogues. By drawing on two flexible and online courses as examples, we pursue this issue by exploring the relationship between reflective dialogue, didactic design and the way students use and renegotiate online learning resources. Our intention is to suggest some relevant criteria to promote reflection and dialogue in both online and blended models, based on the overall aim to increase the perception of quality among students. We argue for a pedagogic-didactic approach which draws upon the competencies and interests of the adult students to support reflection and participation in online discussion groups and assessment.

### **Online collaborative learning and reflection within a socio-cultural framework**

Based on research arguing that it is vital to design, develop and facilitate online continuing education according to a theoretical framework, we build on a socio-cultural perspective on learning underpinning our design of online collaborative discussion groups and assessment principles. This theoretical perspective recognizes learning as relational and as occurring in participation with others in different contexts and by using different resources, such as teachers, peers, books, computers and digital networks. By this, learning spaces and contexts might expand outside the classroom. Learning is not confined to the individual mind. We assume that participation and engagement among adult learners in online courses produce learning and reflection. We focus on how to facilitate and support activities allowing adult learners to relate, interact and to produce. We draw attention to how we organize for activities, connections and the use of resources as vital for mediating learning.

### **Online reflection and dialogic learning discussed according to two cases**

Our discussion draws on two examples of flexible courses – one a blended learning model and the other an online course. The purpose behind our facilitation is inspired by research focusing on the promotion of opportunities to express own ideas and perspectives, and encourage students to improve thoughts, ideas and arguments in their assignments. The central issue is how to enhance reflection on action and thus reflexive practice aiming at developing one's own practice. We put particular emphasis on a mixture of obligatory and voluntary elements as a design principle, in order to engage adult students in online reflection. Based on what the students emphasize in our evaluations of the courses, we suggest the following aspects as vital:

- a clear cut structure embedded in the logic behind the organization of digital resources
- student-centered processes in interaction and collaboration, and in creation of online discussion groups and assessments
- commitments to reflection activities on short- and long term goals, both from teachers and fellow students, stimulating meta-reflection regarding own development, such as point of departure, learning goals, and how to get there.

We conclude by emphasizing a network perspective on learning focusing attention to connections and the human aspects of learning, for instance conflicts and differences in and through learning. The aim is to make university learning as relevant as possible to adult learners. We suggest a solution that expands learning spaces and merge learning contexts in order to provide students with opportunities to draw on a range of contextual resources.

## **ICT ENHANCED LEARNING – BENEFITS AND DIDACTIC CHALLENGES IN A LANGUAGE AND COMMUNICATION COURSE FOR ADULT IMMIGRANTS**

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Do adults with deficient knowledge and ICT skills increase their language abilities through e-learning? Are teachers with average ICT-experience able to successfully administrate and organize a web-based language and communication course for education and work?

This paper presents the experiences gained through a case study related to “Language and communication for education and work”, a language course for adult immigrants. The research was carried out at Oslo and Akershus University College of Applied Sciences (HiOA) in 2011/2012.

Our thesis is that effective use of ICT enhances language learning, as well as it gives the lecturers more opportunities to communicate with students than in the traditional classroom. In addition it makes flexible studying possible, in terms of place, time and pace. The question is whether the average lecturer at the University College, as well as the special target group, is prepared for and able to exploit ICT as a pedagogical tool. A successful e-learning design presupposes that the previous knowledge among the users is taken into consideration and adapts for a learning community across different experiences, different understandings, different views, different patterns of behaviour and different frames of interpretation.

The ICT-based course “Language and communication for education and work” was carried out from 5<sup>th</sup> September 2011 till 11<sup>th</sup> January 2012. The extent of the course is 30 ECTS credits and the main objective is to provide a sound linguistic basis for future studying and professional life through:

- developing an adequate linguistic and communicative repertoire for studying and professional work
- being capable of understanding and making themselves understood in a professional environment
- being able to communicate knowledge and information both orally and written
- developing sufficient language skill to emerge as professionals with integrity and authority

Surprisingly to us, 2/3 of the participants were immigrants who already had completed a bachelor degree at a Norwegian educational institution, and were working as professionals. The rest of the participants were students at a bachelor program or attending a postgraduate program. In spite of fulfilled admission requirements, they had all experienced that their Norwegian languages skills were insufficient for work and studies.

Realizing the potentiality of this course, depends on lecturers’ confidence in the use of ICT in teaching and learning. They have to believe that ICT is an important tool in communication and language learning, they have to take initiative to explore the ICT as a pedagogical tool and they have to be creative. If the teachers do not give it priority, why should the participants? Some of our students expressed resistance, and the resistance was taken into consideration. Teaching and learning is closely connected to seminars, to tutoring, instruction and guidance in face-to-face situations. Accordingly, none of the lecturers were particularly concerned of what happened between the seminars.

The aim of this project was to bring about knowledge about how adults with deficient language and ICT skills could take advantage of the potentiality of ICT in language learning. Unfortunately we have to face the fact that data from this case-study reveals little of what we were looking for. ICT was used at a minimum, and the lecturers did not give learning and exploring ICT as a pedagogical tool priority. In other words, they did not follow up the intentions of the course. However, it is interesting to note that the participants identified the tasks where they applied ICT, as most useful to language development. Digital storytelling and blogging were considered as relevant to their working life, and therefore mostly motivating and engaging.

The case study reveals a great need of change in attitude amongst the academic staff to make use of ICT in teaching and learning. ICT demands a shift in the role of the academic staff, from teaching the students to become a mediator of learning, working online with the students. Good practice has likely yet to emerge.

## **THE NEXT GENERATION: TRANSFORMATION TO A 21<sup>ST</sup> CENTURY UNIVERSITY VIA CORE STRATEGIC PROJECTS**

*Dietmar K. Kennepohl, Rory McGreal, Cindy Ives, Brian Stewart, Athabasca University, Canada*

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Athabasca University (AU) is re-inventing itself as a 21st century e-university. Its road to transformation does not just involve integration of technology into a classroom, but a cultural shift requiring the wholesale integration of systems, skill sets and processes across an entire organization. This was greatly accelerated by two recent externally-funded university programs (\$14 million total): one to increase systems capacity and currency for research, collaboration, learning, content management and student support, and the other for the digitization of all AU course content. They were part of two separate national economic stimulus initiatives under Canada's 2009 Economic Action Plan.

The sheer size, complexity, and deep institutional implications of this undertaking, coupled with the short time frame (24 months), represented an unprecedented challenge for AU. Although these programs and their technologies are major characters in our story, it is more about effectively leading and managing large-scale change initiatives. Accordingly, an analysis of the effect of the start-up and operation of these two major programs with particular emphasis on project management, organizational change, acceptance by the academy, and absorbing the additional work is given. We offer, in the form of lessons learned, our experience for successful systematic integration of ICTs within a large educational organization.

### **Meeting the Challenge**

Setting up the proper governance and project management frameworks was vital for AU to be successful. We adopted a two-tier structure consisting of a (1) steering group and (2) operations group. This structure was able to provide depth of analysis with simplicity of structure. The paper then goes on to address many of the key people, technology and process issues that the projects presented. This would include establishing physical locations, absorbing additional work, recruiting temporary staff, orientation and training, financial tracking, communications, coordinating change and regular business, and reporting and documentation.

### **Lessons Learned**

Innovation is not a smooth uninterrupted flow of adoptions into a pre-determined master plan. While a plan is critical, adaptability and a focus on execution are the keys to eventual success. A couple of the sub-projects did not achieve their objectives as stated in the project charters, but served as effective lessons on the nature of innovation and organizational change. We summarize some of the more important take-away lessons that we would employ in future initiatives, as well as ongoing university business. After having gone through the changes catalyzed by these programs, one naturally looks back and wonders why we did not start earlier. We learned that you need to discuss and plan, but you also have to move on from there to action. The overall lesson here – just do it!

### **Conclusion**

The transformation of AU is an ongoing process. It has been substantively influenced and accelerated by major programs. The mega nature of these programs not only helped to push the transition from print to online, but also created immense organizational, logistical and cultural challenges for us. Initial indications are that real change is occurring in many areas, and that we have learned and grown from the experience. There is no doubt that we have become more advanced and more confident in tackling larger change initiatives. We have witnessed what can be achieved and there is also no desire to go back to many of the past practices. We may not arrive at the exact future we envisioned for AU in the 21st century, but we start our journey knowing that "The best way to predict the future is to invent it."

## **ONTOLOGICAL EXPERIENCES FROM A UNIVERSITY'S CHANGE MANAGEMENT OF ITS ONLINE LEARNING INITIATIVE AND ASSOCIATED CONTINUING PROFESSIONAL DEVELOPMENT OPPORTUNITIES FOR ACADEMICS**

*Geoffrey Goolnik, Comfortable Learning, United Kingdom*

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The fastest growing sections of the world's advanced economies are now knowledge based and universities can occupy a key role here connected with developing knowledge processes, exploiting knowledge possibilities and playing their part in cost effectively skilling or re-skilling the workforce. In this connection, university leaders are repeatedly being asked by governments to improve learning and teaching within their institutions to meet certain national standards of excellence, and to deliver across the board measurable outcomes, implementing technology enhanced approaches to achieve such goals and to pursue them to quality standards. While doing so they are however faced with less state financial support and are, in various ways, encouraged to be far more entrepreneurial in what they do. A significant challenge for senior management is how best to facilitate fresh approaches within their institutions, internally empowering staff and encouraging participation, aligning individual motivations and concerns with organisational goals. In particular, this should include the development of engaging policies and practices in relation to the Continuing Professional Development (CPD) of the academic staff. A concern has been that higher education might not be able to successfully address the cultural challenges involved, one reason being a reluctance often found amongst (often older) well established academics who felt threatened by the pressure to understand and implement the pedagogical skills that work most effectively with technologically enhanced practices.

Change management is accordingly a complex, social phenomenon and this paper reports on a qualitative study that sought to isolate the above aspects in a way that gave voice to and uncovered the socially constructed, ontological understandings and interpretations of those involved. More especially, it investigated – through a phenomenological analysis of the introduction of the two successive virtual learning environments – how change management was handled at one UK University with regards the pursuit of online learning, the impressions of those who had directly experienced these changes and the CPD that was developed and delivered in the initiative. Data was collected from conversational interviews with a purposeful sample of senior university managers, academic managers, academics and academically related staff. These interviews were then subsequently analysed through a human science research framework. The analysis progressed through a series of ongoing hermeneutic or interpretative cycles with an examination revolving around the whole lived experience, its constituent parts and the researcher's prior understandings. This led to the generation of meanings and sets of relationships which were then in turn re-evaluated, with such cyclical interpretations being finally whittled down to certain over-riding thematic concepts.

These (three) essential themes that eventually emerged from the analysis centred around experiences emanating from planning and leadership for change, systems operations for change and preparing staff for change. The findings that were deduced from these themes were then in turn compared to key points already revealed by research studies that have been conducted elsewhere. While the investigation further confirmed these various published findings, it has still made a distinct contribution to the literature. This is firstly because, through highlighting feelings felt within the context of such a period, the investigation employed a methodological approach that very few it would seem have trodden before in the field of change management in general and, more especially, the personal and emotional dimensions of such change with reference to new technologically enhanced delivery methodologies. Added to this, the investigation benefited from a picture built up through an extended length of time because of the University's unusually long involvement with online learning; and, thirdly, the institution had/has acknowledged high quality standards of teaching using traditional face-to-face formats. In the final parts of the paper, a number of recommendations intended to be of use in the University's ongoing management of its online learning initiative and associated CPD opportunities for academic staff have been proposed, while unanswered questions and the scope for further research have been established.

## **ONLINE LEARNING OPPORTUNITIES AND CHALLENGES: THE CASE OF IOWA STATE UNIVERSITY**

*Ana-Paula Correia, Julio C. Rodriguez, Iowa State University, United States of America*

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Engineering-LAS Online Learning (ELO) at Iowa State University, USA initiated operations as a single organization in 2011 and is composed of a Curriculum Development unit, a group that provides professional guidance and technology tools to design and develop online learning experiences for hybrid and online courses. The Curriculum Development context is the primary focus of this paper. Capitalizing on strengths and defining alternative forms of student assessment are some of the online learning opportunities identified. Conversely, the emerging challenges are related with addressing the generational gap between students and instructors, guiding practice with a common quality framework and designing, development and evaluation approaches.



## **E-LEARNING IN PORTUGAL: THE CHALLENGES AHEAD**

*António Moreira Teixeira, Paulo Dias, Universidade Aberta, Portugal*

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Many exciting developments have taken place in Portugal regarding E-learning in the last years. Important changes in legislation and in Government policies have occurred, which resulted from a consistent national strategy towards digital citizenship, but also much actions have been taken at an institutional level, across all educational sectors. Moreover, companies have also started to implement forms of e-training on a much wider scale. E-learning in Portugal changed from a cause of some heroic champions to a mainstream phenomena. One major event that triggered this change was the wide-acknowledged success of the institutional change process overtaken by Universidade Aberta (UAb), the Portuguese open university, from a print-based distance learning to a fully online university. In fact, the speed of transformation, the cultural impact and the international recognition of the innovative strategy pursued by UAb inspired both Government and other Higher Educational institutions.

In 2008, at the EDEN Conference held in Lisbon, UAb organized a special workshop on its institutional changing process, chaired by António Teixeira and Tony Bates. Four years later, the time has come to reflect on how that successful innovative experience can still inspire the future. In this workshop on the state of E-learning in Portugal we'll focus on the new challenges ahead for the E-learning community, in a moment when E-learning is facing the difficulties but also the opportunities resulting from an economical and social particularly negative environment. The debate, chaired by Paulo Dias, Universidade Aberta's Rector, will be lead by a panel of Portuguese E-learning leading experts from the major universities and the private sector.

## **ICT IN THE PROCESS OF DEVELOPING LEARNING TO LEARN COMPETENCES IN LIFELONG LEARNING TRANSITIONS: FROM THEORY INTO THE PRACTICE**

*Magdalena Jasińska, Maria Curie Skłodowska University, Poland,  
Tresa Guasch, Universitat Oberta de Catalunya, Spain, Päivi Virtanen, University of Helsinki, Finland*

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### **Introduction**

Transition from secondary school to university, entering employment, moving back into training or education to reskill or upgrade competencies represent a challenge for any learner. Research suggests that an approach based on the development of learning to learn competencies could contribute largely in equipping learners to deal with these transitions more effectively. Learning to learn competencies pursue the learner think critically and be aware of her/his own learning process in order he or she can succeed. Furthermore, approaches such as social media, social networks, digital media, serious games, virtual worlds, ePortfolio and blogs have enormous potential to support the development of learning to learn competencies and to accompany citizens in transitions throughout their learning lives.

Development of transversal competencies such as learning to learn and the need to improve usage of ICT in higher education are also strategic priorities for Europe. On the other hand the true value of the contribution of ICT to the development of learning to learn competencies is still to be demonstrated, as illustrated by a recent report in France which clearly states that knowledge of the role of ICT in this field is only embryonic and requires further investigation. EDEN workshop is a great opportunity to draw the attention of the participants to this subject and gives the chance for ICT experts, researchers and teachers who will take part in the conference to share their opinions and experiences in this field. By bringing together our knowledge, experience and expertise with conference participants' experiences, we intend to put ICT and digital media firmly on the map as key contributors to the development of learning to learn competencies in lifelong learning transitions.

### **Aim of the workshop**

In frame of eLene2learn network ([www.elene2learn.eu](http://www.elene2learn.eu)) existing practices, tools and methodologies in the application of ICT to the development of learning to learn competencies will be identified and described. This workshop will be part of the activities aimed at collecting new practices and validating already collected outcomes. The results of the research will be presented, reflected and validated by workshop participants. Collected opinions and new approaches will serve as input for practical 'how to' guide for teachers in Secondary Education (SE) and Higher Education (HE), demonstrating how they can integrate ICT into learning and guidance activities to support learning to learn competencies, and how these can smooth lifelong learning transitions (from SE to HE or in other contexts).

By participating in this workshop conference delegates will have a chance to contribute in developing new approaches in using ICT to develop learning to learn competencies, share their opinions and specially be inspired by others to transfer the experiences into their practice.

## **LEARNING IN E-EUROPE IN 2022: SCENARIOS FOR A MORE OPEN, EFFICIENT, SUSTAINABLE AND USER-FRIENDLY EDUCATION SYSTEM**

*António Moreira Teixeira, Universidade Aberta & Universidade de Lisboa, Portugal,*

*Alain Tait, The Open University, United Kingdom*

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In a time of great uncertainty regarding the future of Europe, planning ahead is as difficult and risky as necessary and critical. It's clear to see a certain idea of Europe and its correlated social model is at risk. The crisis of the Euro Zone ideological framework represents also a crisis of the foundations of the European education integrated area. That Europe we have been preparing our students is changing and educations are bound to change with it as well. Yet, what will it change into?

What will be the future of European education ten years from now? And, what will be the future of E-learning in a ever more e-Europe? In a political and social environment increasingly focused in economical sustainability and thus in higher efficiency in managing and using resources (human, material, financial) as well as in providing higher quality at a lower cost for more people, seems inevitable the implementation of technologically-supported forms of learning will dramatically increase.

The Eden Fellows as the European think tank for distance and e-learning will address this pivotal challenge in the coming Porto annual conference. A panel of Fellows will explore a set of alternative scenarios for e-learning in Europe in 2022. This event, however, will be highly interactive and use a collaborative methodology. In fact, during the month of May, a team of young researchers selected from some of Europe's top advanced research courses in E-learning discussed a topics agenda they consider most relevant for the definition of the future of distance and E-learning in Europe. The young researchers discussion was facilitated by a team of Fellows.

During the Porto conference, a panel of EDEN Fellows, chaired by Senior Fellow Alan Tait, will present its vision and discuss possible scenarios with the workshop participants using as reference the agenda of topics produced by the young researchers. After the workshop, both the final versions of the scenarios a report on the results of the discussion produced by the young researchers team and coordinated by the facilitators will be part of a EDEN Fellows green paper on the future of E-learning in Europe. This EDEN Fellows paper will be published online in an open format and also submitted to the European Commission policy-makers.

## **DISTRIBUTED LEARNING SPACES IN OPEN LEARNING ENVIRONMENTS**

*Mike Keppell, Charles Sturt University, Australia*

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This workshop attempts to account for the diverse range of spaces that are enriching the learning and teaching experience for both academics and students and suggests the need to recognize the changing nature of learning spaces in higher education in order to optimize distance education. It will examine 'places' and 'spaces' in the life of both students and academics in higher education distance learning, and will discuss distributed and personal learning spaces across the spectrum of physical, blended and virtual learning spaces in the higher education context. The place of learning is becoming diverse and varied in distance education and there is a need to fully appreciate the affordances of distributed learning spaces in order to facilitate learning when students traverse the variety of places and spaces in which they learn. Distributed learning spaces may include: physical (formal and informal); blended, virtual (formal and informal); mobile, personal, outdoor, academic and professional practice spaces. The student experience may also involve connecting to virtual environments from home, a local cafe, studying on the train or participating in professional practice hundreds of kilometres from the physical campus.

## HOW CAN WE MOVE BEYOND RECORDED LECTURES?

*Sylvia Moes, Vrije Universiteit Amsterdam, The Netherlands, Clive Young, University College London, United Kingdom*

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### How can we move beyond recorded lectures?

The workshop will be presented by leaders from the Erasmus REC:all project (<http://www.rec-all.info/>) which is researching how lectures are currently being captured and used, suggesting learning designs for flexible and off-campus delivery, reviewing technical, pedagogical and legal issues and producing practical guidelines to help teachers. Workshop participants will be invited to join the REC: all active community of practitioners.

More and more universities across Europe are recording their live lectures and then putting them online ('weblectures') as a way to support both on and off campus students. Video is increasingly a core feature of the virtual campus with significant sector investment in lecture capture systems, podcasts, multimedia lecture theatres, i-Tunes U and streaming services. Lecture capture itself is rapidly evolving both technologically and conceptually. What was once seen as a passive recording method is now seen as an enabler of more participative and student-centred models. The Oasis project in the Netherlands for example discovered that the more interaction designed into the different types of weblectures, the better it works for students to really understand the material. Oasis created a multi-dimensional pedagogical model, now being integrated in the current REC:all project, where the types of different weblectures are related to learning goals.

The workshop will enable participants to explore and assess these new pedagogical designs for lecture capture, based on research and models from the Oasis and REC:all projects. Our focus is on adding value to learning in combination with interaction and social models. The workshop leaders will share our experiences of the last 3 years and work with the participants to collaboratively describe and discuss informal models to help individuals and institutions develop these potentially paradigm-shifting approaches. The workshop aims to develop our collective view, based on the participants' contribution and feedback on the applicability and potential of these approaches.

Participants who attend the workshop will also gain a deeper understanding of

- New technological and pedagogical learning designs based on lecture capture
- How weblectures can be used effectively in conventional, blended and distance courses
- Different types of interaction possible with weblectures
- The time and technological skills/infrastructure required
- How social networking can be integrated

Workshop participants will be invited to join and contribute to the REC:all active community of practitioners.

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## ADULTS' LEARNING FOR INTERGENERATIONAL CREATIVE EXPERIENCES – THE CHALLENGE AND THE INITIAL STRATEGY

*Barbara Baschiera, University Ca' Foscari of Venice, Italy, Luca Botturi, Association Seed, Switzerland, Umberto Margiotta, University Ca' Foscari of Venice, Italy, Nektarios Moumoutzis, Technical University of Crete, Greece, Juliana Raffaghelli, University Ca' Foscari of Venice, Italy, Isabella Rega, Association Seed, Switzerland*

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In the complex contemporary European society, social cohesion needs to be built on the basis of a new integrated and complex dimension of the social tissue, where **diversity** (among cultures, age, gender) is considered an **opportunity**. **Intergenerational learning** (IL) bring to the fore the question of “differences” that enrich: in fact, IL can be a twofold purpose process, that improve dialogue among generations through civic participation in common social and institutional spaces, while at the same time enacts processes of informal learning towards the achievement, both by adults and children, of key competences for lifelong learning. IL is hence, a mean and an end to foster social cohesion. But the key point is: how can we ensure IL? Which environments and languages better promote connections between generations, building a **proximal zone of intergenerational development** for the elder and the young learner? In fact, intergenerational learning is an uncommon situation that requires pedagogical innovation and *crossing boundaries of practice* (both personal and institutional). The key point is: how can we ensure IL? Which environments and languages better promote connections between generations? Creative languages, going beyond languages traditionally adopted in educational settings, could be an answer. The role of arts education in forming the competences for young people for life in the 21st century has been widely recognised at the European level. (Jan Figel, 2009, year of Creativity and Innovation in Europe); in adult education, art (from themed film and art to literary evenings, graffiti and “performative” social media like blogs or videorepositories with own texts/images) and games are used as focal point, as events/situations/objects that promote emotional engagement together with reflection on life values, relationships, identity. The kernel of effectiveness is the creative process, where emotional intelligence together with divergent cognitive processes is enacted. CL are hence powerful tools for facilitating dialogue with otherness (in this case, children). The key issue is the opportunity provided by CL of “being together” in non-traditional ways, sharing the creative activity with a feeling of play, exploring, trying, expressing. Furthermore, all these activity are now naturally mediated by technologies; in fact, there’s an exponential development of accessibility and usability of the same via the phenomenon of Web 2.0 and particularly of social media, that causes the adoption of these new media for everyday life activities of searching for information, self-expression, social connections and support, all these dimensions connected to informal learning and hence, to the participation to lifelong learning pathways. As a consequence, the Creative Languages to be adopted during the project are mediated by technologies to support new *literacies* and empower dialogue and expression. In line with this focus of interest, our workshop introduces key activities and reflections envisaged within the context of GRUNDTVIG LLP PROJECT ALICE “Adults Learning for Intergenerational Creative Experiences”. The project aims to work with parents, grandparents, volunteers and other adults interested to interact with children through **creative languages** (art, storytelling, social media) to build **rich and caring environments** for children to grow up. As a result, intergenerational learning could be stimulated, with impact on the achievement of key competences 1, 4, 5, 7 and 8 (COM 2006/962/EC). The workshop will hence introduce the project’s challenge and the connected initial strategy, that will be developed through the several activities envisaged during the project’s life cycle, namely: a) the theoretical reflection on intergenerational learning and parents education (Margiotta & Baschiera) b) the project structure and strategy of implementation based on the training of trainers (Raffaghelli); c) three examples of creative languages in practice: Autobiographical writing and intergenerational learning (Baschiera); Digital Storytelling for intergenerational narratives (Botturi, Rega); Games and social media to promote intergenerational learning (Moumoutzis).

## **INCREASING EQUITY IN HIGHER EDUCATION BEYOND RHETORIC: CAMPAIGN LAUNCH AND RESEARCH RESULTS OF THE PROJECT'S SECOND YEAR**

*Fabio Nascimbeni, MENON, Belgium, Anthony Camilleri, ScienTer, Italy, Livia Turzo, EDEN, United Kingdom*

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### **The EquNet project**

EquNet is a 3-year project researching the state of equity in Higher Education in Europe. The EquNet project was conceived as an independent research and networking initiative, with an aim to increase access to Higher Education for all marginalised and non-traditional groups based on a principle of equity. With the help of European Commission funding under the Lifelong Learning Programme, the project has brought together a consortium of renowned research organisations and stakeholder representatives to work on the project, ensuring a sound methodological base for the research presented here, and a wide audience to which to distribute the recommendations.

The project now is in its final year, already having published a research report entitled *Evolving Diversity* and had run an essay, video and photo competition on the topic. In this last year of the project, the publication of the second report and a campaign with ENAR – European Network Against Racism are scheduled. The campaign starts in May and targeting national policy makers, individuals and EU networks and stakeholders. The second report focuses on the access to HE for persons with a migrant background, lifelong learners and persons with family or work commitments, persons from rural areas and persons with special needs.

### **Background**

Widening participation in higher education is a major component of education policy in many member states of the European Union and of the Bologna-Process and should consist of an attempt to increase not only the number of young people entering higher education, but also the proportion of “under-represented groups” (those from a lower social strata, ethnic minorities or people with disabilities). Social inclusion is important to HE as still too many capable students are excluded from the higher education system due to their background, insufficient study support systems or other barriers.

Non-traditional access patterns are crucial for making lifelong learning reality, widening access to higher education, and securing the supply of a well-educated workforce in times of demographic change. European countries differ vastly in the extent of lifelong learning in HE and the EquNet-project will make some effort to provide more international comparative data on that issue. Also the Commission’s “Agenda 2020” includes a reference to lifelong learning. Thus, lifelong learning “needs to be much more accessible and universities should be more open to non-typical learners.” The European policy goal regarding lifelong learning thus schedules a percentage of 12.5 % of the adult population to participate in lifelong learning activities.

### **The EquNet workshop**

During the workshop, research results will be presented, the EquNet-ENAR campaign will be launched and the recommendations will be introduced. These recommendations are based on the research outcomes and give the basis of the campaign document.

More information available at: <http://www.equnet.info>

## **INTERGENERATIONAL LEARNING AND ICT IN THE EU: POLICY AND PRACTICE**

*Géraldine Libreau, Brian Holmes, Annalisa Colosimo, Susana Neves Vargas, European Commission and the Education Audiovisual and Culture Executive Agency, Belgium*

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A major challenge of European societies is the progressive ageing of the population, including the risk of a growing gap between the generations. Especially as fast developing new technologies increase the distance between the younger and the older generations. 2012 is the European Year for Active Ageing and Solidarity between Generations (<http://europa.eu/ey2012/>). It aims to encourage debate on the challenges related to growing older, and at the same time raise the awareness and recognition of how older people can contribute to society.

The acquisition of Digital Competence is an important element of supporting active ageing, opening up new learning opportunities for this group, either in formal or in informal settings. Using ICT is also a privileged means of learning while creating benefits across different generations, bringing young people and seniors together and tackling the “digital divide”.

The Lifelong Learning Programme (LLP), which supports learning throughout all life stages, is one of the European Union programmes that aim to promote active ageing through learning in later life. In particular, through the Grundtvig sub-programme, funds are available to co-finance projects that, among other objectives, provide seniors with the skills they need in order to remain active in society or that strengthen the contribution of older people to the learning of younger generations.

This workshop aims to illustrate how the European Union contributes and supports intergenerational learning and active ageing through the development and use of digital skills, through a presentation of the EU policy developments in the field of intergenerational learning and four case studies of EU funded projects. The projects that will be presented:

### **mix@ges – Intergenerational Bonding via Creative New Media**

mix@ges promotes understanding and dialogue between younger and older generations throughout the European Year of Active Ageing and Solidarity between Generations. mix@ges encourages intergenerational bonding through media arts, overcomes negative stereotypes and bridges the generational gap. The project creates incentives and access to social, civic, cultural and intercultural competences and creativity by intergenerational and digital learning.

### **The Knowledge Volunteers – TKV**

The TKV project objectives are: promoting digital competence amongst elders at risk of social exclusion through intergenerational exchange and relations with young people; encouraging the active participation of elders in society through voluntary activities, thus enhancing self-esteem, identity and social relations; creating a network of “knowledge volunteers” of all age groups.

### **LEAGE – Learning Games for older Europeans**

LEAGE aims to motivate older people to participate in lifelong learning activities by transforming those activities into games. LEAGE is expected to provide an alternative, innovative way of learning for older people. For this purpose, two popular mediums, digital TV and Kinect for Windows have been chosen for delivering the educational games. The fun of games coupled with gerontology research, as well as the ease of use of the proposed platforms will provide a strong motivation for older people to learn and exercise in a funny way.

### **Intergenerational ICT Skills**

The objectives of this project were to explore and develop models to create learning opportunities between generations, particularly by encouraging and supporting older adults who are afraid or reluctant to participate in learning. It also wanted to promote the motivation of older people for acquiring basic understanding of ICT through an intergenerational transfer of skills and to prepare them for further access to education. Moreover, the project aimed at promoting the younger generation’s awareness of the cultural and social diversity in Europe as well as their understanding of historical background to increase tolerance and to reduce prejudice.



## HOW E-LEARNING PROMOTES INTERGENERATIONAL LEARNING EXPERIENCES IN PORTUGAL AND BRAZILIAN EDUCATION INSTITUTIONS: A DEBATE BY THE E-LEARNING GURUS PORTUGAL NETWORK

*Ana Dias, TecMinho @ Universidade do Minho, Paulo Simões, Portuguese Air Force,  
António Teixeira, Universidade Aberta, Portugal*

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The e-learning Gurus Portugal Workshop at EDEN 2012 in Porto will present the results of a debate conducted by its member researchers, practitioners and/or students from Portuguese and Brazilian Higher Education Institutions on how learning is helping promote intergenerational learning experiences. Created in 2009, the e-learning Gurus Portugal Network has over 1,500 members coming from Portugal, Brazil, Spain and other Portuguese and Spanish speaking countries. The group was created following a number of national face to face events on e-learning (e-learning Conferences organized by TecMinho e-learning Centre @ University of Minho, since 2004) and aimed to extend the face-to-face contact to an online participated and collaborative group. Group members are very active and promote, share and discuss contents, news and events dedicated to e-learning and technology enhanced learning. Group members coming from Higher Education Institutions are bringing their students and promoting thematic discussion, like for instance the one going on about “Personal Learning Environments” where students are working on the “PLEs” directly with teachers from Portugal and Brazil, putting questions and sharing contents, creating a knowledge learning space about this topic. Group members use the network to ask questions and present concrete examples and opportunities on e-learning, promoting significant learning experiences and knowledge.

During the EDEN 2012 Workshop we'll debate concrete examples and opportunities of collaboration in what relates to intergenerational learning between teachers, students and experts, detecting significant examples, real time and long term collaboration between members. The aim of the Debate is to understand the impact that those learning experiences had in the individual learning process, and to understand how members are relating between them. We intend to map the ways a social network group can improve members learning experiences, mixing formal and informal ways of learning, crossing generational barriers and providing access to extra-mural experts and teachers.

**Online and Face-to-face Workshop, main tasks and steps:** The e-Learning Gurus – Portugal Network administrators will manage an online debate aiming to share and discuss experiences on how the group contributed to promote (intergenerational) learning experiences between experts, teachers and students. In the online space we will invite members from Higher Education Institutions (teachers, students, e-learning practitioners, administrators) to explain their views and to share their stories around uses of the group to amplify their contacts, contents and knowledge.

During EDEN's Workshop, a face to face discussion will be chaired by Ana Dias and Paulo Simões (network administrators), sharing with the live participants the impressions and the particular experiences of the e-Learning Gurus Portugal group members, thus amplifying the online debate. This should be an interactive session, where live participants and online ones could discuss the presented remarks. The e-Learning Gurus members would be presenting the conclusions of the debate at the workshop in the EDEN Conference.

## IDENTIFYING NEW 'BLENDED' SUPPORT ROLES TO ENABLE INSTITUTIONAL CHANGE

*Clive Young, Stefanie Anyadi, Lorraine Dardis, University College London, United Kingdom*

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### Identifying new 'blended' support roles to enable institutional change

As the complexity of teaching and learning in Higher Education has grown we have seen the emergence of a cadre of academic managers and administrators. In technologically-rich blended and distance environments these 'new' cross-boundary professionals have a very positive contribution to make to the student experience.

As a consequence in recent years a range of responsibilities have shifted from academic to support staff. In many departments Teaching Administrators (TAs) now have wide or 'hybrid' responsibilities for admissions, quality management, programme and course coordination and planning, VLE course management, student advice, etc.

The workshop aims to raise awareness among attendees of the need to identify and develop new blended support roles and strategies in their institutions. Participants will be invited to share good practice, exchange and compare institutional approaches, look at the changing roles of the academic and the support framework, explore how 'digital literacies' underpin these developments and identify actions for their own educational context.

The workshop derives from The Digital Department, a major UK project based at University College London. We believe a new professional group is emerging which will have a major role to play in the development of new forms of blended and off-campus education over the next decade. The project is investigating how by benchmarking and developing the digital literacies of this group in a structured way especially enhancing their awareness of pedagogically-effective learning approaches we can support even traditional research-led universities develop more blended and distance approaches.

Intended outcomes for participants:

- Identification of potential sources of support and collaboration at home institution
- Identification of resources that would be useful for this professional group at home institution
- Action points for building collaboration within institution
- Building a network across institutions

### Resources

JISC The Digital Department project: <https://blogs.ucl.ac.uk/the-digital-department/>

## ROADMAP TO DIGITAL SCHOOL: A CASE STUDY FROM ITALY

*Giuseppina Cannella, Leonardo Tosi, Elena Mosa,  
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In Italy the strategies carried out by the Ministry of Education have supported a number of regional and national projects that have activated a long-term innovation process in a school system that has been reluctant to innovation for many years. IWBs are going to be integrated at each school level, example of excellence are emerging together with school districts and schools from some regions are going to be completely digitally equipped. As the Digital Agenda is working on, European board should ask for a common framework of strategies and models that could be adapted to specific national or regional contexts. The following article will discuss how concrete results are being reached through the joint effort of the Ministry of Education, our research institute, the local authorities and the school communities.

### Learning environments for the 21<sup>st</sup> century

ICT can actively contribute to redesign the learning environment according to time and space components. Standard school settings are no longer responding to the needs of the knowledge society, as they were created for the industrial society. This kind of setting only allows for knowledge transfer, while we know that learning occurs in many different activities that range from listening to exploring, discovering, making mistakes and working in a social context.

During the workshop we will discuss the theoretical background, aims and results of the following National Projects we are in charge for:

- 2.0 Cl@ssroom project, a three-year (still ongoing) action aimed at providing technology and assistance (based on a coaching model) to 124 primary classes, 156 lower secondary classes and 136 upper secondary classes;
- 2.0 Schools project, a three-year (just started) action aimed at rethinking 15 schools from whole perspective;
- New school architecture, a project that is still in the definition of the concept.

The common focus of these projects is the modification of the learning environment using ICT in a way that have an impact on the teaching activities.

### Professional development models to support digital schools

Considering the Interactive Whiteboard expansion process in Italy, the National Agency for the Support of School Autonomy has promoted a country-wide professional developing initiative involving more than 80,000 teachers in three years. The Agency has set up a training learning model based on blended methodology. The training system is based on a blended model that includes face-to-face meetings and online activities performed on an e-learning environment built on constructivist instructional design principles. While IWB resellers provide an initial technical training to teachers in order to get them familiar with the technology and the main functionalities, the one year long support action delivered by ANSAS is divided into two phases. In the first part teachers explore with the e-tutor the pedagogical potential of IWBs using case studies, video recordings, interviews with expert teachers and discuss how the IWB affordances could be developed referring to their different contexts and teaching styles. In the second phase the focus is on the concrete use of the interactive whiteboard in the classroom with pupils. Teachers learn how to design IWB-based lesson plans and to re-organize teaching and learning considering the impact of the new setting in their professional activity.

### Networked classrooms to overcome isolation

Within the above described framework, The National Agency for the Support of School Autonomy (formerly Indire), has designed a pilot project for a lower Secondary School in a group of small islands in the Mediterranean Sea networked with two schools, one based in Florence and the other in Sicily. Although traditional classroom-based education remains the core of national education systems, it is becoming clear that it is not feasible to expand education systems in the traditional pattern to meet all demands – it requires too much time too many resources, “new approaches and new models are needed if Education for All is to be achieved”, according to UNESCO “Inclusive education means that the school can provide a good education to all pupils irrespective of their varying abilities. All children will be treated with respect and ensured equal opportunities to learn together.”

## **LEARNING HEALTH TOGETHER OVERCOMING BOXES: PROFESSIONALS VS. PATIENTS, AGE CATEGORIES, ETHNIC & SOCIAL CULTURES – THE WEBWISE PROJECT**

*Walter F. Kugemann, MENON Network, Belgium and New Technologies & Learning, Germany,  
Bob Fryer, Chair of Board Campaign for Learning, United Kingdom,  
Anthony F. Camilleri, EFQUEL European Foundation for Quality in e-Learning, Belgium,  
Thomas Kretschmer, ILI(FIM) University of Erlangen and University of Duisburg-Essen, Germany*

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### **Challenge**

- Health and education are amongst the most important social and economic resources in contemporary Europe as in the rest of the world, and both are facing very substantial transformation process. Accordingly, the current healthcare education system is coping with a wide-spectrum of challenges, the most notable of which being the inclusion of the ever increasing skill and training requirements for healthcare graduates as well as innovation in many fields.
- What is more, the Bologna Process has brought about a series of important reforms in Higher Education, having initiated processes aiming significant harmonization in recognition, course structure and quality assurance to name but a few examples. An even cursory look at the instruments created by Bologna process shows an emphasis on flexible learning pathways, recognition of prior learning, widening access to second cycle studies and a host of other instruments aimed at doing quite the opposite of the negative perceptions of the process.
- With this in mind, WEBWISE brings together a range of European higher education institutions active in the field of public health education as well as experts for innovating e-learning, to analyze, experiment and develop innovative learning scenarios within public health education.

Based on a series of common activities and international projects (amongst them WHOLE closed; WEBWISE running a group of health (in particular public health) experts and widely known institutions joined forces with eLearning / eCompetence Building lead institutions and networks to go beyond this analysis and the insight into the urgent need for a complete transformation of our health systems, which can be found increasingly.

### **Why should I care about simulation technology?**

Healthcare systems throughout Europe are suffering a lack of qualified graduates across the healthcare professions, a symptom of the skills mismatch in European education systems. Amongst the thematic areas in lifelong learning, healthcare is considered to be amongst the hardest, costliest and longest, which impacts the accessibility to such an area of study. It also provides unique ethical issues due to the fact that eventually students will need to practice on human beings in order to progress in their studies.

The world of healthcare training can often be messy. Traditionally, many procedures could only be practiced on patients – with students of healthcare trying procedures for the first time under the eyes of supervised tutors. Even after this phase was over, any healthcare professional would perfect his skill over years of practice, involving innumerable unforeseen situations, which, despite even the best training, could only be met with a trial and error approach. Thus, in a 2009 report, the UK Chief Medical Officer quoted that “when a person steps on a plane, their risk of dying in an air crash is 1 in 10,000,000. When a person is admitted into a hospital, their risk of dying or being seriously harmed by a medical error is 1 in 300”.

Simulation can be simple as video-analysis of procedures or e-training; or may be as complex as virtual-world simulations, robotic simulations or even fully simulated experimental surgical training. These techniques all allow students to easily practice medical techniques in their training and learn the theory through experimentation. These results in a very significant change in pedagogy, which the project is attempting to systemise, thus improving the safety, efficiency, quality, reliability and reproducibility of healthcare training

### **The evidence-base needed for decision-makers to make investments into the field**

The adoption of ICT-enhanced techniques brings with it many advantages but adoption requires considerable up-front investment as well as the restructuring of courses and pedagogies which can in turn lead decision makers to hesitate in investing in the development of such cutting edge technologies. To help tackle this, results produced by SIMBASE will be collated into decision-making tools such as the impact-assessment model, implementation guides and a policy roadmap. These tools will allow decision makers throughout Europe to learn from best practices. It will be adopted an open access strategy which means that all project deliverables will be released to the public on an open license and will be copied into several open-access repositories.

### **Learning for the transformation of our health systems in the risk society**

Based on many decades of experience on the analysis, policy consultancy and dissemination planning and support for widening access to learning and to innovate large scale health education and competence building, mostly in the UK, Bob Fryer analyses the factors driving the evident needs for a universal transition process of our health systems.

Particularly the challenges to design and implement innovative systems for a future no longer predictable are described, understood by evidence and discussed in their implications in particular for the sub systems for qualification, learning and life long competence development.

This prepares the ground to map the over all options in times of globalisation, demographic change, social and societal inclusion on the background of a substantial change and an increasing spread of health cultures.

## **THE FUTURE OF DIGITAL CREATION AND ITS IMPACT ON EDUCATIONAL INNOVATION – 5 LIVE DEMONSTRATIONS OF SIMPLE AND CUTTING EDGE DIGITAL CREATION TECHNOLOGIES THAT WILL HAVE GREAT EDUCATIONAL IMPACT IN THE NEXT FIVE YEARS**

*Andre Gomes Genesini, Educamos Online, Cristiana Mattos Assumpção, Colégio Bandeirantes,  
Luci Ferraz de Mello, University of São Paulo, Brazil*

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This workshop demonstrates 5 new technologies that will impact, in the next five years, collaborative educational learning and the way we create and consume content. At the same time, it is a practical lab that demonstrates the new technologies and how they are being used in educational institutions around the world, both in formal and informal settings. Many demonstrations will include the participation from the audience, as they work on their own devices, and will continue in an online group created especially for this conference.

The chosen technologies are strongly based on the Horizons Report, as well as the experiences of the authors in implementing these new technologies in several educational institutions.

### **Format of the session**

BYOD (Bring Your Own Device) format: Participants are encouraged to bring their own devices (smartphones, notebooks, netbooks, tablets). The technologies will be demonstrated inserted in the classroom context, with real examples of how they are being used in educational settings. Debate will continue afterwards at an online group created specifically for this workshop. The technologies and educational applications that will be available for a hands-on demonstration at the workshop are:

- Ebooks and interactive publications – collaborative authoring and its impact on education.
- Tablets, Smartphones and Augmented Reality: Simple educational uses.
- The Revolution of 3D Objects, Web 3D and how they can be used in educational collaborative productions.
- Facebook, Twitter and social media: content repository uses, the expansion of educational frontiers and as publication tools (books made from the compilation of tweets and posts in social networks).
- Gesture-based computing in education: best practices.

## DESIGN PRINCIPLES FOR PEDAGOGIC MULTIMEDIA

*Jack Koumi, Educational Media Production Training, United Kingdom*

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### Rationale

There is a regrettable scarcity of rich media being offered to eLearners. Where this exists the presentation and interactivity rarely display pedagogically effective design.

### Summary

This 90-minute workshop offers a framework of guidelines for designing multimedia learning packages, concentrating on achieving pedagogic audio-visual synergy, effective interactivity and incorporation of appropriate video clips. The framework derives from the author's experience of producing and appraising multimedia packages at the UK Open University.

### Topical Outline of the Workshop

The author will present then interactively discuss a framework of guidelines for designing multimedia learning packages, concentrating on achieving pedagogic audio-visual synergy and effective interactivity. Multimedia clips will be used to illustrate 39 design principles, in the following categories:

- **Use of language**, e.g. write conversational speech, to be spoken and listened to, not sounding as if it is being read from a script – techniques to achieve this
- **Layout of the screen** e.g. design uncluttered, sparse layout, 25 % of normal hard copy density
- **Screen text vs. audio commentary**, e.g. Literate students can read faster than you can speak, so if the screen text duplicates the entire narration, students would process the visual and audio sources asynchronously, causing mutual interference
- **Images and commentary mutually reinforce**, e.g. highlighting an item when it is mentioned is an example of the images synchronising with the corresponding words – which is normally appropriate. In contrast, on some occasions, the words should precede or follow the corresponding images
- **Navigational Guidance and Student Control**, e.g. start the package with a Contents page from which learners can access the different sections. This page should record where students have been
- **Interactivity and scaffolding**, e.g. if a student types an incorrect answer into a dialogue box, there should be an option to get one or more hints, or to try again and finally to be told the correct answer
- **Incorporation of appropriate video clips** – to contextualise the topic and supply concrete examples of its concepts

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## **INTERACTIVE E-LEARNING AS A TOOL TO OVERCOME SOCIO-ECONOMIC AND AGE-RELATED DISADVANTAGES**

*Sabine Stöcker-Segre, Yossi Elran, Davidson Institute of Science Education, Israel*

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### **Introduction: free interactive e-learning sites facilitate access to teaching programs**

Free educational internet websites offer a unique learning platform accessible to everyone regardless of their socio-economic background and physical distance from educational institutions. Moreover, these sites erase any limiting features or characteristics such as age, gender and origin. Hence, many educational organizations and institutes are eager to offer such platforms. From a management point of view, this is not always that easy. Resources need to be managed in an optimal way in order to offer *free* access to interactive e-learning of scientific content. Creative thinking, careful planning and ongoing monitoring and research are required in order to make a successful website – one that engages many surfers in the learning process for long periods of time. In this paper we present an overview of some of the interactive learning content in math and science that are produced at the Davidson Institute of Science Education, the educational wing of the Weizmann Institute of Science. We discuss the importance of including learners in the creation of knowledge as opposed to frontal teaching, as well as ways to reach this goal. Furthermore, we investigate the question of how to reach elderly and socio-economic disadvantaged people and what kind of learning material might be particularly attracting for them. In addition we present and discuss statistics of access to the Davidson's institute's interactive e-learning site.

### **The importance of the community and of contributing to it**

Integrating elderly people and socio-economic disadvantaged people into a community of people interested in science does not only mean to offer frontal lessons such as online articles. On the contrary, learning should be active, i.e. interactive, and learning units should be accompanied by online forum discussions where participants very often do not know of each other's age and background. This initial anonymity helps encourage introverted individuals and to overcome prejudice induced barricades. In fact, we observe that very often, participants in scientific online forums make additional use of e-mail, chat rooms or facebook to reveal more about their personality, once they become more comfortable. Hence, anonymous online forums are just a starting point that helps to integrate individuals into a community of e-learners interested in science.

Elderly people may suffer from various kinds of normal life impairing health conditions, among them restricted mobility, hearing and sight. It is obvious that the internet is appropriate to solve the problem of physical distance from educational institutions. In addition, by means of podcasts it may solve problems of intellectual isolation caused by impaired sight. It is important to offer podcasts for at least some of the content.

### **Statistics and outlook**

In a research to be carried out we will investigate the age distribution of the visitors to the site and their motivation.

In a preliminary study, we investigated the access to the Davidson's institute e-learning site in two different ways: Google analytics and Facebook statistics.

With this survey we expect to get a clearer picture of the age distribution of the visitors to the site, understand their motivation and learn what kind of material should be offered. Specifically we are investigating ways to integrate life-long learners both in the learning and the teaching process of scientific e-learning content.



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## **CASE STUDY – AN EVALUATION OF THE USAGE OF ICT TOOLS IN A DISTANCE LEARNING COURSE BY MATURE STUDENTS**

*Anna Campbell, Evelyn Reisinger, Lisa Migo, Kate Reader, City University London, United Kingdom*

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City University London runs a distance learning PGCert in the Principles and Practice of Translation. This course started in January 2009 and is run via our virtual learning environment, Moodle. Moodle is a flexible space, allowing for a number of embedded tools to be used e.g. discussion forums, assignment submissions; as well as being a platform for other tools e.g. Adobe Connect. This poster details how the mature students that have completed this course (currently two cohorts) have utilised the online resources. The students that take this course are mature students (youngest is 24, oldest 53, mean age 35) and have different levels of experience of using technology.

### **Student use of the Moodle modules**

To create a community of practice in a distance learning environment it is important that the students are using the tools in Moodle, particularly the discussion forums, to connect to each other.

Wenger states that 'communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly' Wenger (2006). The contributions on the discussion forums were analysed and found to specifically relate to some of the criteria for communities of practice as outlined by Wenger (2006). These include problem solving, requests for information, coordination and synergy and discussing developments. On analysis of the posts in the discussion forums, the students, in the main, are doing this with regard to course content. There are also examples of discussions about general issues in translation practice.

### **Evaluation of the use of Adobe Connect**

The discussion forums were used for asynchronous discussions. The academic staff were also keen to have some face to face time with the students. This was done using Adobe Connect (AC), a web conferencing tool that facilitates live teaching and tutorial sessions online. The sessions were specifically designed to answer student questions from assessments. The AC sessions were not well attended which may have been for a number of reasons e.g. technical, timing etc. However, the recordings of the sessions have been widely accessed suggesting that the ability to replay the session at a convenient time for the student was important.

### **Conclusions**

Students were willing to use the online resources made available to them. They had signed up for a distance learning course and were made aware that resources were shared online so this could have led to a self selected IT-confident group.

Students used discussion forums for a number of different interactions, mostly related to the course but including some personal interaction.

Age of student was no predictor of their use of the technology.

Recorded Adobe Connect tutorials were accessed if students could not virtually attend at the time of the tutorial so proved a valuable resource type.

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## **WILLINGNESS OF PEOPLE OF DIFFERENT AGES TO LEARN ONLINE – TAKING GUIZHOU CADRE ONLINE LEARNING SCHOOL AS EXAMPLE**

*Tang Huilin, Li Yuebo, Guizhou Radio & TV University, China*

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Establishing online training and teaching platforms has become an effective way for various organisations to conduct cadre training in order to train cadres on a large scale and to enhance cadre qualities to a greater extent. Guizhou Radio & TV University has made great efforts to build an online cadre training platform with a view to extending further education in a manner that actively contributes to the developing trend of cadre training. Guizhou Cadre Online Learning School was established on December 23, 2008 as the Guizhou cadre online learning platform.

Guizhou Cadre Online Learning School is jointly organized by four co-operators, the Organization Department of Guizhou Municipal Committee of the Communist Party of China, Guizhou Radio & TV University, E-learning supplier and Guizhou Telecom. The cooperation is both economical and suitable in that the participants can give full play to their respective strengths and complement each other in resources. The online learning platform can be operated smoothly, innovatively and can be improved through the continuous innovation in cadre education of the organization departments, and through improvements in Guizhou Radio & TV University's teaching management, the upgrade and update of developers' software and utilisation of Telecom system hardware security technology. Under the leadership of the Organization Department of Guizhou Municipal Committee of the Communist Party of China, the School fully relies on the system superiority of Guizhou Radio & TV University, applies modern information and network technology and adopts the methods of online self-study for learners and with regular online two-way video sessions to train and teach cadres throughout the entire province.

Currently Guizhou cadre online learning platform has 815 subjects with 973 class hours. The subjects cover 26 categories such as "Party Theory, Style and Construction", "Policies and Regulations", "Economic Construction", "Social Management and Social Construction", "General Competence of Civil Servants", "Life Accomplishment", "Business Management", "Tourism Management" and "Health and Fitness".

The method of statistical analysis is employed in this paper to research the interests of online cadre learners, including learners from administrative organizations directly governed by the provincial government, Zunyi city and the state-owned enterprises directly governed by the provincial government in 2011 through the courseware of Guizhou Cadre Online Learning School. The difference in willingness to study in this manner between people of differing ages is examined through data analysis.

Among online learners of administrative organizations directly governed by the provincial government and the state-owned enterprises directly governed by the provincial government, cadres aged from 31 to 40, from 41 to 50 and from 51 to 60 years old show consistent interest in online subjects. Their first choice is "Management and General Competence"; second choice "Cultural Art and Fitness"; third choice "Economic Construction" and last choice "Party Construction, Laws and Regulations"; among the online learners of Zunyi and the state-owned enterprises directly governed by the provincial government, cadre members aged between 21 to 30, 31 to 40 and from 41 to 50 years old equally show the same interest consistency.

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## INTERGENERATIONAL EXCHANGES AND TECHNOLOGY: THE YOUNG AND THE ELDERLY LEARNING FROM EACH OTHER WITH TECHNOLOGY

*Gemma Tur Ferrer, University of the Balearic Islands, Spain*

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Intergenerational exchanges and computer literacy programmes for the elderly directly address lifelong learning and other aims promoted by the The European Year for Active Ageing and Solidarity between Generations (2012) promoted by the European Parliament and Council of Europe. Following Macías, Alzina and Tur (2010) there are numerous definitions but all of them have three main characteristics that define intergenerational exchanges as Newman and Sánchez (2007) evidenced: in all intergenerational exchanges participants are from different generations, they all have to achieve beneficial aims and the participants have a relationship based on exchange.

The intergenerational exchange was carried out between a group of senior students of the Open University for Seniors (UOM) at the University of the Balearic Islands (UIB), Ibiza headquarters, and a group of eleven-year-old students at Sa Graduada Primary School in Ibiza too. It consisted of a meeting between primary and senior students at the former's classroom. The methodology was based on interviews where youngsters were the interviewers and the elderly the interviewees. The topic was about childhood and education contrasting old and modern childhood. The elderly students highlighted some interesting points that we summarize as follows in two groups, positive and negative aspects of childhood and education nowadays.

Positive aspects:

- Primary students, in spite of their young age, can use technology very competently and can use it more comfortably than the older generation. Seniors commented on examples of the use of technology that their grandchildren are able to do and they are not.
- There are more learning possibilities nowadays than in their youth. Senior students value the opportunities for learning in and out school and the diversity of the learning path they can carry out depending on their abilities and preferences. They also commented that with the Internet and computers students do many more things that they could ever do as children.

Negative aspects:

- Young children do not use standardized written language in their texts either private like email or public like social networks. One senior student, the only one who has email and uses social networks, said: "The written accent doesn't exist for them. It is not that they use it wrong, it's simply that they don't use at all".

It can be observed that they value the empowerment of children's learning and among all, they value the abilities children develop with the use of their devices. But despite this positive evaluation, they are also worried about the incorrect use of spelling in children's writing. It is remarkable that none of our senior students introduced the topic of the dangers of the Internet. Probably the enthusiasm they felt in valuing the power of technology for learning made them forget to talk about other alarming topics that are normally introduced by the sensationalist media.

The whole project was a success: primary students were glad to receive, interview and talk to senior students and senior students enjoyed themselves more than they had expected. Technology was shown by youngsters and experimented by seniors but none of them created anything with technology. It was part of the message but not the message itself. Therefore, next goal will be giving technology a central role in future intergenerational exchanges. This concrete intergenerational exchange has opened a new line of work at UOM in Ibiza headquarters. Our main aim is to develop in our senior students the abilities to use technology for lifelong learning and active citizenship.

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## **GENERATION X, Y AND Z: CHALLENGES FOR TEACHING AND LEARNING**

*Eliaana Santana Lisboa, Clara Pereira Coutinho, University of Minho, Portugal*

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The rapid technological developments and its inherent changes cause the technologies to work as timeline paths, allowing a new generation to arise every ten years. The emergence of these new generations in a limited period of time has caused a revolution in society, because unlike what happened in the past, now there are several generations occupying the same work, schooling and leisure spaces. These generations are very different and that is why there is a kind of revolution in its own dynamic, because some of those crystallized habits and behaviours suffered, over time, recursive changes in very short periods, requiring individuals to adapt to a variety of people with very distinct tastes and habits and, more importantly, with different mental models. In this article we will focus our attention identifying the characteristics of generations X, Y and Z, exposing succinctly their desires, aspirations and its relations with the world, as well as their relationship with school and, more specifically, with learning. As a corollary of this relationship, some strategies will be presented that we believe to be of great use in the teaching of generation Y and Z.

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## **BLENDED LEARNING AS THE WAY TO IMPROVE THE QUALITY OF LIFE FOR OLDER PEOPLE**

*Olga Grishina, Elena Sidorova, Russian Plekhanov University of Economics, Russia*

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### **Introduction**

It goes without saying that the Internet and other new information technologies have become an inseparable part of educational process and even traditional ways of organizing education are being constantly reinforced by innovative ways. Different digital applications provide people with the possibility to enrich their knowledge and upgrade their professional skills right at their work places, thus meaning that educational process can embrace not only young students but people of different age groups. Traditional universities find themselves more and more involved in the process of creating programmes for adult learners to meet the demands of fast moving business environments. Lifelong learning based on a new learning culture has become the indispensable aspect of present day life. A recent survey, however, has identified that older people (60 +) are somehow excluded from the group of active Internet users bringing about the problem of “digital division”.

### **Background**

The Moscow Government has prioritized, as the most important objective for the time being, to improve the quality of life for older people. Different projects and schemes are being worked up with the emphasis being placed on the ability of older people to connect themselves to public services via the Internet.

### **Pilot project**

So a special project to provide older people with computer training funded by Moscow government has been set up at the Faculty of Distance Learning at Russian Plekhanov University of Economics. The main aim of the project is to encourage and support older people in their usage of Internet services.

First of all, it was necessary to identify the specific challenges older people would face when they wanted to access computer systems. Our researchers talked to some potential users and the following points have been defined:

- Mistrust – being cheated so many times by banks senior people still do not believe that money can be safely transferred electronically.
- Fear – most older people are afraid of using modern equipment in general and of computers in particular.
- Lack of experience – most of them do not even know how to use a mouse or a keyboard.
- Lack of information – they do not understand clearly the benefits of online services.
- Price – for most of them the price of the new equipment is too high.

The learning process was organized by the teachers of Plekhanov University and the Plekhanov team worked in close collaboration with social support bodies, who backed the project financially. The educational process was divided into three phases, each of which was successfully completed by almost all participants

The results of the pilot project proved the need to continue with the programme. In their feedback most of the older people regarded the organization of the learning process highly and proved that computer skills can help to enrich their lives.

### **Conclusion**

The project has demonstrated the quality of life of older people can be significantly improved if they learn basic computer skills. Without proper training older people will never be able to access most of the government services offered online, besides they may benefit significantly from the usage of social networking sites. So with the support of the government and educational institutions special educational programmes should be built up and implemented to ensure older people are integrated into the digital economy.

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## LEAGE: LEARNING GAMES FOR OLDER EUROPEANS

*Elena Avatangelou, EXODUS S.A., Greece, David Oyarzun, VICOMTECH, Spain, Myrto Maria Ranga, 50+ Hellas, Greece, Unai Diaz Orueta, INGEMA, Spain, Vesna Dolnicar, University of Ljubljana, Slovenia, Vivian Vergouwen, ANANZ, Henk Herman Nap, Smart Homes, The Netherlands*

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### The LEAGE project

Lifelong learning is an important factor for social inclusion, active citizenship and personal development, especially for people over 65 years of age who are usually retired. Over the next 30 years one in three Europeans will be over 60 years old, and about one in ten will be over 80. However, most educational systems are focused on younger people and limited progress has been made in adopting educational systems to the needs of older learners, who also have enormous potential in terms of what they can contribute to the learning of others.

LEAGE is a research project of the Lifelong Learning Programme funded by the Education, Audiovisual, Culture and Training Agency of the European Commission. The project aims to motivate older people to participate in lifelong learning activities by transforming those activities into games delivered on digital TV and using the Kinect sensor for Windows. Within the project 75 users from Greece, Spain and the Netherlands will use and evaluate the games and the proposed educational approach for 3 months in older users associations and day centres.

LEAGE is expected to provide an alternative, innovative way of learning for older people. The fun of games coupled with gerontology research, as well as the ease of use of the proposed platforms (digital TV and Kinect) will provide a strong motivation for older people to increase and practice their knowledge while playing. In the meantime, older people will also have the opportunity to socialise while learning, either with co-players, or with family members, especially grandchildren who are keen on using game consoles.

The LEAGE poster presents the project's research results and educational game. The project started in January 2011 and will be completed in February 2013.

### The LEAGE game

The LEAGE game is a road trip across European countries (Greece, Spain and Netherlands) aiming at:

- Providing information on European countries (main sites, culture, history)
- Improving nutrition habits by teaching local recipes
- Motivating brain and memory training
- Motivating physical exercise
- Teaching first aid and emergency handling

Each country is represented by 3 major cities with important landmarks. Each city includes challenges with different educational goals.

### Project team

- EXODUS S.A. (Coordinator) – GR ([www.exodussa.com](http://www.exodussa.com))
- VICOMTECH – ES ([www.vicomtech.org](http://www.vicomtech.org))
- Fundación Instituto Gerontológico Matia - INGEMA – ES ([www.ingema.es](http://www.ingema.es))
- University of Ljubljana, Faculty of Social Sciences – SI ([www.fdv.uni-lj.si](http://www.fdv.uni-lj.si))
- ANANZ wonen-welzijn-zorg – NL ([www.ananz.nl](http://www.ananz.nl))
- Smart Homes: Dutch Expertise Centre for Smart Technology & Smart Living – NL ([www.smart-homes.nl](http://www.smart-homes.nl))
- 50plus Hellas – GR ([www.50plus.gr](http://www.50plus.gr))

An Advisory Board with expertise on gerontology, geragogy, serious gaming and 3D graphics is following the project progress and guiding the consortium efforts.

More information available at: <http://leage.exodussa.com/>

## **THE BLOG: A GENERATIVE ENVIRONMENT FOR MEETINGS, INTERGENERATIONAL EXCHANGES AND LEARNING**

*Barbara Baschiera, University Ca' Foscari of Venice, Italy*

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This paper aims to present the early stage of development of "Alice" project, that belongs to the field of Educational Sciences, and hypothesizes the effects of intergenerational experiences on adolescents and older adults, using the blog as an environment for socialization and co-construction of knowledge between different generations.

Taking into consideration the "status of the art" of researches on intergenerational practices, policies, programs and initiatives in Europe and Worldwide, this experiment of intergenerational relationship will be accomplished by adopting narration and autobiography as an hermeneutical, epistemic and relational approach.

The project goals are:

1. facilitate participation of senior citizens to social life and lifelong learning programmes, defining new approaches to involve them and to overcome the barriers of adults learning;
2. prevent and fight against social exclusion processes of the weakest part of population, decreasing digital divide problems;
3. improve the role of young people as active citizens and leading actors of their educational path;
4. strengthen relational competences among subjects of different ages, becoming aware of each different identities, discovering new learning opportunities in solidarity context;
5. spread knowledge, e-skills and attitudes among adults and young people through non formal learning environments;
6. disseminate digital competences in order to develop the confident and critical use of ICT.

Blog does not come from the digital natives, but from the elderly of a retirement home who are used to communicating to each other and cultivating relationships through technology.

The frequency and intensity of relations between the two generations will be analyzed using quantitative and qualitative analysis.

The exchange of knowledge between different generations leads everyone to donate their expertise and their knowledge to the other.

To verify the formative impact of actions, a post test will be administered to all those involved and data will be compared with that of the initial test and that in control groups not involved in the project.

Such an experiment, which can be applied to different contexts, is supposed to modify a lot of stereotypes on aging and to develop educational and generative potential of elder adults and relational skills of adolescents.

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## A EUROPEAN STRATEGY TO IMPLEMENT ADULTS' INFORMAL LEARNING FOR INTERGENERATIONAL CREATIVE EXPERIENCES

*Juliana E. Raffaghelli, University of Venice, Italy*

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Ensuring Intergenerational Learning, through the creation of adequate educational environments is a challenge both for researchers and practitioners. From one hand formal education promotes mainly intra-generational experiences, structured in contexts of learning where few or none contact among generations (beyond the technical role of teachers/educators) occur (Loewen, 1996; Miller et al. 2008). From the other hand, intergenerational learning also implies configuring adults' adequate learning settings (Newman, 2008). More research is clearly needed in this field: in spite of the relevance given nowadays to the lifelong learning perspective, adults informal learning, as more frequent learning situations for adults of low educational attainments, is not sufficiently explored, characterized and modelled. This research focus should accompany modernisation of Higher Education, as well as recognition of professional learning, achieved through working situations; the lack of attention to this issue could end in lack of participation to the lifelong learning perspective of an important part of the adult population, as it is emphasized by ET2020 indicators and strategy. This paper aims at presenting the European training of trainers strategy to be adopted for the implementation of adults' learning pilot programmes that promote intergenerational creative experiences. The training strategy is introduced and discussed within the framework of a socio-constructivist approach that empower trainers to reflect on their own role in implementing adults' informal learning opportunities as key dimension of a lifelong learning perspective for adults of low educational attainments. In line with the above mentioned research problem, this paper aims at introducing a perspective on the issue of adults' educators needs' of qualification, through a case study, namely, the European training of trainers' strategy within the GRUNDTVIG LLP PROJECT ALICE "Adults Learning for Intergenerational Creative Experiences". The training strategy is envisaged as a device to promote innovations regarding adults' learning, particularly those excluded from formal training because of their social condition. The project's leading hypothesis is that generations "speak" different languages; as it happens in multilingual, intercultural contexts, the only way to create common spaces of interaction is to adopt *creative languages*, that encompass a process where the individual (particularly adults) goes out from the own resources and processes of meaning, to "play" with new meanings in the relationship with the kid. Therefore, learning situations should adults to reflect on the own role as educators, and hence, early promoters of a lifelong learning strategy. Informal activities, in the project, foreseen the adoption of **creative languages** (art, storytelling, social media) as a mean to generate **rich and caring environments** for kids; moreover, in the process of interacting through creative languages the differences between adults and children are mediated, with impact in both children and adults achievements regarding key competences 1, 4, 5, 7 and 8 (COM 2006/962/EC). Consequently, adults' trainers must be able to understand the value of informal learning situations, to develop skills to promote events with strategic impact on key competences. It is not enough to promote cultural events: trainers, as *scaffolders of generational dialogue* are called to be aware of the educational impacts of their informal activities as a way to engage adults that are normally far from formal (University, Further training) and/or non-formal (training on the job) in lifelong learning trajectories.



## **THE DEVELOPMENT OF ONLINE ASSESSMENT IN THE MOODLE VIRTUAL LEARNING ENVIRONMENT (VLE) AS A REPLACEMENT FOR TRADITIONAL WRITTEN ASSESSMENT**

*Michael O'Rourke, Athlone Institute of Technology (AIT) in association with NAIRTL (National Academy for Integration of Research, Teaching and Learning), UCC, Ireland*

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The objective of this project was to examine if online or computer based assessment is a realistic alternative to written assessment. Electronic assessment techniques have evolved considerably in recent years; well beyond multiple choice assessment which is the favoured method in electronic assessment.

In the Moodle virtual learning environment, there are many different types of questions that can be set including multiple-choice, essay, matching, short answer, numerical, calculated, true/false, cloze (embedded), random, drag-and-drop and ordering. Assessments can be devised that include some or all of these question types. Multimedia images and objects may be embedded in questions quite easily. Feedback may be included in questions also.

The project researched continuous and final assessment types with various course groups using the facilities provided in the Moodle VLE. It determined the development effort in terms of time and technical knowledge required by the lecturer to produce the assessments. This can be considerable and a major concern for academic staff.

Limitations of the online assessment questions were examined. The project examined if all aspects of a module of study, including final exams, can be examined using Moodle assessment, or if it is more suitable as a continuous assessment tool. The experiences of other academic staff that use Moodle in Athlone Institute of Technology (AIT) were collated via a survey, so as to ascertain the usage of online assessment and attitudes to this concept. The feedback from department heads was collated to determine their views to e-assessment also.

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## APPROACHES TO LEARNING IN THE DIGITAL ERA

*Francesco Agrusti, Cinzia Angelini, Università Roma Tre, Italy*

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The impact of technology on education can be identified by following a much more complex path than one would imagine at first. It is not sufficient to compare two situations, the one characterised by the absence of technology in organising and proposing an educational message, the other qualified by this very presence, because this would lead to ignore that technology is hardly separable from other conditions of daily life. But one should wonder if and how much people's attitudes and cognitive styles are being modified by a progressively-widening exposure to technological stimuli; and which effects can be linked to technology-centred experiences.

Different attitudes are also correlated with different ages. Such differences can depend on the inurement that people of different age have to technologies and related behaviours. Younger people have experienced technologies since their first years of life (toys, videogames). They have learnt how to use technological resources together with or even before they were able to establish a link between technological solutions and subsequent conceptualisations (e.g. making arithmetical operations without realising what is being done). More and more, digital memories are substituting biological memories and machines operations are replacing the individual ability to do the same operations. In other words, young people's adaptation to technology is a mainly unconscious "debit-and-credit" result: operating and acceding to sources is increasingly rapid, but in parallel autonomy is partially lost (a tolerable part, hopefully).

The case of less younger people is different. Apart from those who are involved in the development of technology for professional reasons, critical attitudes are still common. The first, main objective of the study on the impact of technology on the population is the identification of attitudes which are likely to be connected with its use. But ours would be an incomplete study if limited to attitudes. It is necessary (and highly recommended) to investigate those aspects of the cognitive and affective profiles individuals are less aware of, but whose relevance emerges when they are considered in the whole population (Keegan and Vertecchi, 2008).

This will be the main focus of the research activity presented in this poster. By highlighting common and distinctive features in learners with respect to age, we would like to show how learning styles, also strengthened by habits, produce different approaches to learning in the digital era.

The research will start with a literary review of the most important studies on learning styles (Kolb, 1984) and andragogy (Knowles, 1973, 1980, 2002; Merriam and Caffarella, 1991; Mezirow, 2003). We will then focus on the changes occurred in learning with the advent of the digital era and investigate the existing differences between learners who grew up in the digital era (younger adults) and learners who were educated in more traditional contexts (older adults) and have had to find personal strategies to adapt to the new opportunities provided by technology.

The study will be conducted with 71 people attending four post-graduate courses for professional development at Roma Tre University and whose years of birth range from 1951 (the oldest participant) to 1985 (the younger participant). They will all be submitted a questionnaire divided into four sections focusing on: (a) personal information; (b) learning styles; (c) metacognitive approach to learning; (d) familiarity with technology.

Through the results, we expect to being able to reconstruct how learning styles, especially in older adults, are being modified by technologies. We will consider the results both in terms of *process* (focus on the learning activity) and *product* (the outcome of the learning activity) and try to show how different processes can possibly lead to similar products.

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## WORKING CLASS WOMEN'S INTEREST AND MOTIVATION FOR LIFELONG LEARNING

*Eva Wigforss, Lund University, Shirley Booth, University of Gothenburg, Sweden*

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In the here presented study we will, through 4 different sets of data, illustrate working class women's interest and motivation for higher education and their unforeseen change of life-world when opportunities for lifelong learning are taken.

The methodology chosen for the study was to (re)analyze 4 different sets of data. *Studies A and B* use data from the project *Recruitment to universities and colleges through free studies (RUHFS)* during the years 2003-2006. The project had the long-term goal to prepare the participants from the Swedish Municipal Workers' Union for life-long learning, and to offer support for overcoming difficulties in the early stages of entering higher education by both introducing and inducting them into academic learning through an Introductory Course, totally flexible in time and place. The data collection includes written course assignments and pre- and post evaluations. *Studies C and D* use data collected for the project *Learning in the ICT-extended University (LIEU)* during the years 2004-2007. The project focused on learning in situations where the university extends its boundaries beyond its traditional campus to offer various kinds of distance learning opportunities, in line with the outreach ambitions of the university. The data collection includes two sets of interviews aiming to capture the phenomenon of university life as experienced by successful female students in the RUHFS project. The first set of interviews (6 month after course completion) was analyzed, seeking categories of qualitative variation in ways of experiencing learning and studying at university. The second interview (12 months after course completion) was intended to return to some of the issues of the first interviews and to follow up what had been attained and what changes had occurred.

From the analysis in Study A (n=112), it becomes very clear that age has little to do with interest and motivation for higher education. More important seems to be belonging to a specific professional group. Working class women who had some previous shorter education after secondary school and who worked with people seem to be more positive to lifelong learning and specifically to more formal education. In contrast women who had very little extra education after secondary school and who worked with cleaning facilities expressed more negative attitudes to lifelong learning opportunities, often mentioning lack of confidence, having a poor economy for further education, and also seeming to be more dependent on having the actual study-place close to their homes. Study B (n=14) in the retrospective reflections almost all of the respondents expressed curiosity and challenge as driving forces for entering the Introductory Course. Most of them had not participated in formal learning situations for years and were worried about the demands and the available time to study, given their family and work commitments. In the prospective reflection all declared that they would continue their lifelong learning within higher education, either in shorter courses or full vocational programs. For most of them learning more had become a pleasant everyday activity. In Study C (n=4) two of the participants drew the conclusion that they cannot manage to study in a university context. Their arguments are similar, one cannot manage the English literature or oral presentations in front of a student audience and the other cannot manage the math and the eye contact with a teacher. The other two participants had drawn a different conclusion from their experience. For one of them lifelong learning has become a central force in her everyday life. They feel that they now know how to deal with learning in a university context. One of the women in Study D (n=2) is now pursuing a line of independent study that is clearly fulfilling her immediate goals and promising well for the future. The other one had formulated a goal for her studies to become a pre-school teacher. Change has characterized her life since the first interview. Her family has changed and even her workplace life has been restructured, though to her advantage with a better position in sight.

The research questions in the here presented analysis, concerned how to understand the interest and motivation as well as the effect of lifelong formal learning on working class women's everyday life. Women's learning pathways are often influenced by family issues such as having small or grown-up children, support and encouragement from partner and parents, economy, enough private study time at home, distance from the school/university, etc. In the analysis of our data both in the written evaluations and in the interviews all these issues are brought up by the participants as either obstacles or challenges to undertaking lifelong learning. There is also a good deal of change in the air when it comes to the role of the work-place and the home-place in those women's everyday lives. An import observation was also the finding that even more influential for motivation for lifelong learning in the present everyday life was a joyful encounter with learning earlier in life and then later in life taken the challenge to return to studies.

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## PEDAGOGICAL AND LEARNING OUTCOMES AFTER A WEBINAR IN UNIVERSITY STUDENTS

*Renata Barros, Maria Teresa Campos, Pedro Carvalho, Vítor Hugo Teixeira, Rui Chilro, Patrícia Padrão, Pedro Moreira, André Moreira, Universidade do Porto, Portugal*

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### Background

A webinar is a web seminar that could be shared in nearly real time with remote locations, across geographically dispersed locations. Although web seminars are common at business level, their use as a tool in distance education is relatively recent, having attracted attention for its advanced technology that allows real-time communication, and enhances the interaction between the speaker and the listeners. This study aims to evaluate pedagogical outcomes of a training webinar session in the field of 'Obesity, Diet and Asthma'; and to compare the students' prior knowledge on the subject with the knowledge acquired after the webinar session, in university students from the Faculty of Nutrition, University of Porto.

### Methods

One hundred and twelve students, from the 2<sup>nd</sup> Grade of the Nutrition Lifecycle Course, from the Faculty of Nutrition, University of Porto were invited to participate in a webinar session in the field of 'Obesity, Diet and Asthma'. The webinar session was held in HD Telepresence Douro Room of the University of Porto, May 16 2011, at 2 pm. The webinar session was transmitted in real time (synchronous communication) to the classroom, through Collaboration Environment WEB Colibri, available from University of Porto, namely by the defined link (Link to the session: <https://webconference.fccn.pt/colibri/public/FowardForParticipate.jsp?confid=6828; SessionID: 6828>).

The 1h webinar session included a brief introduction to the subject, two presentations, 20 minutes each one, and moderation of questions from participants and final discussion. Two questionnaires were administered to participants: one pedagogical outcomes questionnaire of the webinar session, focusing on pedagogical issues, importance and relevance to knowledge on the topic and professional practice in future; and a questionnaire assessing knowledge and learning pre and post session. The pedagogical assessment of the webinar was held after the webinar, through a questionnaire adapted from a pedagogical assessment questionnaire used by the American Society for Nutrition, in similar webinars. Participation was voluntary and anonymous. Only participants who attended until the end of webinar and have answered to the both pre and post session questionnaires were included in the final statistical analysis.

### Results

One hundred and twelve students, 77.5 % female and between 19 and 33 years old, have participated in the webinar session. Fifty-five have answered to the pedagogical outcomes questionnaire, while 30 have answered to the learning questionnaire assessing knowledge in the field, pre and post session. Considering pedagogical assessment, most of the participants have considered the webinar session very positive, and they were in agreement regarding the usefulness of this tool for the acquisition of new knowledge and learning process. About 92.6 % of participants have considered the webinar session relevant to the learning process; 80.0 % for the professional practice; 94.4 % agreed that the webinar showed evidence linking obesity, diet and asthma; and 74.5 % considered the session content appropriate and balanced. About 89.1 % considered that the webinar session has provided ideas to help patients to develop changes regarding diet and body weight control, to reduce the risk of asthma or increased asthma control and 69.1% felt become more confident in their abilities to address this issue in practice with patients. Considering learning outcomes and the assessment of pre and post session knowledge, we observed a significant increase in the correct answers after the webinar session for all the questions.

### Conclusion

These results suggested that webinar sessions may have a very positive impact on the learning process, acquisition of knowledge and skills development in university students. Considering the global trend to increase the use of the new information technologies and the internet in the daily activities, this new approach should be included in pre and post graduate courses, in order to deliver skills to the future professionals and better prepare their learning activities throughout life (lifelong learning). Benefiting from the low cost and high potential for dissemination of the webinars, in the future should be very interesting to explore the possibility of using this tool for new approaches and content, and extended to different target audiences, including establishing national and international partnerships between institutions and Universities.

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## NEW COMMUNICATION STRATEGIES FOR THE RECOVERY OF PUPILS DIFFICULTIES: THE PROJECT SOS STUDENTS

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### The 'SOS Students' – a second chance for pupils in difficulty

Today the dispersion and early school leaving are the focus of the European policy. The European strategy for 2020 imposes to the EU's countries not to exceed the threshold of 20 % of dropouts. Italy has one of the highest level of dispersion of the entire EU, for this reason in the Italian educational system, the research of strategies and methodologies aimed at helping students recuperate their educational deficiencies plays a very important role. The activities of support and recovery, according to the D.M. No. 42, May 22, 2007, are the ordinary and permanent plan of training. This justifies the effort held by our Agency to offer to the needy students an efficiency and durable training program, and a platform accessible from every school across the country.

Our project named SOS STUDENTI, was set up in 2005 by the national educational Agency called ANSAS (ex INDIRE), following the direction of MIUR (the Italian Ministry of Education, University and Research), with the aim of fighting scholastic abandonment and helping students recuperate their educational deficiencies in the curricular subjects through on line remedial work. The work takes place in a virtual learning environment, where a syllabus made up of a series of digital contents has been implemented. The teacher can assign activities to every single student, following the progress made in remedial work, through an automatic system, which registers exercises, activities and their outcomes. The environment allows the use of alternative strategies with the respect of those implemented in the traditional daily practice. One of the most important activities is the Laboratory a real challenge in the organization of disciplinary remedial courses, to be made at distance. The Laboratories are working online environments, where tutors and students work together online on a specific subject, in order to develop a collaborative final product on a theme proposed by the teacher, following a path of distance learning of a month and half. Students are enrolled by the teacher and they work with peers of other classes or schools, in some cases under the guidance of a teacher in others on their own.

During the school year 2010/2011, the virtual environment has been tested in some classes of two high schools in Florence. This has allowed the start of a research on the use of the online environment for remedial course during the summer. The aim of this research was to see how a virtual learning environment can improve the recovery of school credit, developing an uncommon communicative situation between teachers and students. Teachers have used the SOS Students Platform in four disciplinary class, and every class have opened a different laboratory for the recovery of Mathematics, Physics, English and Italian. At the end of the course, a questionnaire was given to the students in order to investigate their approach to the new methods of study and work online. The outcome of this study was collected and analyzed by our research group with the help of the teachers. The analysis of questionnaires shows clearly how the use of an online learning environment can be a viable alternative for remedial courses and reveals its utility for the attraction exerted on students in a particularly sensitive time: the summer recovery. The most significant fact is that students in difficulty have expressed the need to find, inside the environment, a teacher, even if at distance, able to offer help and break the sense of isolation that the student in difficulty usually feels.

The virtual learning environment has proved very effective for many other reasons:

- Shyer students can take advantage of a sort of "anonymity" guaranteed by the virtual alter ego.
- The learning and communication are more based on peer tutoring: the student does not study, suggest, or deepen to get a vote, but driven by a genuine desire to learn a particular topic and share their skills and knowledge to their peers and teachers.
- Inside the Lab online the lesson becomes a real "dialogue". Students have the opportunity to bring their own experiences and knowledge and share it with the others. All this leads to make connections, learning becomes a true work of bricolage, where pupils and teachers work together to create a web of experiences, ideas, memories, points of view.
- The ability to learn in an environment different from traditional school, in some cases turns out to be the only way to overcome some problems that can arise from misunderstandings or difficulties in teacher-pupil relationship or from the "method" used by the teacher.

Being in a new environment with new classmates, new teachers, it is like having a second chance.

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## EUROPEAN DENTAL SCHOOLS' PROVISION OF LIFELONG LEARNING STEP 2: DESIGN OF AN E-MODULE FOR ADULT LEARNERS

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### Introduction

The **DentCPD** project (Dental Continuing Professional Development) aims at the harmonization & standardization of European Dental Schools' programs of continuing professional development for graduate dentists. The project aims to identify agreed essential CPD requirements, provide guidelines for the management and delivery of high quality CPD by European dental schools and create an exemplar e-module for the dental practitioners. The project partners are the Dental Schools of Cardiff University (United Kingdom), Athens University (Greece), Helsinki University (Finland), ACTA (the Netherlands), Rīga Stradiņš University (Latvia) and the Association for Dental Education in Europe (ADEE).

### Aims

This second part of the **DentCPD** project aims at designing an educational e-module on the core topic of "Sterilization and Cross-infection control in the dental practice", intended for the lifelong learning of dental practitioners.

### Methodology

In order to develop the e-module, the team members identified three areas of relevance: 1) the educational content 2) the methodology of delivery of e-learning material and 3) the structure and design of the e-pages.

1. The educational content was developed by an expert on the subject and was based on the most recent guidelines on the sterilization procedures. The content was divided in small sub-units; each one referred to a specific procedure and was supplemented by explanatory pictures, videos and tables. Self-assessment questions were also created.
2. The methodology of delivery was based on the e-learning and the adult learning pedagogical principles.
3. The structure of the content followed the methodological framework of educational material, which identifies and groups all the necessary elements for a comprehensive e-material: text, tests, conclusions, aims, links, photos, key words, etc.

### Results

The e-module was developed in the format of an interactive website. The web page was divided in 3 sections, the main (larger) section contained the study material, the left section contained the navigation options and the right section included the relative literature. The self-assessment tests were integrated into the text. Separate frames included the aims and objectives of the course and the expected outcomes. In all sub-units of the content, the theoretical knowledge was combined with the practical procedures, in an effort to combine theory with practice.

Background, font colours and chromatic contrasts were chosen according recommendations for effective distance legibility. Highlighted titles and key words re-directed learners to additional or complementary material. Effort was made to limit each sub-unit of the content into one internet page. Symbols were used instead of words or texts. Windows that opened on top of the text, including short explanations or summaries, enabled the fragmentation of the learning material. Instant feedback was provided for the self-assessment tests.

### Conclusions

The development of an educational e-module for dental lifelong learning requires a combination of approaches – pedagogy, design, e-learning, adult learning – in order to be educationally efficient and beneficial for the dental practitioners who will apply it to their everyday practice.

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## LEARNING DESIGN SKILLS

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The paper presents the essence of theories, concepts, user needs and examples how to increase learning design skills of in-service and pre-service teachers. The basis of this work is Needs Analysis Report and State of the Art Report for LD-skills project: Development of Learning Design Skills for Enhancing Students' Key Competencies (Marchev, Toncheva, Borisov, 2011). The aim of the proposed project is to have a positive impact on the development of students' problem-solving competencies by promoting the use of inquiry and problem-based approaches to teaching (Tzikopoulos, 2010). To achieve this, a training framework is developed for training teachers how to create science lesson plans by not just providing exemplar solutions to problems that arise from everyday practice, but also enabling them to perceive effective lesson planning in relation to educational principles that may enhance students' problem-solving skills. Following the recommendations of the Rocard report on science education in Europe, the use of problem-based and inquiry-based approaches is important because they provide the means to increase students' interest and motivation. WP2 aims at identifying the training needs in terms of educational theories, models and frameworks, ICT software design tools and other learning design processes that may prove useful to teachers.

As a result of analysis of different authors' opinions we selected key concepts and terminology for LD-skills project. Some of terms are:

- Learning design
  - Learning activities are activities engaged in by the learner for the purpose of acquiring certain skills, concepts, or knowledge, whether guided by an instructor or not (Sala, 2005) in (Houston, 2001).
  - Learning design is a set of practices carried out by learning professionals [...and is] defined as designing, planning and orchestrating learning activities which involve the use of technology, as part of a learning session or programme (Beetham, 2008, p. 3).
  - Learning design includes the process of planning, structuring and sequencing learning activities. The final product of learning design process could be: the documentation, representation(s), plan, or structure, created either during the design phase or later (Vrasidas, 2010).
- Problem solving competencies
  - Problem solving competencies are individual's capacity to use cognitive processes to confront and resolve real, cross-disciplinary situations where the solution path is not immediately obvious and where the content areas or curricular areas that might be applicable are not within a single subject area of mathematics, science or reading according to the OECD and the PISA assessments (OECD, 2004).
  - "Problem solving competency is an individual's capacity to engage in cognitive processing to understand and resolve problem situations where a method of solution is not immediately obvious. It includes the willingness to engage with such situations in order to achieve one's potential as a constructive and reflective citizen." This definition extends the PISA 2003 definition as it includes affective factors such as motivation to engage in problem-solving (Funke et al., 2010).

### Acknowledgements

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## USING THE INFORMATION AND COMMUNICATION TECHNOLOGIES IN THE ACTIVITIES WITH STUDENTS – A GOAL RELATED WITH CHALLENGES AND OPPORTUNITIES

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### **Using the benefits of the new technologies in the activity with students – a paradigmatic shift of the learning design**

Using the new technologies represents an issue reflected in international and European documents. From the point of view of the students, learning about and through using ICT is not a challenge at all. The widely use by students of the new technologies outside the school is a reality. The new technologies are part of their lives. From the point of view of the teachers who have a social studies background, the use in lessons or in other educational activities of the new technologies is less a problem of access to the computers, but is more a problem of how to do it; it involves many aspects and challenges. The main challenge the teachers have to face with is represented by their own initial education. We can ask, in relation with the mentioned aspects, the following question: what is important and necessary for a teacher to know if he/she has to develop to the students, key competences, including the digital competence? For an upgraded teacher in accessing computers and the Internet, the most important challenges and opportunities in using ICT in the activity with students are the pedagogical ones.

The experience of the last years emphasizes the use of computer as a tool, from many points of view: processor of words, a research tool, a communication tool, a tool of processing the information, a tool of presenting the information etc. A paradigmatic shift in the way of use the computer in the activities with students is developed by the constructivist theories on learning. According the constructivist perspective, learning is not an acquisition of knowledge and skills about different aspects of the real world, but a process of knowledge construction based on the experience of learners. The main effect of the constructivism regarding the design of the learning process is the following: the students do not learn *about* the real word; the students learn by experimenting different aspects of the real world. This way of understand the learning process has important effects in the design of the learning. The process of learning is an active one. Working in small groups, the students use their knowledge to solve complex problems. The work of the students involves reflection, exploration and collaboration, exchanges of ideas, going to the construction of knowledge. The teacher has the role to guide, to facilitate the learning process of students.

### **The experience of an international project on Development Education**

In 2010 a three-year international project "Millennium Development Goals Realization: Involving High School Students and Educators in Development Education Program and Projects" was initiated under a European Programme. The project involves partners from four different European countries and from Africa. The project's goal is the involvement of students and teachers in the process of promoting educational projects for development.

The use of ICT is deeply involved in every activity of the international project as a whole, from establishing a network between students, teachers from the participant countries in the project, to its use in the analysis and in find solutions for the investigated topics. One of the project's activities was the development of a school-based curriculum on Development Education. The subject curriculum developed in Romania introduces, in the presentation of the learning contents, an innovative aspect related to the design and implementation/simulation of implementation of an educational project on development. The topics can refer to: global issues; young people in an interdependent world; sustainable development; human rights and sustainable development; global citizenship; social justice; Millennium Development Goals; the environment. The products of the projects could be, for example, a website, a video, a video game or an online game, using ICT.

Developing projects with students, using ICT in the activities with students, including in running projects does not represent a goal in itself. But developing projects with students and using ICT in the activities with students are goals for a more relevant learning for the real life.



## **E-LEARNING FOR VARIOUS STUDENTS' CATEGORIES**

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Almost for 10 last years MESI delivers courses "Teacher in e-Learning Environment" and "Student in e-Learning Environment" which are regularly updated and aimed at raising knowledge and skills of faculty and various students' target groups in using e-learning for educational purposes. This article is a result of our observation and research on attitude of students (from schoolchildren to adult) to different learning practices. Monitoring of frequency of using tools and processing of questionnaires are the main methods applied in the research.

Nowadays educational process is run in different ways from traditional classroom meetings with testing on pieces of paper to webinars and presentation of graduation theses by Skype. The application of each method has its own history and scope and all of them can be used when teacher knows how to use them and which of them to propose to different categories of students.

However, it is necessary to take into account that different learning approaches correspond to various students' categories due to some objective reasons. This article covers these reasons for some students' categories:

- students with disabilities,
- on-the-job students,
- those who study foreign programmes,
- off-campus distance students,
- students of external studies, and
- students of full-time and part-time forms of education.

We separate all these categories conditionally and presume that they may intersect, have common features and the same reasons for education and we keep this in mind and mention the details where appropriate.

We have examined briefly six categories of students who choose electronic tools. We did not focus on students' age on purpose, as our experience shows that anyone can master electronic tools and it's a matter of intention only. There are plenty of young students who refuse using forum and file sharing as learning tools. The reason lies in their inability to present their ideas in written form, and they prefer meeting with a teacher and submitting their assignments in the spoken form.

The same can be said about independent learning experience: this skill is acquired during learning and is entirely dependent on personal qualities of a student and the ability of a teacher to engage students in learning. Social setting also plays an important role as it determines the rules of life style for young people either for real life or virtual one. If a student does not have a personal computer at home and prefers face-to-face communication, most probably he won't choose e-learning and will prefer to attend classroom lectures.

Meantime modern ICT-rich learning environment allows selecting tools for various educational purposes, different students' categories and individuals making education more attractive, flexible and efficient.

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## HOW UNIVERSITIES SHOULD COLLABORATE WITH COMPANIES AND WHAT THEY SHOULD LEARN FROM HACKERS?

*Andrzej Wodecki, Maria Curie-Skłodowska University, Poland*

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We live in difficult times: low entrepreneurship and high unemployment among young people, financial crisis, dark clouds over universities poorly preparing students to professions. On the other hand, we observe a dynamic growth of informal creative groups like hackerspaces, media labs, start-up schools, co-working spaces and a strong demand for creative minds in businesses. That is why universities should start thinking about changes in their mission: from knowledge transfer from teacher to students within their walls to stimulation of knowledge generation and transfer within societies (especially business<->students).

### **University-labour market organizational interfaces**

The research was performed in the frame of the Open Educational Innovation and Incubation (OEII) project realized by consortium of 11 partners and co-financed by EU Lifelong Learning Programme (ERASMUS). Researched universities (the University of London, Uninettuno, Rome3, Naples University and Politecnico Torino) generally combine external market research with internal evaluation procedures as the main methods of identification of market needs. External market (students, companies and public organizations) needs analysis is usually done basing on recruitment trends, direct market requests for training/services and companies feedback. Main goals of these processes are development of new or improvement of existing courses. The methods used include market analysis and consultation (individual or workshops) and are performed within organization (internal level) or in cooperation with external bodies (companies, local government or partner organizations). Networking meetings with alumni and companies are also conducted. Creation of new courses is usually done basing on market demand research, targeted market survey or interaction with commercial chambers Those processes are basically divided into needs analysis, feasibility study, improvement/production and delivery phases which, in most cases, constitute a continuous process. Economic factors and business cases are more and more seriously taken into account in projects approval procedures, which require development of new skills among university staff (especially professors).

On the other hand, employers interviewed suggest other simple to implement and efficient solutions. First of all, they have a practical knowledge of fast (sometimes ultra-fast) adaptation trainings of new employees – more and more often with intensive use of e-learning. Those methods should be adopted, at least partially, by universities – that would require for example shortening university course length (knowledge pills methodology). Moreover, industry representatives observe quite low learning-to-learn competencies among former students, and suggest developing dedicated trainings at university level. Last but not least industry, being aware of high potential of new ICT technologies in cross-company knowledge transfer (e.g. within regional clusters), expects from universities not only to generate knowledge and educate students, but also more actively stimulate its transfer in regional clusters. In such a case university would function as catalyst rather than knowledge generator. Suggestions of that type will be presented in more details during the conference session.

What can be dangerous in traditional university programs, maybe successful in informal learning setup. There are more and more places where creative youngsters create new things and ideas. They name themselves hackerspaces, fab-labs, media labs, start-up schools, co-working spaces etc., but they have one in common: they meet in real to create something and collaborate on new ideas in virtual. They generate not only codes and products, but also knowledge. Hacker School ([www.hackerschool.com](http://www.hackerschool.com)) is an example of such a project. It organizes three-months, full time, completely free traditional courses helping young programmers to develop their programming skills. They meet four times per week and work together from 11am to 7pm. Thanks to such very intense work (“hackathons”) students can drastically improve their programming skills. Business model is simple: organizers earn money from recruitment companies (app. 20 ths USD per person). When young people keep finding such propositions very attractive, the model of traditional universities may drastically change.

Another example of good quality knowledge distributed for free is a new initiative of Massachusetts University of Technology: MITx (<http://mitx.mit.edu/>). MIT offers free of charge e-learning courses for virtual community of learners around the world. The point here is that those courses are run by teachers, and basing on good marks students who demonstrate their mastery of subjects will earn certificates awarded by MITx.

### **Summary**

Taking into account dynamic changes in learning behaviours of Generation Y, growing needs of industry sector and new “good-knowledge-for-free” initiatives universities should start to re-think their mission. Becoming “knowledge catalyst” instead of “knowledge generator” may be appealing. And, last but not least, students should start learning-to-learn: careless use of web 2.0 tools may harm their learning progress.

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## ISPY – “DETECT” LANGUAGE AND GAMES

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### ISPY – playing a serious detective game

ISPY (Project No. 511558-LLP-1-2010-1-UK-KA2-KA2MP Agreement No. 2010-4119) is a KA2 project implemented with the support of the European Commission. The aim of the project is to provide teenagers with study material for six foreign languages – Dutch, English, German, Polish, Romanian, and Spanish in a flexible, attractive manner which can be easily adapted by teachers of foreign languages so as to address various groups of learners.

ISPY platform enables young adults to learn a new language via some problem-solving challenges. Tasks within the ISPY Moodle platform present students with both formal and informal situations, depending on the language under study. The platform targets upper secondary school learners and those in both general and prevocational education and training.

Materials developed in the project are being internally piloted for each language so as to strike the right balance between the targeted language level and the complexity of the language the materials are presented in. Using internal piloting is a means of testing both the content and the functionality of the platform prior to its launch for external use.

ISPY recreates the atmosphere of a detective game with insights on the languages taught. Materials are structured in ten ‘missions’ focusing on language, culture and details framing the overall story so as to attract end beneficiaries. The project team has worked on the methodology of the course and developed the ten missions already. Materials are presented on Moodle and they incorporate Flash activities built around detective themes.

The modules are available in each of the languages on offer and learners can select the target language of their choice. Each module consists of a range of activities including interactive tasks, photo stories, web quests, short tasks, quizzes, listening tasks and extended tasks that may call for collaboration or further research. Once all of the modules have been completed, a learner is ranked as a qualified spy!

The project also provides guidelines for teachers and trainers who are able to complement the initial materials developed in the project with their own contributions. This is a means of constantly enriching the Moodleplatform and offering a wider variety of activities.



[www.ispy-project.com](http://www.ispy-project.com)

ISPY makes language learning interactive and fun with the help of a virtual environment. The project also encourages learners to communicate with peers across Europe in a well structured, moderated communication frame on the Moodle platform.

Improving intercultural dialogue in Europe and reinforcing language skills that are relevant to the workplace are also on the agenda of the project.

## **ELENA – EARLY E-LEARNING OF NEIGHBOURING LANGUAGES**

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In many European countries early language education is “en vogue”, particularly English. Even in those locations where schools have the possibility to introduce another language due to geographical proximity, students and/or parents prefer English. Neighbouring languages suffer under this dominance, even though they are both socially and economic more important. The reason for this cannot only be found in the linguistic competence of the teachers. The attractiveness of English to parents and children is also an important factor. It is therefore important to support the teachers with an attractive and authentic learning environment. Early foreign language education differs from regular primary education due to its emphasis on the input of the teacher. The teacher takes care of the linguistic input through the use of a well-chosen array of media. To make this kind of education possible, teachers need a high degree of linguistic competence which is generally lacking. There is also a lack of class material that takes this need into account. Based on a tried-and-true teaching method for early English education, the Consortium has the intent to develop teaching material for the neighbouring languages German, French and Dutch for children between 4 and 6 respectively 6 to 8 years (depending on when children start primary schooling), offering the children an authentic educational experience and thus create the relationship to the immediate environment (parents, grandparents and siblings) of the child. This environment is embedded innovatively into the learning process, and is even expanded in the case of cross-border partnerships in border regions. The embedding is scientifically justified in regards to the use of media (interactive tables, PC, smartphones) and learning process control. The interface development through Participatory Design guarantees a final product which fulfils the needs of the target group. The digital course has to have two variations, one for the teacher and one for the pupils. Training for teachers completes the objective of the project.

‘Elena’ will be based on the natural sequence in which children learn language i.e. listening and understanding, speaking, reading then writing. When learning vocabulary, ‘Elena’ works along the lines of the model described in “the four branches of vocabulary teaching” (“de viertakt van het woordenschatonderwijs”) by Verhallen. ‘Elena’ consists of 8 themes, based on the experiences of children, and is also the central character in every theme!

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## BUILDING PERSONAL LEARNING NETWORKS – SUPPORT FOR FOREIGN LANGUAGE TEACHERS

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### **An introduction to Personal Learning Networks for teachers and the aPLaNet project**

As the OFCOM research (2008) indicates, the rapid growth of social networking that has been noticed over the last two to three years is indicative of its integration into the daily lives of many people. In parallel with this, there has also been considerable media coverage of the growth of social networking, its potential positive outcomes and concerns about the way that some people are engaging with it.

The potential offered by social networks (SNs) for foreign language teachers is significant as they have become a powerful tool in communicating with colleagues world-wide and a resource for professional development not only in teaching but in a variety of fields. Through social networking and ICT tools available online, teachers can design personal learning networks (PLNs), “virtual staff rooms”, enhancing access to resources, trainings and expert opinions from all over the world. According to Graham Stanley (2010), “a Personal Learning Environment (PLE) is a flexible system that helps people take control of and manage their own learning. It consists of a number of different tools (a blog, wiki, social networks, etc.) that a teacher or learner chooses, around which he or she builds a group of people that can be turned to for knowledge, help, advice and support. This is the teacher’s or learner’s Personal Learning Network (PLN)”.

However, at the moment, these opportunities are not visible enough or formally accessible to teachers. The reasons for the limited usage of SNs and lack of familiarity with the PLN concept vary from country to country but most frequent are one of the following: lack of digital literacy, reticence against sharing (personal) information online, lack of a clear benefit, misleading information received via various media.

The main aim of the aPLaNet project (Autonomous Personal Learning Networks for Language Teachers – Grant Number: 511460-LLP-1-2010-1-TR-KA2-KA2MP) is to enable the usage of social networks and web-based educational resources as a path leading to wider possibilities of self-learning and professional growth while creating a PLN by using these possibilities. Within the aPLaNet project, a teacher guide has been created that is meant to enable language teachers to create a PLN by familiarizing themselves with a set of social networking sites and ICT tools: communication and web-conferencing tools, voice-discussion tools, blogging resources, collaboration tools (including wikis), digital storytelling tools, presentations, writing skills training, audio resources, word clouds, social bookmarking tools, etc. The currently available resources created within the aPLaNet projects, the groups and activities created by its partners are available on the aPLaNet Ning<sup>1</sup>.

With a group of voluntary teachers (around 500 in March 2012 and most of them from Europe as initially they were envisaged as the targeted area, to which other teachers from outside Europe joined, all showing interest in the project), the teacher guide is being piloted throughout Europe between January-March 2012. The main goals of the piloting process are – on the one hand – to improve the teacher guide based on the feedback received during the individual experience in using the Guide and – on the other hand – to raise awareness among as many teachers as possible on the benefits of having a PLN; to jump-start the PLNs of the teachers interested is another objective.

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<sup>1</sup> The aPLaNet project Ning is: <http://aplanet-project.org>. A Ning is, in essence, a social networking site which allows however a more restrictive scope than networks such as Facebook; the Ning environments are being created for specific purposes. Moreover, their content can be restricted for members only. Within a Ning, members can create groups, have individual pages and share information on discussion forums. More about Nings here: <http://www.ning.com/about/product>. Classroom 2.0 is an example of a very active Ning for educators: <http://www.classroom20.com>.

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## SKILLS TRAINING WITH MOBILE GAME BASED LEARNING – GAME MODELS

*Thomas Putz, evolaris next level GmbH, Austria*

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### The Project **INTOUCH**

The project Labour Market in Touch: new non-routine skills via mobile game-based learning

- is implemented from November 2010 until October 2012,
- involves people from 9 project partners in 8 European countries,
- enables nearly 1600 person-days resources,
- involves more than 600 employees in more than 100 SME all over Europe,
- is supported by the EC in the Lifelong Learning Programme.

The severity of the financial crisis adds an exceptional degree of unpredictability about the future. In the service sector, there is a clear tendency towards the broadening of the required skills portfolio linked to “non-routine” tasks. This reflects the growing demand from employers for transversal key competencies, such as problem-solving, self-management and communication, more generally “non-routine skills”. But adults seeking further education face new logistical challenges (place-bound and busy people), claiming for more flexible pathways and an easier access to training offer.

### Digital learning games

The reasons for using digital learning games are mostly due to their high motivating factor, which can make learning fun. Moreover, learning through games is consistent with the constructivist way of thinking that learning can only occur through active application of knowledge in task-based situations. Digital learning games can also promote the acquisition of strategic thinking and planning capability and strengthen decision-making skills.

Pervasive games take place in the real world, and the player communicates with his fellow players and the remote control system via wireless technologies. Various communication channels are available for this, among them the mobile phone. Additional core technologies needed for pervasive gaming are portable displays, which render the digital content tangible in the real world independent of location, and sensor technologies, such as cameras, through which the status of the player can be ascertained. These technological prerequisites are fulfilled by modern mobile phones, which therefore offer an ideal medium for the execution of pervasive games.

### The Game-Models

- Quiz
- Simulation
- Story Branching
- Labyrinth
- Planning

### The Project Team

Centre for Flexible Learning, Municipality of Soderhamn, Sweden; Faculty of Economics and Management, Kaunas University of Technology, Lithuania; Exemplas Holdings Limited, United Kingdom; CATTID, Italy; CIBC Artois Ternois, France; evolaris next level GmbH, Austria; Centro Italiano per l'Apprendimento Permanente, Italy; Bulgarian Development Agency, Bulgaria; The Swiss Federation for Adult Learning (SVEB), Switzerland.

## **“FOREVER CUTTING-EDGE” PROGRAMME**

*Vladimir Slepov, Alexey Grishin, Russian Plekhanov University of Economics, Russian Federation*

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### **Introduction**

It is definitely not a secret that today's economic and financial development of the world is very rapid. So people who have got higher education in a particular field a few years ago now often find their knowledge being up-to-date no more. Another important aspect here is quickly developing information technologies – quite often alumni are unable to apply their knowledge in practice due to the insufficient level of their IT skills. These problems are especially noticeable in respect to the older generation. In the last year the Plekhanov Russian University of Economics (PRUE) which plays a pioneer role in the field of Distance Learning in the Russian Federation worked on a new distance learning programme for the older generation of those people who got PRUE Diploma many years ago. As the result of these efforts, the pilot distance education programme “Forever cutting-edge” (FCE) was launched last September.

### **The pilot FCE programme**

The mission of the FCE programme is to improve the financial knowledge of older PRUE alumni and to adapt them to new realities of the modern economic, financial and technological development of the world. In the context of Life-Long Learning paradigm it also means a kind of educational support for people who once were graduated from PRUE. The programme includes distance learning of the older generation of PRUE alumni in the fields of law innovations (tax, housing law, etc.), financial planning and scarce funds budgeting, placement of savings, insurance.

However, it is to be understood that the information and knowledge provided via FCE programme are not fundamental. The Programme core implies that the alumnus already has basic economic knowledge and only needs it to be updated. If the alumnus wishes to obtain advanced knowledge in some financial sphere, the Faculty of Distance Learning of Russian Plekhanov University of Economics offers a wide range of specialised educational programmes. Moreover, the programme also includes informing PRUE alumni of older generation about other programmes and activities undertaken by the University with invitation to take a direct part in University life.

The FCE programme includes following learning techniques:

- An interactive distance learning programme based on MOODLE system (23 courses in total);
- On-line reference base (official documents, government acts and other materials; interactive fill patterns of official documents, requests, statements etc; access to the PRUE Library funds);
- Off-line tutorial system;
- On-line “Discussion board”, webinars.

To participate in the FCE programme PRUE alumnus should provide details of his/her PRUE Diploma. The participation is free of charge.

### **Perspectives**

The FCE programme aroused the interest among PRUE graduates of older generations. According to the feedback given by participants of the Programme, the University plans to work out similar programmes with emphasis on entrepreneurship and issues related to it. The Plekhanov Russian University of Economics also plans to make this programme available for alumni of other Russian economic institutions on a fee basis.

### **Conclusion**

Indeed, the implementation of FCE programme provides PRUE graduates of older generation with up-to-date financial knowledge and involves them in today's financial life. And most importantly, the Programme gives older PRUE alumni an opportunity to feel themselves more familiar with today's financial world and improves the quality of their life.

## **INITIAL AND CONTINUOUS VOCATIONAL EDUCATION ORIENTED ON EFFICIENT PROFESSIONAL (RE)INSERTION IN THE MOULDING INDUSTRY**

*Joze Balic, University of Maribor, Slovenia, Ludwig Cardon, Hogeschool Gent, Belgium,  
Franc Cus, University of Maribor, Slovenia, Kim Ragaert, Hogeschool Gent, Belgium*

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The project "Initial and continuous vocational education oriented on efficient professional (re)insertion in the moulding industry" was carried out in the frame of Leonardo da Vinci project<sup>1</sup>. The goal of this project was the development of a new training methodology for vocational training on industry mould development that includes the correlation of the courses, seminars / workshops and testing systems of existing conventional tooling and ICT knowledge and recent high tech sintering and high speed milling technologies. The final result of the project is an innovative approach of the vocational teaching method for hybrid moulds production using e-learning and practical tools (module courses, e-learning tools), to implement this innovative approach, Web site and distance vocational training network.

### **Description of new system**

The described project tries to generate new structures and elements in correlation with new adequate courses, in the field of High Tech mould making technologies involving new technologies as SLS and HSM dedicated to distance and continuous education, to improve the skills of students in the various domains, to facilitate the collaborative work, by assuring the development of case studies.

The Hybrid moulds project includes:

- Implementation of hybrid moulds technology within vocational training programs;
- Covering of the new qualifications required by the labour market;
- The need of a new profile of the trainers for the target domains and setting up teaching / training / learning methods by implementing ICT in new skills development and enlarging the access to educational resources (information, simulation and experiment) through user-friendly interfacing;
- Creating a trans-national network among the project partners;
- Development of the Information Society in all countries involved within the partnership.

### **Conclusion**

The final results of the project are:

- An innovative approach of the vocational teaching method using an e-learning hybrid moulds;
- The practical tools to implement this innovative approach:
  - The preparatory module course;
  - The e-learning tools developed in the frame of the project.
  - The Web-site and the e-learning hybrid moulds;
  - A transnational open and distance vocational training network among the project's partners.

The project products are being used by the project partners. Also, other educational units are able to use them accordingly to the legal settlements.

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<sup>1</sup> Leonardo da Vinci, Community Vocational Training Action Programme: Initial & continuous vocational ICT education oriented on efficient professional (re)insertion in the moulding industry integrating high tech rapid tooling technologies in conventional mould development, Coordinator: Dr. Ing. Ludwig Cardon, Hogeschool Gent



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## MOSCOW STATE UNIVERSITY OF ECONOMICS, STATISTICS AND INFORMATICS: TOWARDS SMART UNIVERSITY

*Natalia A. Dmitrievskaia, Oksana V. Shulaeva, Moscow State University of Economics, Statistics and Informatics (MESI), Russian Federation*

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### **Towards Smart University**

The poster demonstrates the Smart University Strategy of Moscow State University of Economics, Statistics and Informatics (MESI). The concept of Smart University means the integration between interdisciplinary educational system for lifelong learning and learning environment. Interdisciplinary educational system includes school, higher and corporate learning and consists of customised educational programmes, integrated lifelong learning e-portfolios, and flexible forms of educational process. Learning environment is the base for sustainable development of students' competencies and the convergence of three main elements:

- Technology platform that consolidates Learning management system, University management system, Quality assurance system, eLibraries, Collaboration eResearch system;
- Functional areas: research, methodological work and teaching/learning;
- Social network of students, teachers, researchers, administrative staff and other stakeholders.

The main purpose of Smart University is to provide new quality of students' competencies development based on creating individual trajectory for each student taking into account his or her initial level of competence, learning style and future career framework. This aim can be realized in the frame of student competencies and learning outcomes monitoring system.

### **The Student Competencies and Outcomes Monitoring System**

The main goal of the system is to organize the process of competence development that can be obtained by student's competencies assessment and learning outcomes and comparing them with the target level. The Russian National Qualification Framework is in development stage at the moment and educational institutions need to gather actual and comprehensive information about skill demand by conducting surveys of occupations, job tasks and research of labour market situation and trends.

The Institute of Economics and Finance as a part of MESI is launching a research project aimed at building the competence monitoring system. The main goals can be stated as:

- To collect data about students' and graduates' competencies;
- To survey professional career paths of graduates;
- To conduct interviews with employers about skill needs;
- To gather data for a longitudinal and panel research.

These activities will provide an opportunity to get actual information about demand for skills in the labour market to compare it with current level of students' competencies. For the last two years MESI has participated in OECD's AHELO project (The Assessment of Higher Education Learning Outcomes) as a partner of 17 Russian Universities in consortium and the competencies assessment results obtained within the projects will be linked together. The gathered data can be used to redesign curriculum, course programmes, and to initialise new educational projects.

As a part of the student competence and outcomes monitoring system, MESI presents "ICT skills of unemployed" project. The project aimed at retraining unemployed people in the field of accounting was conducted during the period of 2010-2012 and had three stages: learning session, questioning just after finishing the training course and telephone interviews 1-12 months later. During the project 716 out of about 850 unemployed students were surveyed and in January 2012 717 participants were interviewed (379 participants of the year 2010 and 338 of 2011). The research demonstrates the importance of ICT skills as an element of competencies of accounting professionals (according to 80 % of participants). The results show a high level of job placement after the trainings (76.5 % of participants of the year 2010) and (53.6 % of the year 2011) and participants estimated the basic ICT training impact on employment outcomes as 3.8 (participants of the year 2010) and 3.9 (of the year 2011) on a 5-point scale.

## FROM TEACHING TO KNOWLEDGE MANAGEMENT: NEW HORIZONS IN LIFELONG EDUCATION

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### Introduction

Open educational resources are those accessible without any restrictions to all citizens of a society from children who were born in a rich technology environment, youngsters, adults and elders who have recently made use of them. Its importance lies in its stimulation of equity in access to education and its support of the goal of establishing a Knowledge Society. The National Autonomous University of Mexico (UNAM), through the Coordination of Open University and Distance Learning (CUAED) has been developing technology assisted and open educational resources, based on the Knowledge Management concept, in order to support the process we call lifelong education, that are fully accessible for the benefit of all citizens located throughout the Spanish speaking world.

### Argument and Scope

The participation of children in the use of open educational products should lead to the achieve new skills and knowledge, to increase their capacity for analysing and discriminating the information, and to adapt them to the spiralling technology, that enable children to advance their learning process that serves them for lifelong learning. Regarding elderly people, several authors note that once the elders incorporate the use of technology in their daily lives, they increase their level and variety of use, especially when it comes to seeking information related to health care.

We believe that Knowledge Management is the appropriate instrument for establishing mechanisms to gradually remove the barriers to the use of technology that now exists between generations. In this sense, the knowledge management tool that we use are the Knowledge repositories consisting of structured and distributed knowledge databases that are at the service of a group of people for sharing and gathering ideas and valuable experiences among the group.

As a member of the Mexican Association of Lifelong and Distance Education, AC (AMECYD) and participant of The Horizon project run by New Media Consortium (USA) and eLearn Centre of the Open University of Catalunya (Spain), the UNAM is committed to developing new projects in favour of "Lifelong Education" at all levels. For this reason, these open educational resources are designed to favour the inclusion of vulnerable groups (indigenous, women, persons with disabilities, children and older adults) in this process of continuing education with the support of new technologies. We want to promote and consolidate these open educational resources repositories, therefore it is necessary to have websites where all individuals, regardless of age, have access to quality educational content in such a way that they can use the Web as a learning space.

Such is the case with several of Media Campus (<http://mediacampus.cuaed.unam.mx>) an open repository where we will find videos that simply address academic and scientific issues, which we call capsules, what are manufactured in such a way they are accessible to both children and elders. Moreover, the interactive features of English Media ([http://www.cuaed.unam.mx/english\\_media/](http://www.cuaed.unam.mx/english_media/)) resources make them particularly accessible to the public; the fact it start with the A1 and A2 levels enables the learning of English to people of any capability; it may even support the independent learning. Regarding the open educational topics of Math Media ([http://www.cuaed.unam.mx/math\\_media/](http://www.cuaed.unam.mx/math_media/)), they were developed in order to be understandable for people of all ages, so that learning will be progressive in complexity without losing the common language during the interaction and exposure of knowledge. Finally, structuring Open Course Ware (OCW) (<http://www.cuaed.unam.mx/uapas/>) courses allows the elders to access them, since it makes use of two areas identified by the andragogy as the design of sequential activities for achieving the objectives and the implementation of design, selecting different methods, materials, and resources. From data obtained from Google Analytics, the general website allowing access to the listed services had more than 300,000 visitors over a period of 6 months. We also noted that the access have been from 65 countries, mainly by the Hispanic population in the U.S.A. and Latin America.

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## **PROMOTING THE EUROPEAN DISTANCE EDUCATION AREA – WORLDWIDE AND FREE OF CHARGE – THE ODL PORTAL**

*Michael Steinmann, Joran van Aart, StudyPortals B.V., The Netherlands*

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Funded by the European Commission, StudyPortals and EADTU recently launched the beta version of a brand-new study choice platform dedicated entirely to the field of open and distance learning. Providing orientation to millions, the ODL Portal (see [www.DistanceLearningPortal.eu](http://www.DistanceLearningPortal.eu)) allows all ODL providers to easily reach and convert interested visitors into their future students. During the EDEN conference 2012, we will be presenting our portal and invite the present institutions to join our initiative free of charge – and thus to boost their promotional effectiveness.

When orienting students think of their future (higher) education, open and distance learning (ODL) is typically not (yet) top-of-mind. On the contrary, there still exists comparable little public awareness and many misconceptions on ODL, its types and how these could fit to and benefit the individual. At the same time, the ODL offer is expanding in both, in volume as in type: Online, Open, Blended learning; degree or credit programmes; offered by specialist institutes but also increasingly by (consortia of) traditional HEIs. This growth and complexity combined with the current lack of awareness on the available offers, stresses the need for and potential of a central information source – a one stop shop where orienting students will be familiarized with the concept of ODL and empowered to concretely find and compare individual ODL opportunities.

To answer this need, StudyPortals, Europe's leading online study choice platform, partnered with EADTU, the European Association of Distance Teaching Universities, created a major European information portal on open and distance education. This platform does not only aim at raising the public awareness on ODL, but also allows ODL providers to promote their offers free of charge to a massive audience. Therefore, at its core, [DistanceLearningPortal.eu](http://DistanceLearningPortal.eu) consists of a comprehensive database listing available ODL study offers in Europe (the ODL database) and a central information resource on open and distance learning (the ODL centre). Like this, the ODL portal does not only publish explanatory videos, articles and real-life experiences to explain and concretise the broad field of ODL to a massive audience. Moreover, it will already present several hundreds of institutions and thousands of offers from its official launch in September onwards. This comprehensive set of information and educational offers makes the ODL Portal the number one information source on open and distance learning in Europe – and the ideal promotion channel for ODL providers.

Recently, the ODL portal has been launched in a first beta phase (June 2012). In line with the expressed needs of students and institutions, the user interface of the ODL Portal is available in the major 4 European languages, whereas programmes can be presented and promoted in any European language. The ODL Portal allows the promotion of entire degree programmes as well as individual modules, and is explicitly designed to meet the needs of ODL providers; including e.g. specific descriptors particularly relevant for ODL, such as presence requirements, delivery mode, time intensity, etc. Until end of the year, the portal is projected to reach out to half a million visitors on a monthly basis.

To multiply its impacts, the ODL Portal is integrated into and leveraged by the leading European Study Choice Platform StudyPortals – currently presenting 1,100 universities with more than 25,000 programmes and reaching 1.7 million visits each month. This does not only boost the visibility of all presented ODL offers; in addition it also ensures maximum exposure of ODL offers towards those orienting students who initially have not been thinking about enrolling in an ODL programme. Ultimately resulting in better informed students, the ODL portal has a lasting and significant impact on both quantity and quality of future ODL students.

Learn more about [DistanceLearningPortal.eu](http://DistanceLearningPortal.eu) and join this major information source on ODL free of charge during EDEN 2012.

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## **AN E-COURSE FOR TEACHERS TRAINING ON WATER AND SUSTAINABILITY: ITS APPLICATION IN PORTUGAL AND BRAZIL**

*Ione Maria Ferreira de Oliveira, Universidade Federal de Minas Gerais, Brasil, Carla M. Padrel de Oliveira,  
Fernando J. P. Caetano, Sandra Sofia F. S. Caeiro, Universidade Aberta, Portugal*

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Nowadays innumerable tools and instruments are available and can be used to improve the teaching process particularly in on-line teaching. Inserting static images helps to improve information; accompanying text with audio enriches considerably the text; producing a combined video image and sound is the most comprehensive offering that can be done to anyone seeking information. Educational programmes in environmental science, in particular water issues, are still receiving a growing interest by the working-student population seeking professional development in this field.

The aim of this work is to present the design of an international e-learning course about water and sustainability, developed for a target group of teachers, where new digital learning materials (script, images, animations and videos) were developed for this specific purpose. This e-course to be taught in Portuguese is to be applied both in Portugal and Brazil and was developed within a cooperation project between Universidade Federal de Minas Gerais – Brazil and Universidade Aberta – Portugal. The course has several teaching areas, such as chemistry, biology, geography, geology, law and management, all in an interdisciplinary way within application to environmental sciences and sustainability. At the end of the course it is expected that students improve their skills on the fields studied, become able to integrate different matters and also recognize the advantages they had by having this type of e-learning/distance course which in this first run at UAb Portugal. This international e-course is also recognized for its capacity of gathering different people from different areas and different countries, allowing them to exchange experiences and learn from them.

The course contents and organization were created exclusively for this course and took into account the rules and demands of both universities – UAb and UFMG. The preparation of the course included a multidisciplinary team consisting of qualified researchers able to develop throughout the course contents and to use technological tools and technical requirements for the development of the e-learning materials and virtual learning environment. Several items were defined, such as: i) educational aims; ii) competencies to be achieved; iii) learning digital materials, including the text books, audiovisual resources, formative and formal assessment activities; iv) virtual learning environment; v) course, teacher and students evaluation tools.

A pilot course that began in January 2012 took place with students from Portugal (a population of about 20 school teachers coming from Portugal, Mozambique and Brazil). All the students are teachers at different school levels and have different scientific backgrounds such as biology, geology, chemistry, physics, mathematics, geography and also primary teachers. In the near future this course will also be offered at UFMG – Brazil, as part of a face to face undergraduate course and as distance learning undergraduate course in teacher training. The preliminary analysis of the pilot course evaluation made by the students (in a questionnaire survey) has shown that the overall course evaluation was very good. The audiovisual used in the course had an excellent evaluation and the students liked and learned with the different formal assessments activities used in the course.

The detail results of the survey conducted will point out the need for some improvements and probably the introduction of further items. Following its validation the learning resources will be produced as Open Educational Resources (OER). To allow free use and modification in academic institutions and other organizations, the materials will be registered under a creative commons license. OER can allow for continuous feedback and subsequent updating of content and improvement of materials. Additionally, it is also very important to note that the use of advanced e-learning in this open form helps developing a more creative and up-to date form of learning, an relevant issue with environmental and sustainability teaching issues.

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## COMPETENCE AND ATTITUDE GAPS BETWEEN E-LEARNING GENERATIONS AT UNIVERSITY LEVEL

*Sara Timar, Semmelweis University, Hungary*

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Within the framework of a B. A. course, 'Introduction to Communication' held for future trainers and PE teachers at Semmelweis University via e-learning, we studied students' competence and attitudes towards ICT. We also asked for their opinion on the Moodle system and the new learning method the most of them faced for the first time in their life.

In February 2012, we started gathering data of around 170 students enrolled to a distance learning course at Semmelweis University, Faculty of Physical Education and Sports Sciences. The age of the participants ranges from 19 to 44 – two generations of e-learners with different ICT skills and attitudes towards virtual learning spaces. At first we asked participants to fill out an ICT competence test and a couple of weeks later – after having the e-learning course performed – we asked about their satisfaction in a survey containing 25 questions along with the final test measuring their course-related knowledge level.

Our hypotheses were as follows:

- students of a younger age perform better in an e-learning environment than older students
- younger students can familiarize with a computer-supported system easier than older students
- the motivational level of students of a younger age is higher than that of older students

Most of our hypotheses were fully or partially proven by the analysis of the surveys. In general, we could observe a gap between generations around the ages 25-30 about the approach towards modern information and communication technologies. Students older than that are much more likely not to let the personal computer and the internet penetrate their everyday life too much, and do not tend to support their learning process with computer thus it can be stated that the computer and other modern communication devices do not play an important role in their lives.

An average student spends around 1.5-2 hours in front of the computer. This period will be much shorter in case of students older than the average. A large amount of them do not use the Social Web regularly and even if they do, the majority of them use it in a traditional way. The ICT competence level proved to be significantly lower at a higher age and there is also a big difference in attitudes. Younger students use the internet frequently as a source or as the facilitator of everyday processes, while older students do not even know what kind of functions and possibilities could be exploited.

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## POERUP – POLICIES FOR OER UPTAKE

*Paul Bacsis, Sero Consulting Ltd., Andras Szucs, EDEN, United Kingdom*

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POERUP is a project approved by the EU Lifelong Learning Programme under Key Activity 3 ICT, running from 2011 to 2014. The project consortium consists of organisations across Europe and Canada. The main interest is to understand how better to foster the uptake of OER by governments and educational institutions.

Access to education is necessary for expanding economic prosperity and for improving quality of life. Only an open climate that nurtures learning will enable institutions of education to adapt to the ever increasing dynamics of competitive global markets. New media and technologies help to democratise and accelerate this process.

Research in the field of OER shows two gaps in terms of what has been done so far at a European level:

- The “end-user–producer communities” behind the OER initiatives and what (or who) it is that actually provides the energy that make OER initiatives work or not
- Policies that governments and agencies (international, national and regional) should adopt in order to best foster creation and uptake of OER

POERUP also responds to the mission recently expressed by the two UNESCO Chairs in OER that there is need for a global “map of the OER landscape”.

POERUP aims to study the end-user–producer communities behind OER initiatives and by comparing in-depth European case-studies to selected non-European ones, to refine and elaborate recommendations to formulate a set of action points that can be applied to ensuring the realisation of successful, lively and sustainable OER communities.

The project is carrying out research to understand how governments can stimulate the uptake of OER by policy means. In order to be successful with OER, decision makers will have to formulate evidence-based policies based on looking beyond one’s own country, region or continent, beyond the educational sector they look after.

### Methodology

The project uses a multi-method research approach to triangulate research data from different sources to gain an in-depth view into the topic.

1. Produce a global inventory of at least 100 of the most relevant national and other large-scale OER initiatives at the above institution level. This is done by in-depth desk research.
2. Produce 11 country reports plus 13 more country mini-reports (8 European, 5 non-European), created based on literature review and document analysis of relevant policy papers and country reports from previous projects.
3. From the inventory in the context of the country studies, 7 case studies will be selected (2 primary school, 2 secondary schools, 2 universities, 1 “other”). To gain an in-depth view into the dynamics of OER communities we use Social Network Analysis methodology
4. Based on the above, 3 EU-wide policy papers will be produced: for schools, for universities, and for colleges and other organised education providers. This results in a set of policies and guidelines. The results will be collected in an on-line handbook.
5. These reports will be pressed down to the national level with 7 options brief packs for EU nations/regions: UK (England, Wales and Scotland separately), Netherlands, Italy, Hungary, and France.

The project website: <http://www.poerup.info>

## **EASY DOES IT – OR HOW TO IMPLEMENT AND USE E-LEARNING TO ENHANCE AND STRENGTHEN THE SELF-IMAGE OF THE ADULT IMMIGRANT AS STUDENTS BUT ALSO MAKE THEM MORE AWARE AND REALISTIC LOOKING AT THEIR OWN ABILITIES AND SHORTCOMINGS AS STUDENTS AS WELL AS PROFESSIONALS**

*Ingunn Nilsen, Oslo and Akershus University College of Applied Sciences, Norway*

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*[H]igher 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. (Greek & Jonsmoen, 2008)*

I will sum up practical experience after a pilot course held at the Oslo University College of Applied Sciences in Norway from September 2011 till January 2012. The title of the course "Language and communication for education and work" (SKOMP) emphasizes the themes communication and language.

The SKOMP course was built up with five modules with three mandatory seminar days at each module. To ensure that the students kept developing their listening skills, their speaking, discussing, reading and writing skills, we wanted an active use of ICT.

### **The use of ICT – Different exercises, different learning outcome**

It is crucial to take into account the students pre knowledge of the use of ICT in a learning situation. ICT was used as a means to widen the range of situations where the students could communicate, and had to communicate. ICT was also used so as to improve their skills in ICT use itself. The students had basic ICT skills, but as it turned out, they didn't willingly use the media outside their comfort zone, to new exercises and assignments.

Since a main objective with this course was to make it easier for the students to reach their goals in later student and professional life, it was important to make the students see that new ways of doing things, new ways of connecting with other people, would enhance their possibilities to succeed.

The feedback from all the students and staff after finishing SKOMP says that ICT must be used, but it must be used with care. The focus should be at one step at the time, at user-friendly manuals and personal assistance.

### **What worked, what did not work as expected**

The course was built around the digital classroom as the mayor pedagogical element. ICT learning was mandatory and necessary to keep in touch and keep working between the module seminar days. We posted mandatory assignments, used the log function and the e-mail. Other ICT use was; using Windows Movie Maker for making digital stories, recording film of the students engaging in an exercise of role play, introducing interactive online Norwegian language learning programs and short films had been made and were shown as introduction to discussions on cultural skills. Some of this worked as hoped, but some of the exercises demanded more work.

I say yes. ICT should be used when the aim is to improve adult immigrants' possibilities to be integrated and successful in their student lives and their professional lives. But remember: easy does it.

## **CONNECTING PRE-SERVICE TEACHERS AND EXPERTS: 21<sup>ST</sup> CENTURY SKILLS AND SOCIAL MEDIA FOR LIFELONG LEARNING**

*Swapna Kumar, University of Florida, United States of America*

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### **Context**

New teachers entering schools today have to be familiar with new technologies to connect with their current students, who have grown up with new technologies, and to also provide their students with a learning environment that mirrors their future workplace. There are multiple advantages to the use of Web 2.0 tools and social media in teaching, such as student participation and engagement, improved communication skills, and improved literacy skills (Alexander, 2006; Barnes & Tynan, 2007; Downes, 2004; Richardson, 2006). This paper describes the redesign of a required educational technology course in a Master of Education program for pre-service teachers. The goals of the course were to provide students with knowledge and skills in appropriate use of social media for a) teaching, learning, and student engagement b) networking, peer support and lifelong learning.

The blended course combined face-to-face sessions and online session where students used social media to interact with experts and peers. They participated in subject-specific Ning, contributed to educational blogs, followed teachers on Twitter, created, posted, and followed comments on educational videos, all within the context of guidelines provided. During four face-to-face sessions, 45-minute real-time Skype sessions with expert teachers around the United States were held. Additional interactions with these experts comprised Twitter interactions, preparing questions based on pre-work, and follow-up discussions on their blogs. At the end of the course, the students wrote a report (student-chosen format) synthesizing learning and impact from online interactions based on evidence of those interactions. This presentation focuses on students' learning and interaction with experts and peers during the online activities in the course.

### **Methodology and Findings**

To gain insight into student learning and perceptions of the blended course, data were collected and analyzed from students' reports and reflection throughout the course of their online activities. These data were open coded (Charmaz, 2006) for themes that emerged. Two main themes were evident in the data: a) Students reported their learning from experienced teachers in terms of new resources, strategies, challenges, and application of current technologies in the classroom; and b) they reacted to the benefits and challenges of communication in a virtual community of experts and novices. Moreover, thirty-three percent of students immediately applied learning from their interactions with experts to their internship classrooms. Students enjoyed the opportunity to interact with experts, perceived some of the experts as role models, and learned to reach out to them and learn from them. The limitation of the data presented in this paper is that it is based on students' perceptions of learning in their reflections for a course assignment. However, students were required to provide online links that served as evidence of their online interactions. The 'real-world' online activities using social media described in this paper resulted in students learning to communicate as professionals, reaching out to experienced peers with questions and building a professional network that they can leverage in their teaching career.

### **Conclusions**

Teachers in a specific discipline often feel isolated and find it difficult to reach out to other teachers in similar situations or to more experienced teachers. This presentation represents one approach to connecting experienced and beginning teachers using social media to provide students with 21<sup>st</sup> century skills in a) creating a curriculum that transcended their classroom walls and b) networking and leveraging expert resources for lifelong learning. Although the activities in this paper were requirements in a teacher education course, the pre-service teachers became aware of avenues for lifelong learning and how they could connect with peers and experts. Further research is needed on whether they will continue to use such resources when no longer required to do so, and also on how the expert teachers who interact with them are impacted by these connections.



## HAPPY ELDERLY: CONTRIBUTION OF YOUNG GENERATION – SOCIAL RESPONSIBILITY PROJECT AS A CASE STUDY

*Ayseli Usluata, Yeditepe University, Turkey*

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The elderly living in the cities of my culture are not visible; the elderly living in the rural areas, however, are visible and healthy which is, according to my hypothesis, due the productive and active life they lead in the villages and the personal relationships.

Direct relationships between happiness and social activity among elderly people are the findings of research conducted by academicians from different fields of studies (Tobin & Neugarten, 1961; Graney, 1975; and Waite et al., 2007; 2009; 2011). The study from Rush University in Chicago looked at 954 elderly people, average age 82 and the data analyzed revealed that busy *social life* may stave off disability in elderly (2011).

One would think that life in cities would bring better quality and healthy life; however, elderly people in the cities who are not even visible and who cannot have active life are faced with social isolation which brings feelings of loneliness: so the aging process is not healthy for them. Social change due to Westernization, called modernization, effected family relations in Turkey, and extended families disappeared, thus grandparents lost personal ties with their grandchildren who would be their emotional fulfilment, decrease their loneliness.

As a Social Responsibility Project my students each semester have been visiting the elderly who lived in the elderly care home near the university campus during the weekdays in groups for four years. They try to be their connection with the social life outside listening to their stories; bringing them news from outside; exchanging jokes and sometimes having parties. For a semester they become grandchildren and grandparents and share a lot. Such interpersonal interactions are satisfactory and a rewarding experience for both parties. This semester the students wanted to support their visits with communication technology so they took their laptops with them to show the pictures they have taken: they scanned the very precious old pictures of the elderly taken years ago and reflected them on the wall which made them very happy. They were introduced to laptops for the first time. Cellular phones are very popular in Turkey, and most of the elderly people have them; however, they cannot use them properly: so the students are planning to help them learn the skills in using the phones for their needs. The result of the project will be analyzed at the end of the semester.

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## NETWORK OF STAFF AND TEACHERS IN CHILDCARE SERVICES

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The term “childcare services” refers to services encompassing formal and informal care, including parental care of children below school-going age, with particular emphasis on children under three years old. Childcare services consist of a wide variety of formal and informal arrangements, with rather fluid – and country-specific – transitions between social support services, the educational system and the actual care system.

A key feature of childcare in Europe is its diversity in terms of:

- social attitudes and child philosophies;
- supply structure and service provision;
- public and private funding mix as well as funding mechanisms;
- childcare preferences;
- childcare workforce structure, i.e. qualifications, training, employee characteristics and regulations.

Education and training of staff working in childhood education is a major concern for the present and the future of ECEC: although the Barcelona targets only refer to the quantity of childcare, several European documents emphasize that the need for childcare does not only refer to the availability but also to the affordability and quality of childcare services. Quality of services includes above all the preparation of teachers, nurses, and childminders to the social, cognitive and emotional development of the child. At present, however, given the varied background of European countries, there are no common recommendations, or defined curricula at European level, and the national (or regional) situations seem being isolated from each other, having very little possibilities of sharing.

With regard to the state of the art, the project aims at answering an identified need of establishing a reference point for sharing, exchange of resources and points of view, peer learning and support, common understanding about the addressed topic and common research on curriculum development, by means of a network focused on ECEC workforce.

The project therefore aims at establishing a network able:

- to establish permanent working groups in specific topics and issues of the field, such as (a) curricula for ECEC staff development and comparison; (b) monitoring of the state-of-the-art of ECEC staff in Europe, starting from the available data; (c) exchange of practices and models for ECEC staff training (pre-service, in-service); (d) identification of innovative case studies and description of them in order to make practices transferable across countries and institutions; (e) research in ECEC topics;
- to set up an online website as pool of learning resources, information and reference point for workforce of ECEC and institutions involved in ECEC at all levels in Europe, as well for others groups (i.e. parents, association of parents);
- to link the actors of ECEC across Europe, by fostering communication and by organizing/promoting meetings;
- to build a community, and promote peer learning and support among staff involved in ECEC;
- to promote and enlarge the community, through dissemination and exploitation of results;
- to establish an effective system for monitoring and evaluate the network.

At present, there are little available services, mainly country-based, and a European network devoted to the topic of staff development in ECEC.

## TRYING CHANGES AROUND A CUP OF TEA...

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European countries as well as economically developed countries are experiencing a process of population aging. Although all countries' population pyramids differ, a general trend towards constrictive pyramids is registered. This type of pyramid corresponds to countries where life expectancy is long and death, as well as birth rate is low. Consequently, populations are ageing and show lower numbers of younger people. This situation is changing the paradigms of the way we view and organize society in general terms. Another great alteration of the present days, and by the way, the genesis of major convulsions on a global scale, is the economical/ financial crisis that has triggered a generalized multiplicity of challenges / obstacles / difficulties.

We know that to transform the world we must first transform the way we "look at it". In our opinion, it is mandatory (i) to take advantage of this particular moment and (ii) to turn this fact into the seed of the fair and sustainable society we want for the future. We believe all human beings possess essential skills for survival: the ability to communicate and to learn. We all learn by changing experiences and communicating with others, either vertically across generations, or horizontally among people of the same age. The collaborative behaviours, social activities and voluntary or supportive practices have to be assimilated and "genetically imprinted" by all in order to create a just society, that is, a decent place, based on happiness and well-being for all.

University is a peculiar workplace. Working in a public institution, we observed facts which undoubtedly always existed, but that now seem to be occurring with greater intensity and frequency. There are events that ultimately remove or block the activities of the professionals of the institution. We quote, among many, some facts, such as: a) the dismissal of teachers; b) transfer of teachers and employees of sectors and activities; c) not steady state hiring of teachers and the placement of employees "available"; d) blocking, non-host of activities, even if (apparently) of interest to the institution; e) the negative evaluation of reports and projects that may affect the functional life (in the limit disrespect) and f) the refusal of projects and other ways to make life easier for working people. Why they occur? Among other issues, the ambition and fear can lead to tactics of power in the workplace; can have constructive functions or unhealthy manifestations of power. How to change this state of things, promoting the change of relations in the workplace? Certainly, motivating.

One of the most famous theories of human behaviour, the Abraham Maslow's hierarchy of needs (Maslow, 1943), separates human needs/ desires into five ascending levels, from basic or survival needs such as eating to the highest goal of self-actualization, where full realization and accomplishment of one's potential can be achieved. Inspired by the dynamic Maslow's pyramid, and sharing the belief that one must be the change one wants to see, a small group of three teachers from Departamento de Biologia at Universidade do Minho, in Braga – Portugal, decided to implement an indoor initiative to look at and to debate cross-cutting issues to multiple areas (not only to science, or biology in particular) in order to focus the intangible, higher needs of peers, students and other staff. With such an encounter, the organizers aim to bring together diverse participants, with different perceptions and experiences, and to stimulate a conversation about general relevant themes (creativity, motivation, inspiration, failing, among others) in an informal / cosy environment around a cup of tea.

## ROAD TO EXCELLENCE IN THE TRAINING QUALITY PROCESS – KEY COMPETENCES OF THE TRAINER / TUTOR IN THE TEACHING-LEARNING PROCESS

*László Komáromi, Dennis Gabor College / SZAMALK, Hungary*

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### **Objectives, activities, results**

The ROQET project proposes to develop a system of competences assessment for the teachers/trainers of vocational education centres. The model is adapted to the systems within the different nationalities, with reference to the Common European Framework for Quality Control. The transfer of innovation is based on the QUTE project. The self-assessment system offers a complete methodology with the necessary tools for ensuring the improvement of quality in education.

- Elaboration of a Competency Map directed to the professional development of teachers/trainers.
- Creation of an Excellence Profile that will be used to establish a pattern based on the previously defined competences.
- Development of competence assessment questionnaires
- Adaptation of the self-assessment software tool and elaboration of a user manual for this tool.
- Elaboration of a self-assessment guide as an instrument for teacher's orientation.
- Tool Implementation and testing.
- Improvement actions guide to collect guidelines aimed at achieving the predefined excellence profile and the development of coaching workshops for the competences achievement.

### **Type of transfer**

The transfer of innovation of the project is directed to the target group, to the tool itself and to the use of the tool. The tool developed in the QUTE project provides the VET teaching staff with the chance of having a proven tool for self-assessment for the teaching staff. This will be the first innovation: the target group. The self-assessment system offers a complete methodology with the necessary tools for ensuring the improvement of Quality in Education, keeping the confidentiality of the obtained data and the teaching staff anonymity. QUTE is an internet tool (there is no need to install anything) but you can also work with paper documents (printing everything) and students can fill in them and then insert the data on QUTE to have the analysis of results. The improvement of the tool, second innovation, will not only be on the software: not just some changes will be needed for adapting them to the new technological advances but also the methodology improvement, compiling the answers that users have been generating during the process. The third innovation will be on the applications: improvements in the educational system brought by the software tool in the VET scope, making the evaluation to be an allied to the teaching staff for their research capacity in the educational scope.

### **Partners**

Fundación Metal Asturias (ES), PIA (SI), CECOIA (PT), HRDC (EL), CPI (SI), ISOB GmbH (DE), Šolski Center Velenje (SI), SZÁMALK (HU).

More information on the website: [www.sef-assessment-in.vet.eu](http://www.sef-assessment-in.vet.eu)

## **THE IMPACT OF E-LEARNING IN STUDENTS' DAILY LIFE**

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In 2011 the Portuguese Ministry of Education approved new e-learning masters course, at the Faculdade de Ciências Sociais e Humanas da Universidade Nova de Lisboa, on Regional Planning and Geographical Information Systems. The construction of the masters proposal was made side by side with a post-PhD theoretical and practical research on e-learning, which included two on-line questionnaires concerning: a) the need for high education courses on this subject and b) e-learning at the Portuguese universities from the students' point of view (available at [http://www.tecminho.uminho.pt/UserFiles/File/SAEEL\\_FRamalhete.pdf](http://www.tecminho.uminho.pt/UserFiles/File/SAEEL_FRamalhete.pdf)).

As a result, we verified that students had no problems with the technological and methodological aspects of their e-learning experiences (such as adaptation to the platforms and acquiring knowledge), but experienced various levels of more or less expected difficulties in their daily life (such as adapt personal schedules and create new learning habits and rhythms).

As a result, we decided to expand the knowledge on this subject by launching a case study survey (60 students) on the impact of e-learning in students' daily life (in comparison with their face to face learning experiences). One of the purposes of the research was to support teachers on the preparation of their disciplines for the first year of the new masters' course. The other was to develop new data and allow new discussions concerning e-learning studies.

The poster aims to increase the discussion about e-learning, both from the universities and the students' perspective and will present, for the first time, some of the results of the case study, namely: reasons to choose an e-learning course, comparison between e-learning and face to face experiences and changes in daily life during the course. It will, nevertheless, also be an important step stone, as the research will proceed during the courses' first year (2012/2013).

## **(MIS)ENCOUNTERS OF DIGITAL INCLUSION: ONLINE COLLABORATION IN CONTINUING TEACHER TRAINING**

*Risoleta Montez, Luísa Aires, Universidade Aberta, Portugal*

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### **Introduction**

Strong investment in the dissemination of digital technologies, as well as increasing ease of access to the Internet, has not been accompanied by the development of skills for their use in educational settings. Thus, new dynamics have to be developed in schools, and teachers are expected to have social and pedagogical skills that are able to assist in creating proximal zones of development geared towards the digital society.

Previous research, accomplished under the Network of Municipal Observatories for Literacy and Digital Inclusion, has revealed that, although teachers in the 1<sup>st</sup> cycle of basic education acknowledge the importance of digital technologies and the Internet, they do not often use these technologies, justifying this situation on the basis of a lack of pedagogical skills (Aires & Melro, 2011). Additionally, the principle of mono-teaching (i.e., one teacher teaches all compulsory subjects) in the 1<sup>st</sup> cycle of basic education has led to cultures of professional isolation, which hinder the dynamics of networking, a fundamental dimension of the promotion of digital literacy.

Given these facts, this study aims to explore to what extent online continuing training, based on collaborative principles, can contribute to acquiring skills in the use of digital technologies and the Internet in a classroom setting. In particular, it intends to determine whether online collaborative practices among peers, generated on the basis of a blog with educational purposes, can contribute to acquiring pedagogical skills to use digital technologies and the Internet.

### **Method**

The study was developed over four main stages: 1) Observation and interviews with 9 teachers in the 1<sup>st</sup> cycle of basic education; 2) Building an online continuing training course, bearing in mind the key referents derived from the interviews conducted; 3) Delivery of the training course to the 9 teachers interviewed previously; and 4) Interviews with the teachers after they concluded the training course.

The comparison of the teachers' narratives before and after the training course and, particularly, their conceptions as to the use of the computer and the Internet, the skills required to develop good practices and the role of training in developing these skills, are the major themes of analysis.

### **Conclusions**

The study's conclusions point out new paths to restructure the processes of continuing teacher training based on e-learning, which is able to boost digital inclusion in 1<sup>st</sup> cycle schools. Therefore, we believe that ICT teachers' training in online collaborative environments will promote new teaching and learning practices and will contribute to an effective inclusion of digital cultures in primary schools (Aires et al., 2007).

## **PELE – USING A NEW EVALUATION AND TEST METHOD TO CLOSE THE GAP**

*Per Bergegård, Sven-Olov Larsson, CFL, Sweden*

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### **The scope of the DONE-IT project**

The DONE-IT project introduces a new software the Peer Learning Assessment Service (PeLe), that immediate elaborative for verification based feedback processes and learning methodologies.<sup>1</sup> It is a new tool for collection and marking their tests in the context of highlighting different crucial culture similarities and differences with the objective to close the technology gap.

### **The PeLe software and the underlying methodology**

PeLe brings evaluation closer to real-world needs as it introduces a didactical methodology that combines immediate feedback by using Smartphones, I-pad, laptop or a stationary computer, in combination with problem solving approaches.

According to contemporary models of learning, individuals understand and remember new material best when they elaborate on that material in some manner.<sup>2</sup> Elaboration can take the form of adding details to the information, clarifying an idea, explaining the relationship between two or more of the new concepts, making inferences, visualizing an image of some aspect of the material, applying an analogy relating the new ideas to familiar things, or in some other way associating the new material with tests. A guided questioning pertaining to the material to be learned and those questions in turn elicit relevant explanations. The characteristics of the questioning strategy that accounts for these effects is the critical-thinking nature of the question prompts and the high degree of learner autonomy and Independent learning within the structure of such a strategy.

### **Real world applications for the PeLe software**

The challenge in the project has been to build a tool that is intuitive, fast to use, while at the same time providing sufficient flexibility and easy inclusion of improvisation in elaborative and verification learning processes. The technology will be used for classroom, conference, seminars and information both for distance learning and in classrooms. Distance learning being an entirely new option for elaborative feedback.

PeLe is an internet based tool that is platform independent. It can be accessed through smart phone, I-pad, laptop or a stationary computer without installing any additional software. PeLe software gives the teacher flexibility to collect responses from spontaneous questions and evaluate the learning progress in class by collecting responses from multiple questions. We aim to highlight culture differences and similarities between age groups with interactive tests using PeLe software to show different religious patterns, how different age groups access and use material online and how they use online social media.

### **Significance of the DONE-IT project and learning approach**

By using the PeLe software the demonstration will show new teaching approaches that capture the imagination and showcase differences and similarities of different cohorts and by that, closing the generational gap.

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<sup>1</sup> <http://histproject.no/node/193>

<sup>2</sup> Pressley et al., 1992, for “elaborative interrogation” and Wittrock, 1990, “model of IT generative learning”

## LINGOBEE: A MOBILE APP FOR IN-SITU LANGUAGE LEARNING

*Lyn Pemberton, Marcus Winter, University of Brighton, United Kingdom*

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### Introduction

LingoBee is a mobile application developed for Android phones as part of the LLP Project SIMOLA: Situated Mobile Language Learning. The aim of the SIMOLA project is to design, develop and evaluate a mobile application for people learning languages in formal and informal settings. The app will enable learners to capture multimedia representations of linguistic and/or cultural items in the L2 setting and to annotate, tag and share them with like-minded learners. It aims to tap into learners' enthusiasm for Web 2.0 social networking via features such as tagging, profiles and favourites. The app's main target user is the advanced learner who is currently in the target language country: examples would be Erasmus students, migrant workers or students undertaking a vocational placement abroad. For these learners, the app is intended to act as a personal learning tool, encouraging them to attend more fully to the language and culture around them and to continue to improve their language skills, even when they are functionally competent and possibly no longer involved in formal language education. The tool may, however, be equally useful for learners at other stages and in different settings. The project targets learners both directly and via facilitators such as teachers and commercial training providers.

### Description of functionality

The application enables students to collect, annotate, and tag interesting or puzzling language- and culture-related content found in everyday life, including text, images, and other media, and to upload these content items to a repository. From the repository, the information is automatically made available to other users who are enrolled in the same user group. Users can swap between user groups in three clicks, as we anticipate that there will be a demand to see what users in other groups deem interesting.

In addition to syndication, the repository offers a web interface:

- to allow adding, editing, annotating, tagging and discussion of content items;
- to provide a central point around which a community of practice can crystallise.

The Web interface is more appropriate for extensive editing and extensive text-based communication, thus combining the affordances of the two platforms. The demonstration will allow participants to use both mobile and Web interfaces in real time to share content with each other.

### Current Status

LingoBee is currently being evaluated in six EU countries with a range of language learners including Erasmus students, immigrants and vocational students. We are working with partners to integrate the app into the practices of language schools and independent learners alike. The demonstration will show delegates how learners use the app to collect, annotate and share language- and culture-related items from the target language culture.

### Acknowledgements

The SIMOLA project was funded by the EU as part of its Lifelong Learning Programme in ICT LLP 511776-LLP-1-2010-1-UK-KA3-KA3MP. We gratefully acknowledge the support and the work of our project partners.



## CREATIVE USES OF WEB 2.0 IN ONLINE OR BLENDED COURSES

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Web 2.0 tools make it easy to connect and collaborate with others, and these traits are becoming increasingly desirable in today's professional workplace. Clearly, there is a need to give today's students of all ages the experience and tools to be successful in a changing marketplace that emphasizes digital literacy and 21<sup>st</sup> century skills. However, many instructors or curriculum designers do not know where to begin in terms of including Web 2.0 elements in their online or blended courses. Many discussions or demonstrations about Web 2.0 tools focus only on the technical "how to" aspects of these tools, and forget to address *why* you would use them in a class, or *how* you would integrate them with the rest of the course structure. Before utilizing these tools you should ask: does this tool have true educational value, or is it just adding bells and whistles to the class?

This demonstration shows actual educational examples of some Web 2.0 tools demonstrated in a sample online course shell. Tools shown include: Wikis, Blogs, Flickr, Delicious, Google Docs, Voice Thread, Jing, and YouTube. These educational examples could be appropriately used in online or blended courses, or even as supplemental materials for traditional classes. A student login to the demonstration course will be provided to participants.

## GENERATIONS OF MANAGERS WORKING FOR YOU! JUST WITHIN A FEW CLICKS

*Airina Volungevičienė, Kristina Mejerytė-Narkevičienė, Estela Daukšienė, Danutė Bačinskienė, Vytautas Magnus University, Lithuania, Jan M. Pawlowski, University of Jyväskylä, Finland*

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*What if you could access hours of open management education from one website with just a few clicks? The OpenScout project (<http://learn.openscout.net>) offers a new service which can give you this knowledge. It lets management education users, teachers and students search, visualize, use, share and publish information.*

*eContentplus Programme as a Targeted Project "OpenScout – Skill based scouting of open user-generated and community-improved content for management education and training" in the area of Educational Content (ECP 2008 EDU 428016)*

### The concept of OER in OpenScout

OpenScout open educational resource definition is based on UNESCO (2002) OER concept defining OER as "as teaching, learning and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials or techniques used to support access to knowledge" (Atkins, Brown, Hammond, 2007).

At present, the classification of OER suggests three main types of OER:

1. Learning and teaching content: Full courses, courseware, content modules, learning objects, collections and journals.
2. Tools: Software to support the development, use, reuse and delivery of learning content, including searching and organisation of content, content and learning management systems, content development tools, and online learning communities.
3. Implementation resources: Intellectual property licenses to promote the open publishing of materials, design principles of best practice and localise content.

The definition of OER is both broad and vague. A wide variety of objects and online materials can be classified as educational resources, from courses and course components, to library or museum collections or, to open access journals and reference works. Over time the term has come to cover not only content, but also learning and content management software and content development tools, and standards and licensing tools for publishing digital resources. This allowed to users to adapt resources in accordance with their cultural, curricular and pedagogical requirements.

### OpenScout services

OpenScout is a project co-funded by the European Commission within the eContentplus Programme as a Targeted Project in the area of Educational Content (Grant ECP 2008 EDU 428016). During the project, OER research and use system was designed for higher education institutions, teachers and students, as well as for small and medium enterprises, business companies, consultants and their staff. Other services, like tool library enabling editing and publishing OER. High quality, competence – based open content is harvested in OpenScout portal from international companies and (INSEAD, EFMD, SPK and others) and universities (OUUK, UNED, BRUN, OUNL and others).

OpenScout demonstration in EDEN Porto Conference will suggest demonstration participants who want to find free online materials to improve their management skills, having laptops, ipads, tabs, smartphones, and other smart things to:

- Search, publish, join online community of practices, select the tools, adapt resources, re-publish and discuss findings and effects with peers online!
- Listen and watch the tutorials on IPR, OER and other issues while using OpenScout repositories
- Plunge into management education resources and browse harvested content from INSEAD, UNED, TIMES, and other famous and quality repositories!
- Find recommendations for the best tool library use produced by OUUK
- And then – discuss results in circles, suggest your national, institutional and personal way of use of OER.

Demonstration session will include possibilities to plug-in OpenScout into existing institutional Moodle websites and many other possibilities. Demonstration will be based on OpenScout portal at <http://learn.openscout.net> available in several European languages.

OpenScout portal will be launched on May 14, 2012. Webinars for all managers, teachers and students will be open via OpenScout portal. Thousands of hours of competence – based quality content will be offered for free use for management education. By these services, OpenScout contributes to development of culture at education institutions and companies, and to improving the quality and transparency of education worldwide.