

**Eighth EDEN Research Workshop – EDENRW8**

# **Challenges for Research into Open & Distance Learning**

Doing Things Better – Doing Better Things

Oxford, United Kingdom

27-28 October 2014

## **BOOK OF ABSTRACTS**

Edited by

António Moreira Teixeira and András Szűcs  
on behalf of the European Distance and E-Learning Network

EDEN, 2014

Eighth EDEN Research Workshop – EDENRW8  
**Challenges for Research into Open & Distance Learning**  
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## Introduction

One of the important missions of EDEN is to support the development of academic research by facilitating its wide scale dissemination, promoting international networking, knowledge sharing and exchange of academic and professional experience. This is a critical role in a rapidly evolving scene. The EDEN conferences are major academic and professional events in Europe, based on collecting best practice and breakthrough innovations, serving with the papers presented and published as well as media records of the discussions held as most valuable resources for the professional community.

High quality research into open learning is indispensable in face of today's challenges. It provides important information to enhance learning with technologies in the digital age, improving and enriching the learner's experience, to assist effective decision-making and foster the uptake of promising educational innovations, and helps to ensure the viability and quality of products and services. This is vital in a field where change is constant. The continuing significant interest from the professional community has been confirming for 15 years already the relevance of the EDEN initiative to run the Research Workshops which represent the bi-annual meeting place for the leading European and global research for open and digital learning.

This year's Workshop Scope reflects upon the current complex challenges facing researchers and the intersection of their work with 'doing better things' for key stakeholders. This includes informal learners, formal learners, teacher, leaders, funders and policy makers especially where new learning technologies play an important role.

EDEN is proud that the Open University, as a founding member of the Association since 1991 is hosting and sponsoring the event. The OU has been a world leader in modern distance learning, pioneer of teaching and learning methods which enable people to achieve their career and life goals studying at times and in places to suit them. With their support, the 2014 Research Workshop is held in Oxford.

The format of the event is key for setting a unique environment. The EDENRW8 will be very focused on the researchers and what they can learn from and with their peers. This year the program design is not like that of the usual conferences. Networking occurs as an essential aspect of the experience, featuring small groups for deep dialogues, feedback on your research, 'research-speed-dating' papers, poster session, world café style facilitation and presentations along with keynotes.

Two challenge areas have been identified which shaped the EDENRW8. They are: Challenges for open and distance learning in 21st century and Challenges in undertaking research and research impact. The top themes selected were: Researching Learning Design for the 21st Century skills, Open and Distance Learning for Employability, Researching 'the Crowd' in a mass learning in a global society and Researching 'the Group' and social Learning and the independent learner in ODL. New or recast models and methods for researching learning design: Learning Analytics is high on the agenda – how can we use big data research: to evaluate open and distance learning? How do we measure and how can we increase the impact of our research into ODL?

The EDEN Best Research Paper Award has become an important part of our conferences and Research Workshops since it was first introduced in 2008. EDEN acknowledges and appreciates the continuous support of the Ulrich Bernath Foundation for Research in Open and Distance Learning in the selection of the most outstanding research papers, thus highlighting excellence in our community.

Andras Szűcs  
Secretary General

António Moreira Teixeira  
EDEN President

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# **BOOK OF ABSTRACTS**

The Proceedings of the Research Workshop  
with full text of papers/posters is available at:

[http://www.eden-online.org/2014\\_oxford/proceedings](http://www.eden-online.org/2014_oxford/proceedings)

*The Book of Abstracts was published without references,  
which can be found with the full texts in the Proceedings.*

# Table of Contents

## E-LEARNING METHODOLOGY: MODELS AND PRACTICES

Faculty Role Change: Adjustment to the Influence of Online Teaching and Learning .....	17
<i>Martha Cleveland-Innes, KTH Royal Institute of Technology, Sweden, Athabasca University, Canada, Sarah Gauvreau, Contact North, Canada</i>	
Successful Online Distance Learners: An Exploration of Learner Characteristics and Patterns in Online Learning .....	18
<i>Trish Andrews, University of Southern Queensland, Australia, Belinda Tynan, The Open University, United Kingdom</i>	
Individual Learning Path in Gamified Environment.....	20
<i>Maria Zajac, Marcin Piekarczyk, Pedagogical University of Cracow, Poland</i>	
Teachers' Professional Development through Learning Ecologies (le): What are the Experts Views?.....	22
<i>Marc Romero, Lourdes Guàrdia, Montse Guitert, eLearn Center – Universitat Oberta de Catalunya (UOC), Albert Sangrà, UNESCO Chair in Education and Technology for Social Change, Universitat Oberta de Catalunya (UOC), Spain</i>	
Teachers Perception on Innovative Services and ICT in Teaching and Learning in Primary and Secondary Schools in Croatia.....	24
<i>Jasna Tingle, Dragana Kupres, Croatian Academic and Research Network – CARNet, Croatia</i>	
Where is the Teacher in Online Learning: Centre Stage or Cameo Appearance? .	26
<i>Julie Peschke, Athabasca University, Canada</i>	
Understanding the Student Experience: Doing Things Better in Studying First-Time Distance Learners .....	27
<i>Mark Brown, Dublin City University, Ireland, Helen Hughes, University of Bristol, United Kingdom</i>	
Feedback on Academic Essay Writing through Pre-Emptive Hints – Moving towards 'Advice for Action' .....	28
<i>Denise Whitelock, Alison Twiner, John T. E. Richardson, The Open University, Debora Field, Stephen Pulman, Oxford University, United Kingdom</i>	



“Are they Ready?” Exploring (Non-Traditional) Students’ Self-Directed Learning Readiness and their Acceptance of e-Learning Tools.....29  
*Stefanie Brunner, Svenja Bedenlier, Joachim Stöter, Günter Hohlfeld, Carl von Ossietzky University Oldenburg, Germany*

The Influence of Emotion on Cognitive Presence in a Case of Online Math Coaching.....31  
*Martha Cleveland-Innes, KTH Royal Institute of Technology, Sweden, Athabasca University, Canada, Stefan Stenbom, Stefan Hrastinski, KTH Royal Institute of Technology, Sweden*

Faculty Satisfaction in an Online Learning Environment: A Caribbean University Perspective .....33  
*Benita Thompson, The University of the West Indies Open Campus, Barbados*

Crossroads and Challenges for Research into a Massive Distance Learning Program: UBA XXI .....35  
*Patricia Inés Gándara de Marshall, University of Buenos Aires, Argentina*

Clustering based Recommendation of Pedagogical Resources.....36  
*Brahim Batouche, Armelle Brun, Anne Boyer, University of Lorraine, France*

## **OPEN EDUCATIONAL RESOURCES**

Developing 21<sup>st</sup> Century Skills through Colearning with OER and Social Networks .....38  
*Alexandra Okada, Cíntia Rabello, The Open University, United Kingdom, Giselle Ferreira, UNESA, Brazil*

Promoting Engagement in MOOCs through Social Collaboration: Common Lessons from the Pedagogical Models of Universidad Galileo and Universidade Aberta.....40  
*Rocael Hernández, Miguel Morales, Universidad Galileo, Guatemala, José Mota, LEaD, António Teixeira, Universidade Aberta, Portugal*

Internal Responses to Informal Learning Data: Testing a Rapid Commissioning Approach.....42  
*Patrina Law, Leigh-Anne Perryman, The Open University, United Kingdom*

OER in Alberta Canada & the eMundus Europroject.....44  
*Rory McGreal, Athabasca University, Canada*

Developing Critical Perspectives on Technology in Education:  
 A Tool for MOOC Evaluation .....46  
*Antonella Poce, Università Roma TRE, Italy*

A Networked Learning Framework for Effective MOOC Design:  
 The ECO Project Approach .....48  
*Francis Brouns, Open Universiteit, Netherlands, José Mota, LE@D, Universidade Aberta, Portugal, Lina Morgado, Universidade Aberta, Portugal, Darco Jansen, EADTU, Netherlands, Santiago Fano, Universidad de Oviedo, Spain, Alejandro Silva, Universidad de Zaragoza, Spain, António Teixeira, Universidade Aberta, Portugal*

**E-LEARNING QUALITY AND ASSESSMENT**

Assessing Transformational Learning in Online Professional Programs:  
 Methodological Approaches and Challenges .....50  
*Swapna Kumar, University of Florida, United States of America, Patricia Arnold, Munich University of Applied Sciences, Germany*

A Review of a Faculty-Wide Change in Assessment Practice for Open and  
 Distance Learners of Science .....52  
*Sally Jordan, The Open University, United Kingdom*

An Exploration of Tutor Feedback on Essays and Development of a Feedback  
 Guidance Tool .....54  
*Anthea Wilson, The Open University, United Kingdom*

Assessing Oral Presentations in Distance and Open Learning .....56  
*Stefanie Sinclair, The Open University, United Kingdom*

Exploring Quality in Teaching and Learning with ICT: A Qualitative Study .....57  
*Cathrine Tømte, Dorothy Sutherland Olsen, NIFU – Nordic Institute for Studies in Innovation, Research and Education, Norway*

University as an Extended Environment: A question of “e-Quality” .....59  
*Francesca Ravanelli, Free University of Bolzano – Bozen, Italy*

The ‘LIBE’ Project Distance Learning Platform – Evaluating an Adaptive  
 e-Learning Solution .....60  
*Francesco Agrusti, Roma Tre University, Italy*

## **SOCIAL MEDIA AND MOBILE LEARNING**

- Making Online Teams Work – The Tutor View .....62  
*Jane Barrett, Helen Kaye, The Open University, United Kingdom*
- Mobile Learning Delivery via Social Networks: What Platforms Do First-Year University Students Prefer? .....64  
*Yaacov J. Katz, School of Education, Bar-Ilan University and Michlalah – Jerusalem Academic College, Israel*
- Evaluating Web Connectivity for Adult Distance Learners – Facebook or Forums? .....66  
*Christine Gardner, The Open University, United Kingdom*
- Measuring Impact of Using e-Learning Portals on Educational Systems .....67  
*Masoud Fakhimi, Munir Abbasi, Lampros K. Stergioulas, Georgios Xydopoulos, University of Surrey, United Kingdom, Maria Fragkaki, Computer Technology Institute, Sofoklis Sotiriou, Ellinogermaniki Agogi, Greece, Luis Anido Rifon, University of Vigo, Spain, Ruxandra Margineanu, UNISOFT, Romania, Ferenc Tatrai, EDEN, United Kingdom*
- The Internet in Icelandic Teacher Education – Twenty Years History, Problems and Possibilities .....69  
*Thurídur Jóhannsdóttir, Sólveig Jakobsdóttir, University of Iceland, Iceland*
- A Murky Business: The Ethics of Conducting Educational Research in Facebook Groups .....71  
*Leigh-Anne Perryman, Tony Coughlan, The Open University, United Kingdom*

## **POLICY, THEORY AND CONCEPTION IN E-LEARNING**

- Student Perspectives on the Use of Their Data: Between Intrusion, Surveillance and Care .....74  
*Sharon Slade, The Open University, United Kingdom, Paul Prinsloo, University of South Africa, South Africa*
- Who Graduates from Irish Distance University Education? .....75  
*Lorraine Delaney, Dublin City University, Ireland*
- Learning Effectiveness – A Case Study on Critical Thinking and Collaboration within Higher Education .....77  
*Marianne Öberg Tuleus, Örebro University, Sweden*

Speeding-up Adoption of e-Learning Innovation in Europe: Mission Possible? ...79  
*Fabio Nascimbeni, MENON Network, Belgium, Vana Kamtsiou, Brunel University, United Kingdom*

Life-World Factors of Distance Education Students and their Influence on Learning Achievement .....81  
*Karin Krey, Sebastian Vogt, Wencke Bauhaus, FernUniversität in Hagen, Germany*

Promoting Awareness and Ownership in Digital Processes of Teaching & Learning.....83  
*Elsebeth Korsgaard Sorensen, Aalborg University, Denmark*

## **RESEARCH APPROACHES AND PERCEPTIONS IN ODL**

Challenges behind Research-Based Practices and Practices-Focused Research in Distance Education .....85  
*Selçuk Karaman, Engin Kurşun, Ataturk University, Turkey*

Learning Analytics in Practice: Setting up a Laboratory for Action Research at the Universitat Oberta de Catalunya .....87  
*Julia Minguillón, Christine Appel, Francesc Santanach, Universitat Oberta de Catalunya, Spain*

Peer Review of OER is not Comprehensive – Power and Passion Call for Other Solutions .....88  
*Anne Algers, Magnus Ljung, Swedish University of Agricultural Sciences, Sweden*

A MOOC *avant la lettre*: David Harvey’s Lectures on ‘Reading Capital’ and What Distance Educators may Get from it.....90  
*Thomas Hülsmann, UNISA, South Africa*

Achieving Improved Quality and Validity: Reframing Research and Evaluation of Learning Technologies .....92  
*Adrian Kirkwood, Linda Price, Institute of Educational Technology, The Open University, United Kingdom*

Belonging and Mattering through a Technological Lens – Meeting One Challenge for Open and Distance Learning in 21<sup>st</sup> Century .....93  
*Rhonda Leece, University of New England, Australia*

## POSTERS

Pedagogical Speedbumps and Life's Potholes and Diversions on a Distance Learner's Journey.....	95
<i>Anthea Wilson, The Open University, United Kingdom</i>	
ICT in Emancipatory Education: An Approach to Crisis Alleviation.....	97
<i>Maria Frangkaki, Research Academic Computer Technology Institute and Press-Diophantus, Greece, Lampros Stergioulas, University of Surrey, United Kingdom</i>	
Digital Learning – Exploring the Leadership Factor.....	99
<i>Colum Foley, Dublin City University, Ireland</i>	
SpeakApps: Studies on Oral Production and Speaking Interaction.....	100
<i>Christine Appel, Maria Luisa Malerba, Universitat Oberta de Catalunya, Spain</i>	
Social Networking in (L2) Second Language Learning.....	101
<i>Maria Luisa Malerba, Open University of Catalonia, Spain</i>	
Vision, Scenarios, Insights and Recommendations on How ICT may Help Making Lifelong Learning a Reality for All – The Stakeholders' Voice.....	102
<i>András Szűcs, Livia Turzó, European Distance and E-Learning Network (EDEN), United Kingdom</i>	
Patterns of non-Encouraged in-Class Mobile Technologies use at Budapest University of Technology and Economics (BME).....	105
<i>Judit Vidékiné Reményi, Budapest University of Technology and Economics, Hungary</i>	
From Library Place to Library Space: Investigating Distance Learner Engagement with Online Library Services.....	107
<i>Jacqueline Baxter, Megan Doolittle, Non Scantlebury, Sam Thomas, The Open University, United Kingdom</i>	
Assessment Strategy – Designing and Developing Assessments for Online Distance Education.....	108
<i>Elaine Walsh, James Brunton, Dublin City University, Ireland</i>	
Digital Learning Objects Design for Teachers Continuing Professional Development.....	109
<i>Daina Gudoniene, Danguole Rutkauskiene, Kaunas University of Technology, Lithuania, Emma Beatty, Fast Track into IT, Ireland, Brigita Latvelyte, Kaunas University of Technology, Lithuania</i>	

Critical Reflections on Course Design in Open University .....	111
<i>Satu Hakanurmi, University of Turku, Finland</i>	
The South Baltic Weblab: Captivating Pupils in Marine Science .....	113
<i>Dalia Baziukė, Klaipeda University, Lithuania</i>	
E-Learning Paradigms in Apulian Living Labs .....	115
<i>Gianna Avellis, InnovaPuglia, Adriana Agrimi, Apulia Region, Gaetano Grasso, Marco Di Ciano, Francesco Surico, InnovaPuglia, Italy</i>	
EMPORT – Improve Employability and Enhance European Competitiveness through the Acquisition of Language and Cultural Competences in Portuguese.....	118
<i>Amador Ordóñez, Silvia Capón, Dirección General de Educación FP y Innovación Educativa, Ana Mª Jorquera, Asesoramiento, Tecnología e Investigación S.L, Spain, Turzó Livia, European Distance and E-Learning Network, United Kingdom, Simone Schwambach, Università Degli Studi di Roma "Tor Vergata", Italy, Rui Azevedo, Universidade Lusófona de Humanidades e Tecnologias, Carla Laranjeria, Magensinus, Empresa Promotora de Serviços de Ensino, S.A., Portugal, Gerd Merke, Euroroc Brussels/Wiesbaden, Belgium/Germany, José Carlos Paes de Almeida Filho, Universidade de Brasília, Brazil</i>	
The Online Classroom – Developing Learning Spaces Using Blogs, Wiki and Twitter .....	120
<i>Per Arne Godejord, ICT-Pedagogical Centre, Nord-Trondelag University College, Norway</i>	
Internet Services in the Work of University Teacher .....	121
<i>Alexey Kozlov, Tatiana Kozlova, Ilya Ashavskiy, MESI, Russia</i>	
Blended Learning: A View from a Research Angle.....	123
<i>Alla Nazarenko, Moscow State University, Russia</i>	
An Experience of Blended Learning in an International Distance Education Context.....	125
<i>Jose I. Navarro, University of Cadiz, Spain</i>	

## WORKSHOPS

- From Beans on Toast to Molecular Gastronomy (and a Bit of MasterChef):  
Linking Learning Design with Learning Analytics ..... 126  
*Bart Rienties, Denise Whitelock, Lisette Toetenel, Vicky Marsh, Alison Ashby,  
Institute of Educational Technology, The Open University, United Kingdom*
- From Lightning to Enlightenment: How to Apply Learning Analytics in  
Practice ..... 128  
*Kevin Mayles, Bart Rienties, Zdenek Zdrahal, Avinash Borooa, Sharon Slade,  
Alison Ashby, The Open University, United Kingdom*
- Teaching Strategies and Design for Online and Blended Learning ..... 130  
*Martha Cleveland-Innes, Athabasca University, D. Randy Garrison,  
University of Calgary, Norman Vaughan, Mount Royal University, Canada,  
Stefan Stenbom, The Royal Institute of Technology – KTH, Sweden*
- Learning across Disciplines: A Step too Far for Educational Research? ..... 132  
*Alexandra Mihai, Vrije Universiteit Brussel – SCOM, Belgium*
- Decision Making on e-Assessment Criteria ..... 133  
*Blaženka Divjak, Nina Begičević Ređep, University of Zagreb, Croatia*
- The Impact of Openness on Technology Enhanced Learning Integration in  
Education Organizations ..... 134  
*Alan W. Tait, The Open University, United Kingdom, Airina Volungevičienė,  
Margarita Teresevičienė, Vilma Žydžiūnaitė, Lina Kaminskienė,  
Vytautas Magnus University, Lithuania*
- Good Practices of e-Learning Solutions for Vocational Education and  
Training ..... 135  
*Zsolt T. Kosztyán, University of Pannonia, Hungary*





## **FACULTY ROLE CHANGE: ADJUSTMENT TO THE INFLUENCE OF ONLINE TEACHING AND LEARNING**

*Martha Cleveland-Innes, KTH Royal Institute of Technology, Sweden, Athabasca University, Canada, Sarah Gauvreau, Contact North, Canada*

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This paper presents an argument which rests on two interrelated premises regarding the influence of new pedagogies in higher education. The first is that the phenomenon of web-based teaching and learning is dramatically affecting faculty roles in higher education. The second is that the role of faculty member is saturated with requirements and adding a teaching process that requires advanced teaching expertise and additional time commitments will not fit into the current role of faculty; this is so for web-based teaching and learning. Survey data from seventy-eight faculty from eighteen comprehensive academic institutions in Canada provides evidence of change in faculty views and activities in refer to teaching, whether faculty are engaged in teaching with technology or not.

## **SUCCESSFUL ONLINE DISTANCE LEARNERS: AN EXPLORATION OF LEARNER CHARACTERISTICS AND PATTERNS IN ONLINE LEARNING**

*Trish Andrews, University of Southern Queensland, Australia, Belinda Tynan,  
The Open University, United Kingdom*

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The rapid growth in online learning over the last two decades has led to a considerable focus on researching a range of issues that impact on the online distance learner experience. These investigations have focused primarily on instructional or learning design, interaction and communication in learning communities and learner characteristics. Online distance learning research which has had a focus on learner characteristics has been essential over the past two decades for understanding how to support diverse learners within this mode especially given ongoing high attrition rates. While this work has undoubtedly contributed to improvements in online learner's experiences, online distance learning continues to be plagued by problems such as high attrition rates, concerns about quality, poor understanding of how to teach effectively online and the role of technology in online learning amongst many other issues. While much focus has been on the types of interventions that organisations might deploy, it remains that learners cannot be easily classified into homogenous groups and there is a need to understand more deeply who they are and how they behave as individual online distance learners. With this in mind, the focus of the research reported here was '*how do mature-age distance learners go about learning?*' The paper situates the research in the macro, meso, micro theoretical framework for researching online distance learning and focuses this study at the micro-level. The research questions fits well within the micro context for research into online distance learning and to identifying learner's behaviours in relation to their learning activities. The key objective of the project discussed here was to contribute to effective and positive learning experiences for the online learner in distance programs.

The project was funded by the Australian Government and the Office of Learning and Teaching (OLT) and involved four Australian universities – two research intensive traditional face-to-face institutions and two dual mode institutions offering both face-to-face and distance learning programs. The project also investigated the spaces and places (physical and virtual) within which distance learners participate in ICT supported teaching and learning activities. Participants were invited to provide two types of diary data in various textual, audio, video and photographic formats, Charting the Weeks activities and the Day Experience Method, photos of learning spaces and to participate in a focus group discussion, to

illuminate understandings of distance learners' experiences in relation to the ways in which they engaged in their learning activities. In total 43 students from the 4 participating institutions completed the study.

The results of this study identified a number of learner characteristics and patterns of learning behaviours for the learners in this study and utilised two case studies to demonstrate the patterns of learning behaviours adopted by different learners. The participants in the study identified as successful online learners who are highly motivated individuals developing unique patterns of learning and self organization to support their learning activities and complete study requirements. A significant learner characteristic identified in this study included orchestrating time which is accomplished through managing self, using technology, learning on the go and participating in concurrent activities. An interesting characteristic that also emerged was the focus on wellbeing. Other characteristics related to connectedness, and technology use. A strong finding from the study is the unique way in which individual students demonstrated these different learner characteristics.

Understanding the complexity of the different ways in which the students manage their learning is important for supporting their progress. As the online distance learning environment continues to evolve with the ongoing and widespread adoption of technology, learner behaviours and characteristics will also change and evolve, requiring ongoing research to ensure that our understanding of learners keeps pace with these changes and universities can provide the kinds of learning experience that contribute to successful online learning and potentially minimising attrition.

## **INDIVIDUAL LEARNING PATH IN GAMIFIED ENVIRONMENT**

*Maria Zajac, Marcin Piekarczyk, Pedagogical University of Cracow, Poland*

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The purpose of the paper is to present the preliminary findings of a research project aimed at individualization in Technology Enhanced Learning. The main objective of the project is to elaborate the methodology of designing the individualized courses and of implementing them into online and blended learning. The project has been financed by The Polish-Norwegian Research Fund within the scope of so called Small Grant Scheme aimed at women doing research in technical sciences<sup>1</sup> Although originally the scope of the project was placed in computer science there is no doubt that pedagogical aspects of the issue are equally important. The pedagogical and technological aspects influence each other, which means that the conceptual work and software solutions are well settled in teaching practice which is not often the case when talking about adaptive learning systems.

The process of individualization will be combined with some elements of gamification, therefore the necessary data regarding the learners' individual profiles will be gathered from two sources: the Bartle's test of player types and the learning styles questionnaire derived from the Howard Gardner's Multiple Intelligence Theory. The model we are currently working on in the project assumes that a course structure is built around the concept of role playing game combined with project based learning. Therefore the main requirement for the course authors is to create diversified activities for the learners depending on the role they play in a team, with strong emphasis on supporting the development of soft competences like leadership, time management, critical thinking, collaboration skills and responsibility.

Initially the model will be implemented on the Moodle platform (some experiments are already carried out), with the possibility to be adapted also by the other learning platforms in the future.

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<sup>1</sup> INDIPATH, Formal description of individual learning path in Technology Enhanced Learning, project ref. No Pol-Nor/205110/12/2013

The necessary steps of the project could be outlined as follows:

1. To establish the context for individualization – how is it understood and realized in practice
2. To identify as many as possible different forms of engaging the learners and increasing their motivation for learning (this was done by analysing good practices both accessible as online courses and described in the literature)
3. To elaborate a system of identifying different types of course components and activities with the aim of assigning diversified activities to the different learners' profiles they correspond with
4. To prepare a sample individualized course and to implement it in a chosen learning environment
5. To run a course, evaluate its workflow and improve the system based on evaluation results.

As far as the technological aspect of the project is concerned the main challenge is to create an algorithm that would be able to adjust the course content to the learners' individual needs. This should be understood that the author of the course that is intended to be delivered in an individualized manner creates its content, which is redundant in some way because it includes various types of tasks corresponding with different learners' profiles. Some course components (incl.: general instructions, course completion requirements, game rules, some units of learning content and even some activities) are common for the whole cohort of learners whereas the others are aimed at particular working teams or individual learners, depending on their preferences and the role they play in a group (and consequently in a whole course). Additionally the Learning Styles Inventory gives the indications for audio-visual form of learning content contrasted with the verbal (descriptive and explanatory) or graphical (logically structured and concise) form. The heart of the system is the *Selection engine*, which goal is to create individualized version of a course, which will be a subset of the original one and will contain only those elements, which are aimed at a particular learner.

Some elements of possible future works and further development of the system are also outlined in the paper.

## **TEACHERS' PROFESSIONAL DEVELOPMENT THROUGH LEARNING ECOLOGIES (LE): WHAT ARE THE EXPERTS VIEWS?**

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Professional profiles and the skills and knowledge that individuals need to thrive in today's society have been changing due to social changes generated in recent decades. We know that there is no single reason, but there is no doubt that the role of ICT have been taking in all dimensions of our society is one of them. Within this setting, where ICT have an undisputed dominance, there emerge complex sets of contexts, comprised of activities, resources, and relationships, which provide new opportunities for learning in physical and virtual spaces, and new opportunities for non-formal and formal learning. These sets of contexts are referred to as ecologies of learning, and in this study, ECO4LEARN, we focus on how these ecologies determine the professional profile of teachers in compulsory education, and how they can contribute to personalize training needs and increase the effectiveness of their professional development.

With this in mind, and with the aim of focusing our research on one particular group of professionals, we set out to provide answers to the following questions: What role do LE of lifelong learning play in teacher' training and professional development? What are the elements that make up teachers' lifelong and life wide LE? What role does each of the elements play and how do ICTs contribute? What benefits do teachers find in the various components that make up LE beyond those of traditional schemes?

The teacher nowadays also must evolve into a different role, becoming a facilitator of learning rather than someone who is transferring information, a content generator, promoter of the use of ICT, especially in social networks. With this vision of what the future teacher should be in the school environment, we have chosen to look at different cases in this investigation. The concept of ecology, developed by Barron (2004, 2006), Brown (2000), Luckin (2010) or Uden, Wangsa and Damiani (2007) moves beyond Communities of Practice, Learning Communities and further even than social networks, given that these only exist as selected components of each individual's LE. From this viewpoint, we understand the concept of LE to be "a set of contexts made up of configurations of activities, materials, resources and relations generated in physical or virtual spaces, which provide opportunities for learning" (Barron, 2004, p.6).

As the aim of the project was to first conceptualize learning ecologies for teacher training, – understanding what they are and how they are configured, what are the main components and in particular those related to ICT, among others, – it was decided to work in parallel and in combination with the literature review as well as the use of Delphi technique.

In relation to how primary school teachers update themselves today, experts stress independent learning through access to blogs of other teachers producing similar content, social networking, reading books as well as printed and digital magazines. About what specific components mostly affect the teachers' professional development, we can conclude that are personal interaction that takes place with peer exchange and the dialogue established through participation in professional networking and educational networks, such as those promoted from the regional government, companies, or associations. With regard to which of these components produces a noticeable improvement in educational practice in terms of transfer, great emphasis is placed on the faculty – virtual or in person – as a natural area in which teachers come together and share common concerns and projects. It is in the faculty where dialogue activities, the creation of communities and working groups, innovation, and the exchange of activities and training that are needed are promoted. Another component is based on innovation activities in the centre based on the reflection. Finally, regarding the advantages and disadvantages of the components that set the learning ecologies that influence the teachers' professional development, the experts participating in this research mostly identified the reflection of practice, peer contact, the opportunity to discuss common issues and questions, sharing resources and activities they already designed and used before, and the promotion of innovation, all as advantages.

## **TEACHERS PERCEPTION ON INNOVATIVE SERVICES AND ICT IN TEACHING AND LEARNING IN PRIMARY AND SECONDARY SCHOOLS IN CROATIA**

*Jasna Tingle, Dragana Kupres, Croatian Academic and Research Network – CARNet, Croatia*

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The focus of the paper is on researching and analysing teachers' perception of using ICT in teaching and learning and for innovative services in primary and secondary schools in Croatia. The research was conducted in spring 2014 using qualitative methodology in small guided groups discussions, covering 10 schools, 26 focus groups and over 150 teachers of both primary and secondary schools in rural and urban, geographically dispersed locations of Croatia. The purpose of investigating teachers' perception was to inform the preparation of the large-scale national project of ICT in education called e-Schools, in which teachers should have the key role as change agents, and to engage teachers early in the project preparation. This large-scale implementation is planned under the umbrella of a national project called e-Schools that encompasses use of ICT in two directions: a) for school administration purposes; b) for teaching and learning. The project is led by CARNet, with partners from major stakeholders in Croatian school education sector (Ministry of Science, Education and Sports, agencies for teacher training and vocational education, universities) and is to be implemented in phases between 2016-2022.

The starting point of the large-scale implementation of ICT in education processes in Croatian school system is the acknowledgement that teachers are the key carriers of the change. The importance of the role of the teachers in managing change, both in administration and teaching and learning, facilitated by the use of ICT, has already been documented, stressing the importance of the bottom-up approach and contextualising ICT policies for teachers (Meyer, Kristensen, 2011), but also combining bottom-up with top-down approaches with specific activities that focus on awareness, education, implementation, promotion and support (Mudrinić Ribić and Quien, 2013).

Therefore, it was vital to understand the teachers' point of view, in relation to advantages and barriers they see in managing the change that technology is bringing. For that reason, the research key questions when conducting the described study were: What advantages from using ICT in teaching and learning do teachers in Croatian primary and secondary schools perceive? What are the barriers,



and possible solutions to overcome them, in using ICT in teaching and learning that teachers perceive?

SCALE CCR multi-dimensional concept was chosen as an evaluation tool for the large-scale project planning, e-Schools. The same model was introduced for the purpose of data analysis of the focus groups and world café group as well as for the purpose of testing the model itself in the context of Croatian schools and project preparation in CARNet. (Bocconi, Kampylis & Punie, 2012a, 2012b).

The results of the study have showed that more informed and more experienced the teachers, wider spectrum of ideas about using ICT and capability of noticing its advantages they have, together with higher expectations and variety of uses they show.

On a national level, it is evident that Croatian teachers still perceive ICT mostly as infrastructure (10), innovative services (11), however, they do perceive potentials and the need to use the technology for deeper learning, such as meaningful activities (20) and for learning by exploring (14). The results also show that teachers are not yet capable or have not yet endeavour in to using technology for social inclusion, social entrepreneurship, learning events, and that the changes technology use can have in the physical space are not even thought about. These are the areas that CARNet can promote and should think of incorporating in the large-scale e-Schools project.

## **WHERE IS THE TEACHER IN ONLINE LEARNING: CENTRE STAGE OR CAMEO APPEARANCE?**

*Julie Peschke, Athabasca University, Canada*

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The www-culture of our now global village may increasingly be seen as a harbinger enticing us to follow a pathway from which will emerge the re-conceptualized educational practices of a new century. This research set out to discover where the highways of the Internet would lead me, the researcher-practitioner, in terms of the teaching and learning of mathematics in an online world of my own design. The venue was a virtual environment which had shifted from inter-active to inter-personal, from digital text to digital dialogue, and which had the potential to morph the traditional student role into a more engaging self-organizing instructor role. My primary research questions became: What would be the *lived experiences*, both cognitive and affective, of adult learners taking an online program in developmental mathematics, without any face-to-face contact or means of support? Moreover, would our learning together be hindered or be enhanced by this disassociation of persons in both space and time?

The research took the form of an empirical case study by way of narrative inquiry but was encapsulated within a hermeneutical interpretative framework. The findings led me to a re-conceptualized notion of a face-to-face classroom ensconced within a virtual world – a place of learning, even deep learning; a place of community with its resonances and its discordances; and an enduring legacy. Why? ... because I began to envision a pedagogy stretching beyond the confines of spatial considerations into the open realms of the linking and embedding of thoughts and feelings towards a mutual understanding through the voice and language of human dialogue.

## **UNDERSTANDING THE STUDENT EXPERIENCE: DOING THINGS BETTER IN STUDYING FIRST-TIME DISTANCE LEARNERS**

*Mark Brown, Dublin City University, Ireland,  
Helen Hughes, University of Bristol, United Kingdom*

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This paper is set against the backdrop of the problem of retention and completion and reports on the experiences of 20 first-time distance learners using a novel video diary approach to data collection. Video diary reflections were submitted by a purposive sample of online/distance learners each week over a period of up to 16 weeks. Data were analysed using a thematic analysis method following the general principles of a phenomenological approach. Many of the key decision points in undertaking this type of research are described along with some of the methodological challenges and limitations. The lived experiences of first-time distance students were a complex phenomenon. The paper reports some of the main findings and reflects on different ways of studying the student experience along with the imperative of doing things better for this group of learners.

## **FEEDBACK ON ACADEMIC ESSAY WRITING THROUGH PRE-EMPTIVE HINTS – MOVING TOWARDS 'ADVICE FOR ACTION'**

*Denise Whitelock, Alison Twiner, John T. E. Richardson, The Open University,  
Debra Field, Stephen Pulman, Oxford University, United Kingdom*

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This paper reports on the SAFeSEA project (Supportive Automated Feedback for Short Essay Answers), conducted by the Open University and Oxford University, which set out to assist students in writing draft essays. The project explored a number of feedback mechanisms to facilitate this process. One such mechanism was investigating how to offer support regarding essay structure, based on the premise that a good essay is like a good story: it needs a beginning, middle and end; the components are also well connected and the middle section of the essay provides the evidence for the argument progressed throughout the essay. This leads to the development of a web-based feedback system called OpenEssayist (Whitelock, Field, Pulman, et al., 2013). In parallel with this technical development, we also investigated whether support could be given to students before they started writing their essays, in the form of 'hints'. This paper will set out the rationale behind this investigation, the context in which it was addressed, and the conclusions we can draw to confidently assert that such a 'feed-forward' approach can have a statistically significant effect on students' essay marks.

# **“ARE THEY READY?” EXPLORING (NON-TRADITIONAL) STUDENTS’ SELF-DIRECTED LEARNING READINESS AND THEIR ACCEPTANCE OF E-LEARNING TOOLS**

*Stefanie Brunner, Svenja Bedenlier, Joachim Stöter, Günter Hohlfeld,  
Carl von Ossietzky University Oldenburg, Germany*

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## **Introduction**

Accommodating ‘Non-traditional’ students’ (NTS) needs (Kerres, 2012) is an increasing concern for traditional brick and mortar universities. This also applies to teaching and learning in the online distance education context: “As the online learning environment is characterized with autonomy, self-regulation becomes a critical factor for success in online learning” (Barnard, Lan, To, Paton & Lai, 2009, p.1). This paper investigates the differences in self-directed learning readiness of non-traditional and traditional students in German higher education as well as the acceptance of digital teaching and learning approaches with respect to their self-directed learning readiness. Thus, the central research questions are:

- Do traditional and non-traditional students show different levels of self-directed learning readiness?
- Does a relationship exist between the self-directed learning readiness of these two groups and their acceptance of e-learning tools?

## **Theoretical Background**

The well-known definition of self-directed learning by Knowles (1975) is applied in the context of this study. Consequently, self-directed learning readiness refers to the “attitudes, abilities and personality characteristics” (Wiley, 1983, p.182 as cited in Fisher et al., 2001, p.517) that the learner needs to apply to his or her learning process. Self-directed learning is one of the central components in the theory of adult education (Merriam, 2001). As early as 1978 Guglielmino developed a scale to measure this self-directed learning readiness. Transferring self-directed learning readiness to online distance education means to directly address that “studying at a distance requires maturity, a high level of motivation, capacity to multi-task, goal-directedness, and the ability to work independently and cooperatively” (Brindley, 2014, p.287).

Definitions of the non-traditional student by Ely (1997), Horn and Carroll/NCES (1996) were considered while for this study, the classification by Zawacki-Richter, Hohlfeld and Müskens (2014) was used, defining non-traditional students according to their age, employment status and mode of study.

## **Method**

Data in this analysis is taken from a large quantitative study on students' use of media, which was conducted in 2012 in the framework of "Aufstieg durch Bildung – offene Hochschulen", a large-scale program funded by the German Federal Ministry of Education and Research and the European Social Fund (Zawacki-Richter et al., 2014). The study aimed at identifying university students' usage patterns when deciding on which (digital) media, tools, and services to use in the context of their studies. In total, 2339 students from over eleven German higher education institutions answered the online administered questionnaire. In the media usage study, questions concerning the participants' self-directed learning readiness were taken from Fisher's et al. (2001) self-directed learning readiness scale and were translated from English to German by the researchers. Fisher et al. developed their own self-directed learning readiness scale in response to the critique on the validity of Guglielmino's scale (Field, 1989).

## **Results and Conclusion**

The results of a 2-factor variance analysis clearly indicate that differences in the estimation of the own self-directed learning readiness between the groups of NTS and TS exist, although they are rather small and not statistically significant. NTS show higher scores on the self-directed learning readiness scale, be the acceptance of digital teaching and learning approaches low, middle or high. The higher the self-directed learning readiness, the lower the acceptance. Considering the design of teaching and learning in higher education, this would mean that non-traditional and traditional students are rather similar in some characteristics relevant for the instructional design and share a lot of the same needs regarding study modes. Increasing the flexibility of educational offerings (flexible learning opportunities in terms of time and tools) in higher education will therefore be an advantage for all groups of students.

## **THE INFLUENCE OF EMOTION ON COGNITIVE PRESENCE IN A CASE OF ONLINE MATH COACHING**

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A model entitled the Relationship of Inquiry (RoI) framework was developed to provide a deeper understanding of one-to-one online tutoring. It is built on the widely accepted online Community of Inquiry (CoI) framework (Garrison et al., 2000, 2001), is based on the work of Peirce (1955) and put in an educational context by Lipman (1991). The RoI framework is based on four interdependent elements: cognitive, teaching, social, and emotional presence. The framework and elements is described below. To date, the RoI framework has been tested and verified in an online math tutoring setting. The adapted cognitive, teaching, social, and emotional presence measures achieved an acceptable level of reliability (Stenbom et al., 2012). Findings suggest the adapted online inquiry framework is a good fit for describing one-to-one online tutoring.

Emotional presence has been suggested as an element worth exploring in online environments. It has been suggested that the present location of emotions in the CoI, currently defined as a part of social presence, can be questioned (Garrison & Akyol, 2013). Cleveland-Innes and Campbell (2013) suggested a possible four element framework adding emotional presence as “the outward expression of emotion, affect, and feeling by individuals and among individuals in a community of inquiry” (p.283). As described above, this additional presence is included in the RoI framework, and is a central element in this study.

This paper reviews evidence that suggests that emotions are evident in an online learning environment (Brookfield, 2006; Zembylas, 2008; Dirks, 2008) by revealing emotions associated with all three other presences identified in an online RoI. Although text-based communication is a more limited medium to express emotions compared to face-to-face communication, online students develop new ways to express themselves emotionally. Similar to other studies, the students in this study used paralinguistic (i.e. emoticons, punctuation, capitalization), adopted a less formal more personal and expressive tone or used figurative language (e.g. Meyer, 2003; Swan & Shih, 2005; Delfino & Manca, 2007; Lomicka & Lord, 2007) to exhibit both positive and negative emotions related to all areas of cognitive presence, but during the exploration phase in particular.

The identification of emotional presence as a substantive, significant influence in online learning environments is an important finding in this study. More important is the relationship suggested by the combination of emotional presence in reference to cognition. Emotion was identified more often in cognitive presence than social presence, but less so than in teaching presence. Across elements of cognitive presence, as identified by the practical inquiry model, emotional expression varies. Emotion is more prevalent during the early phases of cognitive processing: the experience of a triggering event and the exploration toward understanding. The integration of this experience into past learning demonstrates the least amount of expressed emotion. The resolution of a cognitive event involves greater expressed emotion than during the integration phase, but less than during the triggering event and exploration phases of cognitive presence.



## **FACULTY SATISFACTION IN AN ONLINE LEARNING ENVIRONMENT: A CARIBBEAN UNIVERSITY PERSPECTIVE**

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This study was conducted to identify factors affecting the level of satisfaction and dissatisfaction of online adjunct faculty in an online learning environment at an English speaking Caribbean university. The factors investigated included personal, institutional; technological, institutional and administrative. An adapted online faculty satisfaction survey was developed and administered to all instructors via the online survey site: SurveyMonkey. The sample included E-tutors, Course Coordinators and Group Facilitators who were contracted during Semester 2 of the 2012-13 academic year and those who had been previously contracted within the past three years. Of the 345 faculty members who received surveys, 249 responded, thus achieving a response rate of 72%.

The research was guided by the following research questions:

- What is the overall satisfaction level of adjunct faculty?
- Which factors most contribute to the satisfaction of adjunct faculty members?
- Which factors least contribute to the satisfaction of adjunct faculty members?
- What differences exist in the satisfaction levels of adjunct faculty by age, sex and job title?
- How can UWI Open Campus improve the online delivery process?

Firstly, the findings indicate that faculty was generally satisfied with their online teaching experiences as demonstrated by an overall mean score of 4.05, from a maximum of 5.00. Male faculty was slightly more satisfied (4.12) than their female counterparts (4.03). Secondly, faculty was most satisfied with administrative factors with a mean score of 4.18. This indicates that faculty was very satisfied with the response times of Programme Managers, Course Delivery Assistants, Learning Support Specialists and the general administrative support in the online environment. Thirdly, faculty was least satisfied with student factors (students' participation in online discussions and the level of student-faculty interaction) with an overall mean score of 3.07. Finally, there were minimal differences in regard to satisfaction levels of faculty by age, sex and job title.

In addition, the findings revealed a number of ways by which the UWI Open Campus could improve online course delivery. Faculty recommendations included an increase to faculty remuneration; more flexible training schedules; more consistent practices in course delivery and timely handover of course content. Faculty also suggested a decrease to faculty- student ratios; improved student participation; increased measures to ensure student readiness and student technology competencies; the creation of a more user-friendly Learning Exchange; and improved technology support, especially to new faculty members.

Overall, the findings suggest that Open Campus Faculty is relatively satisfied with their online course delivery experiences. Of importance, however, is the need to improve the students' participation in online discussions and the level of their interaction with faculty. In this regard, every effort must be made by faculty and other UWI Open Campus personnel to improve student engagement. In light of this, faculty should seek to provide meaningful ways of communication to enhance their social presence as well as that of their students. Moreover, at the curriculum level, courses should be examined to determine the extent to which communication activities are integrated.

The UWI Open Campus is a relatively new institution, which provides quality educational opportunities to the English-speaking Caribbean region and beyond. The online mode of delivery is expanding and best practices are being adopted and adapted to ensure student and faculty satisfaction. Consequently, this investigation should contribute to the development of the Open Campus' online teaching and learning process. Moreover, the empirical evidence should inform and initiate policies with regard to the needs of online faculty. Equally important is that this investigation will also add to the overall discussion relating to online and distance education.

## **CROSSROADS AND CHALLENGES FOR RESEARCH INTO A MASSIVE DISTANCE LEARNING PROGRAM: UBA XXI**

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This work presents the crossroads and some of the challenges involved for research into a massive distance learning program at the University of Buenos Aires. Among its general objectives we can name in first place the Global Positioning System (GPS) that provides the location of this work in Argentina, and the introduction of the legacy in distance university studies along the country. In second place the description about the general characteristics of the distance learning program "UBA XXI" that takes place in the University of Buenos Aires. The main objectives of this work are: the analysis of the researcher role in this distance program whose main characteristics consist in being a massive program and with a large implementation experience in the distance education field. Determinate some of the conditions for the practitioner researcher in distance open learning. Reflect on some of the research tensions as: the promptly inclusion of new technologies in the distance learning programs, the logic of managing of time in a research and an educational process, the necessity of differentiation between research and pedagogical improving practices, the concepts of "proximity and distance" as dimensions to be considered, and one last tension about the role of the researcher when he is a member being part of the distance program. Finally introduce some possible paths to generate impact and validations within the colleagues inside the program.

## **CLUSTERING BASED RECOMMENDATION OF PEDAGOGICAL RESOURCES**

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In France, seven DTUs (Digital Thematic Universities) allow open access to more than 24,000 OERs (Open Educational Resources). A DTU is a thematic repository of OERs, all validated by the academic community and indexed using SupLomFR (the French declaration for higher education of the LOM standard). The emergence of many huge repositories of OER offers new opportunities to learners, where the OER can be freely accessed from the DTU's portal, at any moment, by anybody, from everywhere. But it is difficult for most of learners to find interesting resources, when the only available information about resources is their indexing in an international standard such as the LOM or one of its national declarations. Thus it is important to help learners to find pertinent resources, even if the only thing known about a learner is the last resource he selects in the current session. One way to perform an accurate recommendation is to recommend him the nearest resources to the last one he clicked on, in term of similarity. But the nearest resources can be highly dissimilar to the last clicked resource if this latter is an isolated one. In this case, it is better to recommend nothing to him, as we cannot afford to recommend an inappropriate material in an e-learning context.

The task of the recommender system could be viewed as the task of a librarian who helps users to find a pertinent book within a library. Books are classified by themes. A users request will be related to the theme, which matches it the best. Our recommender system works on the same way: it classifies the UOH, (uoh.fr) the DTU dedicated to humanities, dataset in clusters (themes) in order to give recommendations according to the theme of interest of the user. If, because of the isolation of resources in a specific theme, the user has already seen all the available resources, then the recommender will have nothing to suggest. In this scenario, the librarian's knowledge about close or linked themes allows to ensure nevertheless a high quality of recommendation. The question is how to do that automatically? The main difficulty of the task is that users are not registered, and we only can use the information collected during the current session for a given user.

This paper describes a recommender system relying on the last resources the user has consulted: the recommender system takes into account the fact that a resource has been accessed, as well as its description in LOM, if available. The interest of using information such as disciplines and keywords is to recommend the most adequate resources. Indeed, in the context of e-learning, it is crucial to make

accurate predictions: a recommender with a low quality of prediction is not acceptable. The quality of prediction can be highly affected by the isolation of resources: a problem appears when the last resource viewed by a user is an isolated resource (no similar resource in terms of keywords and disciplines exists).

An unsupervised machine learning approach can automatically build knowledge about relationships between clusters, e.g. to build classes of resources and to determine links between classes. This knowledge presents a great advantage to solve the sparsity problem. It is the reason why we decide to recommend resources according to their description and also to their metadata. Due to our applied characteristics and objectives, I2GNG (Improved Incremental Growing Neural Gas) is the better candidate method of clustering. The dynamic clustering of I2GNG and its capacity to build connection between classes are the main advantages for our choice. I2GNG allows taking into account, in real time, the change and update done in the dataset. In summary, the use of I2GNG has the following objective: to ensure the quality of prediction by analysing isolation of resources, and building scalable knowledge about links between resources.

After defining the recommendation process and choosing the best candidate method for our problem, we contribute to (i) formalize a new representation of neural weights, which considers the pedagogical resources, (ii) adjust I2GNG to consider the specific case of isolated resources detection, and not only the cluster determination. The adjusted algorithm is experimented with UOH (uoh.fr) corpus.

## **DEVELOPING 21<sup>ST</sup> CENTURY SKILLS THROUGH COLEARNING WITH OER AND SOCIAL NETWORKS**

*Alexandra Okada, Cíntia Rabello, The Open University, United Kingdom,  
Giselle Ferreira, UNESA, Brazil*

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In little over a decade, Open Educational Resources (OER) have opened up access to knowledge through hundreds of projects and open content repositories, open practices and, more recently, Massive Online Open Courses (MOOC). However, OER lie at the heart of the Open Education movement, which advocates that communities and individuals should have access not only to repositories, but also to open technologies and methodologies. Since 2006, OER initiatives such as OpenLearn have been providing both open content and knowledge media environments. Currently, it is possible to observe that an increasing number of open learning projects have been moving beyond the provision of repositories to offer social personalised platforms for collaborative open knowledge construction. OpenScout and weSPOT, for example, offer opportunities for users to organise their social networks and co-create resources, methodologies, inquiries and best practices.

The aim of this paper is to discuss the potential of online collaborative learning to support the development of 21st century skills. It draws upon an on-going virtual ethnography study that aims to investigate colearning – collaborative open learning – with OER and social networks. The research focuses on COLEARN, an open research network constituted by communities of educators, students and researchers who have been participating in various OER projects, including OpenLearn (Lane, 2012), OpenScout (Okada, 2012, 2014) and weSPOT (Mikroyannidis, 2012). A large data set that has been collected in the course of activities revolving around the creation of the book *Open Educational Resources and Social Networks* (Okada, 2013) is currently being treated. This project has been conducted for over four years and includes a variety of open digital data from multifaceted social settings in different platforms used during the co-authoring process of three editions of the book. The process has involved 113 educators, students and researchers from thirty research groups in 21 different universities in 5 countries, who co-authored, initially, 30 chapters that draw upon their mainstream research. Amongst the activities developed, 7 open web conferences were organised with research groups responsible for each chapter, who discussed their work with readers on Facebook and FM webconference application. COLEARN's fieldwork includes both quantitative and qualitative sources. Thus, a variety of open digital data were co-produced from multifaceted social settings in

### *Open Educational Resources*

different project platforms, such as digital productions, discussion forums, wikipage reflections, videoclips about the process, web-videoconferences, virtual focus groups, social media comments, social network dialogue and online surveys.

A global overview of individuals' and groups' skills were integrated to show COLEARN's skills. The "C" model analysis, which was created by the community itself for identifying and representing these skills, was used for data analysis, which was later shared with all COLEARN members who contributed to the book production in different stages. The limitation of this research has currently been discussed with participants in order to develop deeper analysis with more data and subjects' different interpretations. Additionally, working environments with social personal open technologies such as weSPOT might be useful for educators and colearners to develop investigations on individual and collective issues, conduct efficient searches on the web, and construct knowledge collaboratively. The next step is to obtain the community feedback about this research and findings.

## **PROMOTING ENGAGEMENT IN MOOCS THROUGH SOCIAL COLLABORATION: COMMON LESSONS FROM THE PEDAGOGICAL MODELS OF UNIVERSIDAD GALILEO AND UNIVERSIDADE ABERTA**

*Rocael Hernández, Miguel Morales, Universidad Galileo, Guatemala, José Mota, LEaD, António Teixeira, Universidade Aberta, Portugal*

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Massive open online courses (MOOC) have been dramatically expanding online learning opportunities due to the emergence of new platforms and MOOC aggregators that facilitate access and search for courses according to the needs of each user, growing from a selection of specialist courses to an offering of hundreds of courses on major online platforms with millions of registered users. All this has caused a very interesting debate about their influence in the future of higher education.

Initially, MOOCs were seen as a form of providing better education for all, offering the opportunity to study with the best teachers for free and promoting the development and management of specific learning communities for people with less access to education. However, different studies show that people who enrol and participate in a MOOC generally have higher education qualifications. However, MOOCs have been receiving criticism for their high rate of attrition. Even if this is justifiable in view of the millions of participants that can be enrolled in the same course, each of them with its own different learning needs and motivations.

But studies about this issue have not considered the analysis of the learning experience designed. This is basically an expression of the prevalence of an old and inadequate traditional academic model that ignores the potential of open education in general, and MOOCs in particular, for example the social collaboration aspects. Given these concerns, the Galileo University in Guatemala and the Open University of Portugal initiated a research collaboration on issues of design and development of an educational model based on the use of learning artifacts, resorting to cloud based tools to improve the learning experience and achieve better results. In this paper we depict the first stages of this comparative study.

The MOOCs experiences from both the Open University of Portugal and the Galileo University prove, independently of the basic pedagogical approach used, learner satisfaction and, most importantly, the success of the learning experience cannot be measured by completion rates. This cannot be a quality indicator for non formal open forms of education delivery. In fact, participants in MOOCs are typically non



### *Open Educational Resources*

homogeneous groups of learners with quite different backgrounds and expectations and, ultimately, aiming at different learning outcomes.

As the experiences presented also demonstrate, the improvement in the quality of MOOC offering depends on how much more flexible and adjustable to different contexts and needs the learning opportunities provided can become. According to the results of the institutional experiences shown, the real success factor in a MOOC is the level of engagement obtained from course participants and this can be highly improved by the use of learning artifacts based on cloud based tools.

## **INTERNAL RESPONSES TO INFORMAL LEARNING DATA: TESTING A RAPID COMMISSIONING APPROACH**

*Patrina Law, Leigh-Anne Perryman, The Open University, United Kingdom*

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There are several unique aspects to researching the behaviour and motivations of informal learners. Examining informal learning data can allow researchers to respond more quickly, and at a greater scale, than to data gathered through formal institutional research processes. Studies were undertaken in 2013 to analyse and compare the demographics of The Open University's (OU) informal learners, students and educators who are using OpenLearn ([www.open.edu/openlearn](http://www.open.edu/openlearn)) and/or iTunes U (Law et al., 2013; Perryman et al., 2013; Law et al., 2014). In addition an analysis was made of what content these three categories of learners were using, how they were using it and how they were motivated or otherwise to progress to formal education. The study provided a set of recommendations for the University around informal learning. These were to:

1. Create an entire Badged Open Course (BOC) curriculum targeting access students,
2. Improve the usability of OpenLearn around the user experience of studying an unsupported course, and
3. Extend syndication to reach new audiences.

The recommendations were acted upon and at time of writing, are almost complete. This paper reports on the impact of the research undertaken in 2013 brought about by these recommendations, how this research was repeated in 2014 and shows how simple research models in the open can bring about change in a short period of time that would be difficult to replicate in the formal curriculum.

Understanding the usability challenges of learners using OpenLearn as a course environment has required The OU to make modifications to the Moodle platform, based on our understanding of learners' interactions with it and with each other – information which can be fed back to the formal student learning experience. Our research into evaluating methods of assessment in the open through the BOC project and exploring how underserved and less educated groups can be motivated in an unsupported environment, will again provide an opportunity to impact on informal learners' experience in addition to that of The OU's formal students as we continue to evaluate them in 2014 and 2015.

### *Open Educational Resources*

Recommendations from the 2014 studies will be the subject of future papers. However, whilst the approach to issue a suite of access-level badged open courses on OpenLearn was largely based on data and a desire to meet the needs of a widening participation group, the discussion has extended to how we might serve other groups and to challenge how we recognise informal learning achievements beyond the issuing of certificates. Whilst FutureLearn, Coursera and other MOOC platforms charge for their certification, The OU will maintain the issuing of badges as recognition of informal learning for free. One of the questions for us researching informal learning in 2014/15 will be understanding whether learners' perceptions of paid-for certification as a recognition of achievement in informal learning has a greater value than that which is provided for free.

We now have a good picture of our learners studying informally on OpenLearn and via third party platforms such as iTunes U. In the light of greater numbers of universities' participation in MOOC provision, availability of free informal learning content is increasing as is the understanding of what it means to deliver to open platforms and to third party platforms. To research informal learning, assessment in the open and to gain a better understanding of who our learners are and what motivates them is ever more important. To exploit the rapid feedback from data to commissioning enables us to both positively influence the learning experience and to share findings openly.

## OER IN ALBERTA CANADA & THE eMUNDUS EUROPROJECT

*Rory McGreal, Athabasca University, Canada*

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### **OER in Alberta**

The province of Alberta Canada has initiated a CAD\$2 (€1.4) million OER Grant program in response to the challenge of high expense to students causing decreased affordability of education. This initiative provides publicly funded post-secondary institutions in Alberta the opportunity to apply for funding to support the assembly, use, development, implementation and evaluation of open education resources to support teaching learning and research. This includes test items and course wraps, lesson plans and other forms of OER including textbooks where needed. OER will be deposited into a provincial or other repository and available for broad viewing, downloading and use. Project goals include reducing student costs by fostering awareness and use of open licences (CC-BY & CC-BY-SA). The project will foster strategic partnerships within Alberta and the other Western provinces that have signed a Memorandum of Understanding to support OER.

British Columbia has embarked on an earlier project to produce OER textbooks, and they have identified the need for ancillary content to complement the OER texts in order to make the choice easier for instructors. This “wrap-around” content can include quizzes, test banks, curriculum aids as well as videos, multimedia apps., games, web links etc. They have also introduced test bank “sprints” where teams of instructors work together in isolation for a two day period to produce examination questions. These tested trials will be incorporated into the request for proposals in the Alberta OER initiative.

### **eMundus EuroProject<sup>1</sup>**

Athabasca University (AU) is participating in the eMundus partnership following from the successful POERUP (Policies for OER Uptake) Europroject. The aim of eMundus is to promote international collaborations supporting OER, MOOCs and Virtual Mobility in higher education institutions. Partners include colleagues in the EU, Brazil, Mexico, Russia, Indonesia, and New Zealand). The aim is to establish long term, balanced, inter-cultural academic partnerships for improving learning through Open Education approaches.

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<sup>1</sup> <http://www.emundus-project.eu/>

eMundus has three goals:

1. To map the global state of the art of MOOCs and Virtual Mobility developments both in Europe and in the involved countries, facilitating the identification of successful patterns of ICT-enhanced international collaboration;
2. To foster global sharing of knowledge, tools, practices around MOOCs and VM stressing their impact on HE internationalisation and on fundamental issues such as employability, quality assurance, credit recognition, joint degrees; and
3. To promote and mainstream working practices of MOOCs and VMs as a way towards XXI century academic cooperation, making sure that the best practices of the world leaders in the field are transferred to universities which are starting to adopt MOOCs and Virtual Mobility as strategies for their internationalisation.

AU is responsible as a partner for creating the open eMundus Atlas<sup>2</sup>, which maps OER, MOOCs and Virtual Mobility initiatives around the world. This map is based on an open source mapping application and an open source database for the content. The map will be introduced along with several of the more important features.

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<sup>2</sup> <http://emundusatlas.org/>

## DEVELOPING CRITICAL PERSPECTIVES ON TECHNOLOGY IN EDUCATION: A TOOL FOR MOOC EVALUATION

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The Laboratory for experimental pedagogy (LPS) based at the Department of Education – Roma Tre University has been working, since 2010, on research focusing on the enhancement of students' critical thinking skills to foster the development and promotion of the critical use of technology in education. A series of departmental projects, coordinated by LPS researchers, have been funded from 2011 to achieve these aims (Poce et al., 2011, 2012, 2014). The projects use specific models and coordinated approaches to teaching and learning across a range of disciplines. Students are invited to engage in learning activities, which involve analysis and reflection, individually and in groups, taking into considerations the differences in learning, according to the specific situation. Students work on the different tasks focusing on the identification of cultural and disciplinary contexts, within the *lectio magistralis framework*: 1. *Distinctio* – Presentation of the context; 2. *Divisio textus* – Analysis of the text; 3. *Collatio* – Discussion; 4. *Quaestio* – Critical interpretation. The same analytical method is used on a variety of texts, including Descartes and Rousseau, working online on a dedicated platform. The same technique has then been applied to studying other disciplinary subjects and concepts accessing MOOCs, as described in the present contribution. Students are asked to evaluate the effectiveness of a massive open online course (MOOC) through their experience of learning online as outlined above.

The main aim of the study has been to provide students with the opportunity to approach online learning in a structured way, which can be applied in a variety of contexts. The goal is to overcome short term, instrumental learning which fails to exploit the educational potential of MOOCs. This paper is part of a wider research project and focuses on the model adopted for evaluating the impact and effectiveness of online teaching and learning, enabling students to adopt a critical approach which could be extended to any online resource which they may use for their lifelong learning.

Otten and Ohana, in their *The Eight Key Skills Competences for Lifelong Learning (2009)*, a document issued under the support of the EC DG Education and Culture, focus on the identification of a set of skills needed to overcome present youth unemployment and social exclusion in developed countries. The central concepts referred to are: "critical thinking, creativity, initiative taking, problem solving, risk management, decision taking and managing feelings in a constructive manner"

(p.10). There should be a closer connection between the above skills, education and digital education in particular. Technology plays a fundamental role in everyone's life and must be approached critically, especially by young people entering the labour market for the first time. In the information society, the amount of online content is constantly increasing, and more content is becoming readily available online. Open Educational Resources (OER) are assuming an ever increasing importance in national educational policies. Between 2005 and 2007 UNESCO identified priorities for the spread of OER (OECD, 2007). As part of the aim to broaden the availability of a range of multimedia digital content, MOOCs arguably represent the most interesting digital products. The number of MOOCs is expected to grow rapidly over the next few years.

This paper describes how giving students the tools to carry out an evaluative analysis of MOOCs can enable them develop their analytical and critical thinking skills. It can also help them to gain insight into the importance of 'learning to learn'. These students also gain the ability to characterise the impact of OERs on Higher education teaching and learning. The main scope of the present research project is that students could independently evaluate the quality of online digital resources both as learners and future educators. Doing so it is possible to overcome "brief term instrumental characteristics" of tools and promote long term evaluation processes (Vertecchi, 2012). This proposal concerns an area of research into distance learning which has not been explored in this way previously. The study does not explore the quality of learning in online environments. Rather, it investigates how students should approach the online resources at their disposal, facilitating their critical and reflective skills and adopting a model for analysis.

## **A NETWORKED LEARNING FRAMEWORK FOR EFFECTIVE MOOC DESIGN: THE ECO PROJECT APPROACH**

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The EU-funded project *Elearning, Communication and Open-data: Massive Mobile, Ubiquitous and Open Learning* (ECO) conceived a high-quality model for MOOC design. In this paper we present the model and its most innovative features, its theoretical foundations and context of development, as well as scenarios of implementation. We propose a networked learning framework for effective MOOC design develop quality-oriented and effective approach to a massive open online form of education delivery.

There are many definitions for a MOOC. The ECO project has adopted the definition that it is an online course designed for large number of participants that can be accessed by almost anyone anywhere, as long as they have an internet connection, is open to everyone without entry qualifications and offers a full/complete course experience online for free. In our perspective, a MOOC includes educational content, facilitates interaction among peers, provides authentic activities and tests, including feedback, has some kind of (non-formal) recognition options and provides a study guide or syllabus.

ECO sMOOCs also differ from other MOOCs because they are “social”, since they provide a learning experience marked by social interactions and participation, and “seamless”, since ideally they should be accessible from different platforms and through mobile devices and integrate with participants’ real life experiences through contextualisation of content via mobile apps and gamifications.

The model is based on the assumptions that it is applicable to the concept of ECO sMOOCs, that is has to be defined as a framework to cater for the varied needs of the participants, that the pedagogical approach draws on connectivism, situated learning and the general social-constructivist perspective required for online learning, that it is not a formal education context and participants are learners in a community not students, and that the context is not a classroom but open courses, delivered online to unlimited number of participants.

Therefore the learner has a central role, learning takes place by performing various activities in a situated context through interaction with the resources and other



### *Open Educational Resources*

learners. Flexibility is required, by offering a variety of activities and optional learning paths. Courses are aimed at digital inclusion and provide ubiquitous learning opportunities.

Registration is only required for publishing, contents are open to anyone. Courses should last 6 weeks, and include a familiarization period. The learning environment is intuitive, provide social and community/network features. Learners take an active role and demonstrate learning through creation of artifacts and collaboration. Activities have a weekly schedule without dependency. A variety of tasks is needed to meet learners' needs, including options to do extra tasks. Tasks are authentic, situated and contextualized. Learning materials are associated with activities and open licensed. Success needs to be measured against participants own goals, interests and satisfaction level, not against predefined learning outcomes. Formative assessment should be available. Participant should support others through peer assessment. Gamification should be used to stimulate interaction and learning. Badges and reputation points can be used. Teacher presence is through a learning guide and extensive instructions. Teachers are supported by a team of voluntary facilitators. Weekly feedback help maintain focus.

The quality and effectiveness of the pedagogical model will be evaluated in some 20 sMOOCs aimed at 50,000 participants. Additionally, some 4,000 teachers will be trained to create their own sMOOCs. The first sMOOCs will be launched in November 2014.

## **ASSESSING TRANSFORMATIONAL LEARNING IN ONLINE PROFESSIONAL PROGRAMS: METHODOLOGICAL APPROACHES AND CHALLENGES**

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In the last decade, online education has increased access to institutions of higher education and equity for non-traditional populations. Developments in ICT have led to an augmented number of online professional programs for adults that offer students professional growth and attempt to connect theory and practice or theory, research and practice, with goals of transformation in thought, behaviour and action. Transformational learning in professional programs or in related work-based learning environments has been studied using various methods such as student, faculty and employer interviews; observations and analyses of student work. Researchers have also proposed that transformational learning should be studied as a process and not as an outcome at the end of a course or program (Land & Meyer, 2010). However, in the online environment where faculty and researchers rarely meet students face-to-face and where the workplace is located in another state or country, research on the assessment of transformational learning becomes problematic. At the same time, the access to a record of all interactions in the online environment and learning products in digital format presents new sources of data and opportunities for research such as learning analytics. Given this situation, how can online professional programs assess that they are achieving what they set out to do? What existing methodological approaches can be applied to assess transformational learning in online programs or are new approaches needed?

In this paper we attempt to answer these questions and present two approaches to assessing transformational learning in online professional programs. The two approaches investigated were implemented in (A) an online program offering a BA in Social Work to professionals already working in the field of social work, run by Munich University of Applied Sciences, Germany, and (B) an online doctoral program in Educational Technology at the University of Florida, USA. For the online doctoral program in Educational Technology, a research plan was created to collect data using various instruments, representing an external approach. In contrast, the online program in Social Work adopted an internal approach to data collection. The program contained “jewels in the curriculum” (Land & Meyer, 2010, p. 75) or assignments that served to evaluate the learning goals and that were analysed using a research framework. Both these approaches were found to be reasonably

### *E-learning Quality and Assessment*

successful, but had their respective pitfalls. Given adequate resources, a combination of the methodologies would increase the validity of the results in both contexts and further work will proceed in this direction.

We discuss the shortcomings and benefits of the two approaches and the general challenges associated with identifying a methodology for assessing transformational learning and implementing it in an online program. Furthermore, we depict the challenges faced when assessing transformational learning as a process at different points of an online program, and when using embedded assignments within a program. Given the increase in non-traditional students pursuing higher education opportunities through online programs, this paper addresses an important issue – that of assessing the impact of online learning for adults not just in terms of knowledge acquisition but in terms of learning outcomes such as changes in thinking, behaviour, action and identity.

## **A REVIEW OF A FACULTY-WIDE CHANGE IN ASSESSMENT PRACTICE FOR OPEN AND DISTANCE LEARNERS OF SCIENCE**

*Sally Jordan, The Open University, United Kingdom*

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Previous practice in the Open University Science Faculty has been for all modules to be assessed by a combination of summative continuous assessment, with extensive feedback comments, and an end-of-module task (an examination or an extended assignment). This practice, although well established and apparently well received, has led to concerns, as reported elsewhere, that staff and students have a different understanding of the purpose of continuous assessment: staff see its purpose as primarily formative whilst students are primarily concerned with obtaining high marks.

The revised practice still requires students to meet a threshold for their overall continuous assessment score, but the final grade is determined by the end-of-module assessment alone. The evaluation of the change in practice has been split into small practitioner-led sub-projects, comparing impact across different modules and levels, with the aim of identifying factors that lead to improved engagement. Sub-projects are both quantitative, e.g. comparing assignment completion rates before and after the change, and qualitative e.g. investigating student and tutor perceptions and opinion.

The change to formative thresholded assessment has sometimes led to a reduction in submissions for the final piece of continuous assessment and to an increase in the number of partial submissions. However other factors, in particular a cut-off date for an assignment (whether summative or formative thresholded) close to an examination, had a considerably larger effect and the change in practice does not appear to have had any effect on overall completion and success rates.

Many students and associate lecturers have a poor understanding of our assessment strategies, including conventional summative continuous assessment. This is in line with a frequently found result that students have poor understanding of the nature and function of assessment, perhaps because it has not been properly explained. It is important that assessment strategies are clear and consistent across qualifications, and that they are made clear to students.

Whilst student motivation cannot be implied, it is possible to see evidence that supports a notion of two contrasting groups of students who are in borderline continuous assessment categories: those who do well on the minimum number of assignments but chose not to submit others and still do well on the final

### *E-learning Quality and Assessment*

examination, and those who have a more modest performance on continuous assessment (perhaps just omitting one assignment) and fail the module as a result of their poor examination performance. Some students are probably best advised to spend their limited time on revision rather than attempting all components of continuous assessment.

Where a skill is best assessed by a project or experimental report, future policy will encourage a two-part summative component, including the project/experimental report as well as an examination. Other assignments will remain formative but thresholded, with a clear purpose of preparing students for the examinable components.

## **AN EXPLORATION OF TUTOR FEEDBACK ON ESSAYS AND DEVELOPMENT OF A FEEDBACK GUIDANCE TOOL**

*Anthea Wilson, The Open University, United Kingdom*

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The provision of appropriate feedback on assessed work to students in higher education has long been a topic of concern, not least at The Open University, UK (OU). Although The OU has a reputation for excellence in the assignment feedback provided to students (Gibbs, 2010), ongoing experience of OU academics is that students do not always appear to be responding to, or even in some cases reading, the tutor feedback. As established by Hattie and Timperley (2007), an essential aspect of providing feedback is discovering how students have interpreted it. In the OU distance-learning context, students typically do not contact their tutors to discuss the feedback on their assignments and frequently tutors are working somewhat in the dark with respect to how their feedback is received. This paper first discusses some of the challenges raised by this situation typically experienced within the OU distance-learning model and reports on an investigation of patterns of tutor feedback in the context of written assignments in a health and social care module.

A second stage of the project reported here is the testing of a tool or guide intended to support tutors to unpack the academic language surrounding feedback on academic writing. For example, what does it mean if an essay needs 'more depth' or a student's writing is 'too descriptive'? How can a student replicate 'good structure;' next time if it is not clear what they did well last time? The tool aimed to meet three outcomes for students: to understand the rationale for their marks; to know what to work on next time and how to do it; to feel empowered and motivated to take control of and continue their studies. I will discuss the issues raised by tutors' efforts to apply the guidance.

### **Stage 1: exploring feedback practices and explicit student responses**

This stage aimed to evaluate the relationship between tutor feedback on student essays and student responses to the self-reflective questions. Trends in retrospective and future-oriented feedback, and content and skills feedback were explored during the course. Some tutors had separated their retrospective and forward-feeding feedback on the page. In other cases, tutors had combined retrospective and future-oriented feedback into one sentence or paragraph. Retrospective tutor feedback mostly outweighed future-oriented feedback, particularly for cognitive skills and content. It was also apparent in the majority of

cases that there was scope for increasing the clarity of feedback summaries through improving the structure and by unpacking the jargon.

## **Stage 2: developing a tutor feedback tool**

A feedback tool, which focused on the tutor's feedback summary, was developed following the analysis of tutor feedback and the corresponding student self-reflective notes reported here. The tool was piloted in 2013/14 and feedback gathered from nine tutor volunteers. All pilot tutors willingly embraced the principles and adjusted their feedback practice to varying degrees. I would like to share the feedback and the subsequent adjustments made to the feedback tool at the EDEN workshop, along with further discussion of links to the relevant literature.

## **ASSESSING ORAL PRESENTATIONS IN DISTANCE AND OPEN LEARNING**

*Stefanie Sinclair, The Open University, United Kingdom*

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This paper is based on the findings of a HEA funded teaching scholarship project which considers how digital technologies can be used to create opportunities for the development and assessment of verbal communication skills, particularly in distance and open learning settings. It critically evaluates the effectiveness and wider applicability of a form of assessment included in the Open University's Religious Studies module A332 'Why is religion controversial?', where students are required to digitally record a short oral presentation and submit it electronically as an audio file. It investigates how students perceive the experience of delivering, recording and receiving feedback on a presentation given to a virtual audience in an asynchronous setting. It also considers tutors' views on the benefits and challenges of providing effective feedback on oral presentations in distance and open teaching and learning settings.



## **EXPLORING QUALITY IN TEACHING AND LEARNING WITH ICT: A QUALITATIVE STUDY**

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Much of the recent literature on information and communication technologies (ICT) in higher education has concentrated on how the technology improves efficiency and reduces costs, or how the technology makes education more easily available to students, who cannot attend lectures in the usual way.

The focus of the current study is on the relationship between ICT and the *quality* of education. Our aim has been to study this in terms of how those teaching at higher educational institutions, and their students, experience the use of ICT in education. By including both students and lecturers, our study encompasses both teaching and learning practice. Our emphasis has been on the experiences of the individuals involved rather than on the outputs of the educational process.

We used qualitative methods and selected eight institutions of higher education, where we conducted focus group interviews with teachers and students at each of the institutions. At each site we carried out separate group interviews with lecturers and with students on the same educational programme. Among the eight institutions, five offered online educational programmes in various disciplines. All lecturers interviewed were experienced in using technology at their institution.

We used the EFQUEL<sup>1</sup>, framework to analyse the characteristics of quality in the educational use of ICT / e-learning in higher education, (EFQUEL, 2011). Based on this we have looked more closely at learning resources, learning and teaching processes and context.

The main finding of the study was that we were able to distinguish two types of digital teaching processes irrespective of context or resources; one that was practiced by those who were experts in the technology and used it well in order to support their teaching. The other process was more likely to involve students to be active participants in their own learning processes. In this latter the technologies had been adapted in various ways to fit the needs of particular groups of students and contexts. We also found that they had been adapted to enhance the learning experience of different subjects. Students participating in the latter kind of education were those who were most enthusiastic about the benefits of ICT and

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<sup>1</sup> European Foundation for Quality in E-learning

who thought they had learned most. The result of this latter teaching process was customised programmes, positively received by students. We have characterised this as digitally integrated teaching. We also found that teachers, considered as experts in ICT at their institution, were not necessarily the ones who were developing these digitally integrated teaching programmes.

We have examined our findings in relation to literature on quality in digital education (Koehler and Mishra, 2006, 2007; Voogt et al. 2012; Prestige 2012) and conclude that even when teachers have mastered modern digital technologies, this is no guarantee for technology-enhanced learning. Our study suggests that this enhancement only occurs when teachers are able to integrate the technology in a customised way into their teaching. It is only then that it becomes a true instrument of learning. These findings are relevant in the context of online learning situations.

## **UNIVERSITY AS AN EXTENDED ENVIRONMENT: A QUESTION OF “E-QUALITY”**

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In order to respond to the demands of the knowledge society, university is facing the huge challenges of open, flexible and lifelong learning and is rethinking its environment towards an integrated and hybrid one, in which inside and outside, face-to-face and distance can coexist, enabling the creation of real lifelong learning paths and learning opportunities accessible to anyone. The contribution of technology, especially of the Web, plays an essential role in the extension of the learning environment by removing the obstacle of distances represented not only by socio-economic conditions, but also by limitations due to the individual's job, time, place, age, gender and ability; this makes access possible for categories of users that have been excluded from the learning process until now.

University's activity context is therefore involved in reconfiguration processes regarding both the opening of time and space and the creation of student-centred learning environments in which the student is the active and participating protagonist of the learning process.

This paper presents a case study which analyses the different steps of the processes involved in the transition from a traditional system to a flexible one, this latter being open to the needs of adult students and aimed at transforming the concept of face-to-face learning into participation in learning.

The key word of this transformation is “equality” in both its acceptations:

- equality in the meaning of equal opportunities; in other words equity supported by technological instruments and digital environments to create the right conditions and opportunities to access higher education for people who are generally excluded from it;
- e-quality as an idea related to the “quality” which the digital and technological aspect can lend to the teaching/learning process by implementing situations, occasions and environments that foster discussion and active participation in the building of knowledge.

## **THE 'LIBE' PROJECT DISTANCE LEARNING PLATFORM – EVALUATING AN ADAPTIVE E-LEARNING SOLUTION**

*Francesco Agrusti, Roma Tre University, Italy*

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The project LIBE, funded with support of the EACEA in the LifeLong Learning programme (Project Ref. No. 543058-LLP-1-2013-1-IT-KA3-KA3MP), aims at designing, developing and trying out, in Italy, Portugal and Norway, an innovative e-learning platform providing a full learning experience with the main aim of improving learners' skills to retrieve effectively specialized information on the internet. The LIBE project has a 2-years duration.

The main goal of the project is to improve and enhance basic ICT skills, the digital competence, intended primarily as the ability to retrieve information and to assess its suitability to learner's needs, and the comprehensive achievement of key competencies in low educational achievers aged 16-24.

The project will provide courses based on a learner-focused approach devoted to develop, consolidate and secure transversal competences in retrieving and selecting the text to read and/or data to analyse using ICT as a pervasive motivator to learn, freeing students from prejudices linked to their own gaps in preparation.

To enhance the fostering of key information processing skills for ICT (literacy, numeracy and problem solving), with an inquiry-based approach to learning, the LIBE learning management system (LMS) will provide a high level of personalization in learning using automated computer-based assessment (CBA), computer adaptive testing (CAT), and through the adoption of an innovative way of delivering adapted learning materials in order to reduce reading comprehension difficulties.

The LIBE LMS will use automated algorithms in order to adapt learning contents according to learner's lexical profile. Since technical research has reached high level of implementation of such algorithms, it is our opinion that it would be more efficient to re-use this state-of-art software so, the LIBE LMS has been created reusing already existent open source applications.

The LIBE LMS will provide information-centred courses in 4 languages (English, Italian, Portuguese, Norwegian) dedicated to upper-secondary school, undergraduate students and unemployed young people.

This paper presents an initial outline of the technological solutions identified for personalized e-learning in order to deliver adapted learning materials. First of all, a briefly introduction about of the definition in literature of adaptive learning and personalized education is presented. Then, from a recognition of the state of the art of web-based learning and personalization research, the current approaches to the adaptive learning are described together with the criteria that allow to define a system as adaptive. Furthermore, the approaches selected will be briefly compared in order to find the more suitable solutions for low educational achievers needs. Additionally will be evaluated possibly usages of these approaches into LIBE LMS, estimating their feasibility from a technical point of view and eventually provide a starting point for their inclusion in LIBE LMS.

## **MAKING ONLINE TEAMS WORK – THE TUTOR VIEW**

*Jane Barrett, Helen Kaye, The Open University, United Kingdom*

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### **Introduction**

Working in a group as part of a team presents important educational and employability opportunities. However, many students report poor group dynamics can be a barrier to creative thought, particularly when the work is in online forums. This is because of the need to adapt to the asynchronous nature of forums and to the different working patterns of the constituent group. (Kaye, Barrett & Knightley, 2013)

The Open University offers a short online project module as part of its very popular, BPS-accredited psychology degree. Tutors supervise small groups of students working together and thus gain a unique perspective as participant observers: they read all the forum postings, interpret the interactions, try to ameliorate the difficulties and nudge students through to completion of their projects. This paper explores the group dynamics of these student teams through the unique lens of their tutors.

### **Methods**

A survey was sent to all 53 tutors employed on the online project module presented in 2013 (25 responses). The tutors each supervised several groups and were asked to identify their 'best' group and their 'worst' group; initially defining their own categorizations and then responding to questions about each group's behaviours. They were also asked about their use of 'ground rules'.

### **Results and conclusions**

Most tutors initiated discussions about ground rules, some concentrating on the rules of netiquette, whereas others made students aware of how to create a good online working environment with mutual regard for one another.

Whilst their 'best' groups had diverse characterizations, tutors identified group attributes like mutual regard as being important. Tutors provided a more coherent picture of their 'worst' groups, with non-contributors being a major cause of tension. Tutors perceived some differences between the 'best' and 'worst' groups: how they managed their projects; their group dynamics and their successful completion of the project. Whereas 'best' groups were more likely to be democratic in the way they allocated tasks, the 'worst' groups were more likely to have leaders.,

However this leadership was characterised as being an uneasy alliance with one person making a decision and doing most of the work, while other members of the group (for whatever reason), lagged behind or made little contribution to the forum. There were differences in the group dynamics, with those in the 'best' groups exhibiting mutual regard for one another; whereas those in the 'worst' groups were likely to be dependent on their tutors, needing regular forum intervention for facilitation, decision-making, and resolution of disputes. Finally, the 'best' groups were perceived as being more likely to succeed than the 'worst' groups in producing the group output.

## **Discussion**

This small-scale study of tutors' perceptions of their online groups yields some interesting, if unsurprising, results; and, as always there are more questions than answers. Two main issues emerge from this study. First, effective teams cannot always be made by just putting students into a group and giving them a task to work on – some students cope with this, but others do not, and understanding the reasons for these individual differences remains a challenge. Secondly, some students do not engage with a collaborative task, even when there are educational benefits in doing so. So, what can we do for students who, however much we try to make project work palatable, still do not take part in collaborative activities – are they doomed to fail or can we find some creative way either to engage them or to provide an attractive alternative?

## **MOBILE LEARNING DELIVERY VIA SOCIAL NETWORKS: WHAT PLATFORMS DO FIRST-YEAR UNIVERSITY STUDENTS PREFER?**

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Latest technology based distance learning and mobile learning delivery platforms include smartphone based SMS as well as Facebook based learning delivery technologies that provide access to learning materials without being limited by space or time. Ongoing up-to-date technological advances have upgraded learning delivery systems and have highlighted some psycho-pedagogical variables which contribute to higher levels of affective learner sensitivity in the learning process.

In the present study two groups of first year university students who studied historical and cultural Jewish concepts in a mandatory 15 week long (semester) course were exposed to two different modes of concept delivery. The first group of students received weekly lists of historical and cultural Jewish concepts sent via SMS messages to their smartphones and the second group received weekly lists of historical and cultural Jewish concepts sent via internet to the Facebook course homepage. The definitions of historical and cultural Jewish concepts studied via smartphone based SMS messages or via the course Facebook homepage were identical and the students received 30 historical Jewish concept definitions on a weekly basis for a period of 15 weeks. In addition identical relevant power-point presentations and other digitized learning materials, such as videos were sent to both groups of students on a weekly basis. At the end of this period the students in the two groups were tested on a cognitive standardized historical and cultural Jewish concepts achievement test and responded to a questionnaire that examined learner self-regulation, learner creativity and learner technological mastery, key affective psycho-pedagogical variables related to the learning process.

Results of the study indicate that there were no significant differences between the achievement scores on the standardized historical and cultural Jewish concepts achievement test attained by students in the smartphone based SMS delivery group or in the Facebook course homepage delivery group. All participating students in both delivery groups passed the course with similar mean achievement scores. However, there were significant differences between the students in the delivery groups regarding their levels of learner self-regulation, learner creativity and learner technological mastery. The students who received historical and cultural Jewish concepts via SMS messages to their smartphones exhibited a



### *Social Media and Mobile Learning*

significantly higher level of learner self-regulation, a significantly higher level of learner creativity and a significantly higher level of learner technological mastery than their counterparts who received lists of historical and cultural Jewish concepts via the Facebook course homepage.

The results of the study indicate the potential evident in up-to-date technological learning delivery platforms, and most especially a smartphone based SMS delivery platform, regarding enhancement of students' attitudes toward affective psychopedagogical variables such as learner self-regulation, learner creativity and learner technological mastery. Thus the smartphone based SMS learning delivery platform can in fact become a practical technological mobile delivery system in the university learning process and serve as a routine methodology for the delivery of relevant learning materials.

## **EVALUATING WEB CONNECTIVITY FOR ADULT DISTANCE LEARNERS – FACEBOOK OR FORUMS?**

*Christine Gardner, The Open University, United Kingdom*

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With the growth of social networking over the past decade there are many questions regarding how, or whether, social networks can best be embraced within a formal learning environment. Adult part time learners need flexible study environments, with opportunities to interact at times convenient to them. Social networking, as an asynchronous communications tool, may offer learners an additional interactive educational platform.

For this paper, which is a summary of one chapter of a doctoral thesis researching 'equivalency of interaction' (Anderson, 2003), the focus is on student-student interaction within the Open University, contrasting the more formal online study forum as provided by the university, with interaction via social networking. The affordances of social networking sites, such as Facebook, are viewed in comparison to university-provided online forums.

The research was designed to have three phases; each phase comprising of questionnaires, interviews and observation. Both qualitative and quantitative data were collected both during the research.

Research evidence suggests that students value the provision of online forums. Social networking can offer, for some, an attractive alternative interactive platform, yet not designed specifically for educational purposes.

- Not all students want to interact, but few have any objections or concerns if others do- and this extends to social networking sites.
- Although the questionnaire data suggested forums are valuable, observation of actual forum activity indicates that they are underused.
- Forums, as provided by the university, are valued by the students but tend to be underused. Forums work well in a formal monitored environment, but there should be a social space to encourage participation.
- Interview data revealed that forums could be seen as controlled, driven by the module content and have an obvious tutor presence.
- These factors could inhibit the more emergent type of learning that would enhance the social learning experience.

Social networking can help promote student ownership of their learning.

## **MEASURING IMPACT OF USING E-LEARNING PORTALS ON EDUCATIONAL SYSTEMS**

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Technology Enhanced Learning (TEL), Open Educational Resources (OER), innovative learning paradigms, educational scenarios and the associated digital technologies, learning environments, applications and content are continuously changing and rapidly evolving nowadays, thus affecting not only the effectiveness, the impact and the cognitive outcomes of teaching, but also the quality of the learning process and outcome as a whole. The impact of TEL environments and portals using OER can be evaluated in terms of usability, effectiveness and pedagogical use. Impact evaluation has always carried great potential for improving learning outcomes and tailoring learning toward the users' needs, motivation, satisfaction and expectations. However, impact assessment of the use of teaching and learning resources, environments and portals in a systematic manner has proven to be difficult.

The research work described in this paper contributes to assess the impact of using Open Learning Resources in a shared and distributed way, on an innovative portal, namely the "Open Discovery Space" (ODS) portal. In this European example case, there are different dimensions of impact to consider, including impact on teachers, students, stakeholders, schools and the educational system at large. The focus of the impact evaluation in this research is to understand how best such TEL environments are to be accommodated, adopted and used within the educational processes, and how well they can fit within the current national/regional curricula and educational systems. To achieve this, this research aims to evaluate how best the e-learning portals and services like ODS are to be accommodated within existing teaching and learning processes/practices as they are seen by teachers and learners.

The objectives of the impact assessment activities are to discover the nature and extent of effects and changes, and demonstrate the outcomes on the micro-level stakeholders, including on individual teachers, learners and schools and the macro-level stakeholders, including regional, national, and EU-level stakeholders, and also the policy makers. In this context, it is expected that identifying and measuring the

actual impact that a portal like ODS has on educational systems will help stakeholders to fully exploit the strength of such portals and services and will facilitate improvements in terms of the application of digital technologies in educational systems and in their decisions for educational processes.

Impact assessment of an eLearning portal such as ODS involves evaluation and assessment of educational aspects that directly relate to the context of the teaching and learning activities. For this reason, the results of such assessment can be used as a basis to improve the educational system. This type of assessment contrasts with traditional approaches, which focus on a limited number of factors and are usually used for grading and accountability purposes. Thus, our impact assessment methodology considers various impact factors including motivation factors, engagement, support, empowerment, involvement, satisfaction, accessibility, availability, usability, effectiveness, achievement, performance, sharing, interaction, communication, collaboration, innovation, training, creativity, search facility, socialising, culturally and linguistically appropriate features, etc.

Taking into account the early results of this research, it appears that the use of an e-learning portal like ODS, in EU Educational Systems has a great impact on the whole educational system and on the learning processes and learning practice, and has the potential to greatly improve the quality of the work done in schools. Such an initiative is generally suitable for a wide range of teaching practices, while it enables the accomplishment of the learning tasks easily and offers a wide range of useful and updated learning resources. Further work is planned, in order to benchmark the results with previous studies, in order to conduct the qualitative research effectively and detect trends/patterns, and improve the reliability of ODS impact assessment survey results over time and across multiple assessment tools and instruments.

## **THE INTERNET IN ICELANDIC TEACHER EDUCATION – TWENTY YEARS HISTORY, PROBLEMS AND POSSIBILITIES**

*Thurídur Jóhannsdóttir, Sólveig Jakobsdóttir, University of Iceland, Iceland*

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In the paper the focus is on twenty years history of distance programmes in teacher education in Iceland, both programmes for initial teacher qualifications and graduate programmes for teachers' professional development at the University of Iceland – School of Education (UISE)<sup>1</sup>.

Internet was first used at the IUE in 1993 when a full distance programme for initial teacher education was initiated in response to a lack of qualified teachers. Student living in rural districts in lack of teachers had priority in admission. One year later experienced teachers could enrol in the graduate programme which was in a blended mode, online with campus sessions. Over time both programmes became open to all students regardless of teaching experience or linkage to rural area schools. Students could enrol either as a distance or traditional students on a course-by-course basis.

The ideology behind the first phase built on the classical welfare liberal model looking at the public service for common good and public interest. Financial regulations required funding before the programme could be offered and admission was restricted in accordance to the amount of fund allocated. The interplay of new technology and ideas of lifelong learning and social justice facilitated the launch of the distance programme and the primary motive was the need for qualified teachers. The planning of the programme focused on meeting the needs of the schools and regional school offices and local schools took on the responsibility for providing practical and pedagogical support. Common experience of teaching in the student group enhanced collaboration and mutuality in the community of the student teachers. Research indicated closer ties between schools and university/teacher education and closer ties between theory and practice than in the on-campus traditional mode. In the new millennium financial regulations were based on number of students enrolled and both programmes were opened for all students irrelevant of background. As a result the number of students increased radically and distance students became half of the student population. Now the ideology was influenced by neo-liberalism with emphasis on individualisation and marketization where teacher education was offered on an open market.

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<sup>1</sup> Before 2008 an independent university – Iceland University of Education (IUE)

Drastic changes in the year 2008 affected the teacher education. New legislation for teacher education required 5 years master degree, the Iceland University of Education merged with University of Iceland which offered few courses or programmes via distance. In addition the Icelandic financial system crashed which lead to funding cuts in the university. As a result courses previously offered both in traditional and at a distance mode were merged and the two student groups are now co-taught in the same class, some attending courses online while other have regular on-campus schedules. From students' point of view the arrangement has been chaotic and lecturers feel heavier work load in the co-teaching model. One of the problems is that the UISE is trying to serve groups with different interests in the same course; full time traditional students, students who are working alongside studies and students living outside the capital and need online education. The question is whether it is feasible to serve them all in the same course or if it is better to identify the different groups and meet their needs in separate courses?

Our analysis has revealed symptoms of alienation that might be the root of the problems. The development of the programmes has weakened their focus on the relation of the academic education to practice in schools and on the meaning of education for professional development of teachers and school development. If we look at the first phase as the thesis, the second phase as the antithesis, now a synthesis is needed in form of ideology that combines individual and societal needs and is grounded in visions for the role of teacher education in Icelandic society today.

## **A MURKY BUSINESS: THE ETHICS OF CONDUCTING EDUCATIONAL RESEARCH IN FACEBOOK GROUPS**

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### **Introduction**

Facebook is undoubtedly the face of online social networking and is transforming 'the ways students communicate, collaborate, and learn' (Tess, 2013) within higher education. This paper builds on existing research on the use of Facebook in educational settings, taking as its focus the ethical challenges of researching within Facebook – a topic that receives little attention – asking the overall research question 'what are the ethical challenges of researching social network activity in an educational context?'. The paper is informed by two phases of our own reflexive research on the educational practices of formal and informal learners both in online forums and in Facebook groups: our developing and piloting the 'public open scholar' role (Coughlan & Perryman, 2012) within UK voluntary sector communities and Commonwealth autism-focused Facebook groups; and our more recent research around formal learners participating in public Facebook groups about specific UK Open University (OU) courses.

### **Findings and implications**

Our findings cover ethical considerations that arise before, during and after the research process, including the issue of informed consent, the distinction between public and private research settings, the responsibilities of the researcher to their employer and the potential impact of any research on the individual participants and online communities that are the focus of a research study.

Before conducting any research the researcher needs to make decisions about whether to gain the informed consent of participants. The BERA Ethical Guidelines (2011, p.5) point out that 'social networking and other online activities...present challenges for consideration of consent issues'. The distinction between public and private research settings appears pertinent to considering whether informed consent is necessary when researching Facebook groups, of which three categories exist – public, closed and secret. The AERA Ethical Guidelines (AERA, 2011, p.151) state that 'education researchers may conduct research in public places or use publicly available information about individuals...without obtaining consent'. We argue that the responsible, reflexive researcher can conduct ethically defensible research in social media spaces as long as they look closely at what might

constitute public and private communication in itself, irrespective of the extent to which the context in which such communication takes place is public or private.

When researching social media settings connected with one's own institution the researcher also needs to be clear about the responsibilities connected with their employment. Facebook has been reported as particularly conducive to 'online disinhibition' (Joinson, 1998; Suler, 2004), prompting people to self-disclose more than they would in person. Consequently, the researcher may find formal students breaking university rules (e.g. plagiarism or anti-social behaviour) and institutional guidelines may require them to report such practice. A researcher studying Facebook groups will also need to whether to join the groups they are researching, and whether to disclose their status as a researcher. When conducting our own study of Commonwealth Facebook groups we joined each group, gained participants' informed consent, and disclosed our identity as researchers. However, we have not joined the OU Facebook groups that we have been researching more recently as all of the data that we needed was available without doing so. We argue that where a researcher is conducting observation-only research on passive participants in public Facebook groups it is ethically defensible for them neither to join these groups nor to disclose their researcher status.

Researching within Facebook groups also necessitates the researcher to be mindful of Facebook's rules. For example, It is not uncommon for Facebook-located research studies (e.g. Lieberman, 2013) to report that the researcher has created a duplicate Facebook account for their research and has encouraged research participants to do the same – despite this being prohibited by Facebook (in addition to possibly undermining the validity of the research findings). We suggest that such practice is difficult to defend from an ethics-related perspective. Accurate record-keeping is also very important when researching in Facebook as it is not possible to download Facebook group activity wholesale, and much activity is very transitory and can be deleted at any point. We argue that the researcher needs a clear strategy for coding and anonymising research data, and to be particularly attentive to data protection laws even where the research setting is deemed 'public'.

Reporting the findings of Facebook-located research raises further ethical considerations regarding confidentiality and the potential impact on research participants. While our research with public Facebook groups has solely involved passive participants the issue of confidentiality remains, as does the distinction between researching in public and private settings. The AERA (2011) Ethical Guidelines state that: 'Confidentiality is not required with respect to observations in public places, activities conducted in public, or other settings where no rules of privacy are provided by law or custom.' We tentatively argue that data in public



Facebook groups falls into this 'public' category, though we stress the researcher's obligation to navigate the complexities of unintentional disclosure resulting from online disinhibition and to consider the possibility that research participants could be harmed when a researcher reports research data that has been unintentionally disclosed. We also urge the researcher to consider possible risks to the stability and effectiveness of any online community being researched that might arise from reporting research findings relating to that community.

## **Conclusions**

It is clear that researching Facebook groups has value for learners, educators and host institutions alike and this should be borne in mind when navigating the various ethical complexities and challenges that arise. We suggest that ethical regulations and restrictions should be proportional to the scale and purpose of any research project and that the ethical dimension should not prevent socially and educationally valuable research taking place. In addition, there is a need for the academic community to work together to critically engage with, and debate the ethical complexities of researching within Facebook.

## **STUDENT PERSPECTIVES ON THE USE OF THEIR DATA: BETWEEN INTRUSION, SURVEILLANCE AND CARE**

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The advent of learning analytics means that many institutions are increasingly collecting, analysing and using student data to impact the student experience with the aim of improving student satisfaction and success. The Open University (OU) is a large, open distance learning institution with more than 200,000 students. In common with many other higher education institutions (HEIs), the University is looking more closely at its use of learning analytics.

The use of a learning analytics approach to inform and provide direction to student support within the Open University is relatively new and, as such, existing policies relating and referring to potential uses of student data have required fresh scrutiny to ensure their continued relevance and completeness (Prinsloo & Slade, 2013). In response, The Open University made the decision to address a range of ethical issues relating to the University's approach to learning analytics via the implementation of new policy. In order to formulate a clear policy which reflected the University's mission and key principles, it was considered essential to consult with a wide range of stakeholders, including students.

Representative student views were collected over a three week period addressing a number of specific questions relating to the uses of student data. The resulting range and complexity of the discussions has informed policy development and will feed into the ways in which communication of both the policy and the implementation of learning analytics will be rolled out across the Open University. This study has offered an opportunity to explore how students might react to increasing uses of their personal and study data, and to facilitate a more considered and informed response.

## **WHO GRADUATES FROM IRISH DISTANCE UNIVERSITY EDUCATION?**

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While there have been many studies on those who withdraw from distance education less is known about those who successfully complete degrees by distance education. Drawing on results from an online survey of recent distance graduates, this study, based in Dublin City University, addresses the gap in the research on this cohort of graduates. The study profiles those who have graduated from online distance university education programmes at the National Institute for Digital Learning (NIDL, formally Oscail). Distance education, established to address the political and social policy issue of increasing access to higher education, has been offered at DCU since 1982 and in that time over 5,500 students have graduated. The concept of access is now understood 'to encompass not only entry to higher education, but also retention and successful completion' (HEA 2008, p.14). For this reason the focus of this study is on graduates.

The purpose of this research is to explore the role played by online distance education in improving access to Irish university education. The main questions explored in the study are:

1. Are Irish online distance graduates from a group who are new to university education?
2. Are Irish online distance graduates from groups who are underrepresented in university education?

Findings indicate that distance graduates are primarily from lower socio economic backgrounds, a group largely under-represented in full-time university education. Significantly, a large percentage had never accessed any form of higher education before. More surprisingly, an equally large percentage had accessed full-time higher education previously, but at a lower level than the honours primary degree they obtained through distance learning. Implications regarding the role of distance education in both widening and deepening access to university education are discussed.

Currently socio-economic data is gathered only for new entrants to Irish higher education (HEA, 2013). The value of this metric is questionable as many new entrants, in particular those from lower socio-economic groups, do not go on to successfully complete their studies. It is possible therefore that participation in Irish

higher education by underrepresented groups is even worse than reflected in official figures. Gathering socio-economic data on graduates would allow us to more accurately assess the value and success of strategies to broaden access to higher education.

The graduates in this study are from one institution and are not representative of all online distance graduates in Ireland. The intention of the study is not to generalise findings but rather to provide a unique insight and interpretation of a phenomenon (Merriman, 1988). To date, no study has explored the particular position of online distance university graduates in an Irish context.

## **LEARNING EFFECTIVENESS – A CASE STUDY ON CRITICAL THINKING AND COLLABORATION WITHIN HIGHER EDUCATION**

*Marianne Öberg Tuleus, Örebro University, Sweden*

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This paper presents a case study, which is set in a higher education context and the quest for learning effectiveness. The overall aim of the paper is to inquire into the contribution of ODL as a means for developing the skills critical thinking and collaboration, and consequently, for learning effectiveness. The research question is: How does ODL contribute to the development of the skills critical thinking and collaboration? The empirical context of the case study is my experience as a senior lecturer in educational sciences. I teach and direct courses, which are offered to Erasmus students. After some years of using a blended learning course design I got the impression that the students seemed to prefer face-to-face teaching, and that they talked about online teaching as “difficult”, or strange. That is why I took on a systematic documentation of both the study result of the students, and the opinions they expressed in the course evaluation. This work made me realize that the students experienced a very complex and sometimes confusing learning situation. On the one hand they looked forward to studying in an educational context, which was different from their home university. On the other hand they assumed that the teaching would take place on campus, and as a reaction to the online context they asked for teacher-directed face-to-face activities. Instead of meeting this demand, I decided to teach fully online. The reason for this was that I wanted to challenge a teacher-centred conception of information as knowledge and teaching as transmission (Ramsden, 2003).

The overarching theoretical understanding of the case study is a hermeneutic phenomenological perspective where the interactive process of teaching and learning is understood as the interplay between the world as in the course content, and human beings as the students and teachers who are involved in the course (van Manen, 1991, 1997). Critical thinking is seen as the ability to question the familiar world that is the world we already know, while to collaborate involves openness to the experience of other people, and the courage to risk the world that ‘is’. The empirical material of the case study consists of student online conversations. They are made up of student discussions on how to take on course assignments, as well as how to deal with and understand the course content. The concepts to question and community of practice are used as tools of analysis for identifying the ODL contribution to the development of the skills critical thinking and collaboration.

The result of the case study shows that it is by (i) asking questions, (ii) comparing their experiences, and (iii) opening for 'strangeness' that the students develop the skills critical thinking and collaboration. A main conclusion is that the use of online teaching tools enhances learning effectiveness. When teacher-directed activities are put into play, the teaching content, rather than the teacher or teaching methods, provides the core of the student's learning activities. The online teaching tools contribute to the development of the skills collaboration and critical thinking by framing student collaboration in communities of practice where they share experiences, write texts and solve problems together. In this process personal experiences are used as a frame of reference, and a starting-point for comparisons and inquiries into the course content. Also, when 'strangeness' emerges, for instance when the students encounter new information or new concepts, the ODL context provides the common ground for negotiating different understandings.

This finding points to the importance of addressing the relation between teaching and learning. Paul Ramsden (2003) claims that teaching is a means of directing students' attention to learning as a process of understanding, and he states that "To teach is to make an assumption about what and how the student learns; therefore, to teach well implies learning about students' learning" (Ramsden, 2003, p.8). This statement directs attention to teachers within higher education as both teachers and learners. Hence, teaching means exploring students' experiences in order to be able to learn effectively i.e. teaching in a way that enhances learning in a desirable way. To question, to compare and to be open develop the skills critical thinking and collaboration. These skills enhance learning effectiveness, and in doing so they also provide the tools for meaning and understanding. This finding suggests that it is by challenging the divide between fully online education and face-to-face education that we as teachers and students can take on the contribution of ODL, and discuss it as a question of the relation between teaching and learning.

## SPEEDING-UP ADOPTION OF E-LEARNING INNOVATION IN EUROPE: MISSION POSSIBLE?

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The HoTEL project, an action supported by the European Commission Seventh Framework Programme, has been working in the last two years with the aim to contribute to more effective, holistic and faster innovation cycles in European Technology-Enhanced Learning (TEL), by proposing an *Innovation Support Model* able to increase quality at the level of the innovation cycle itself and of the different phases foreseen, that can be replicated in the future. Within the scope of HoTEL, innovation support is defined as a support in the different steps and processes that bring innovations to be generated, adopted, incorporated in use, scaled up and eventually exploited in commercial or institutional ways; and where innovation support refers to the way a "professional body" of analysts and stakeholders representing users categories, advisors, fund raisers, institutional and private investors, etc. can help innovators to succeed, or to succeed more quickly than they could do without this support. From this perspective, innovation support models are essentially relational models, linking innovators to their context through a structured set of interactions that, in the case of HoTEL, take place within and around the *Learning Exploratorium Labs*. These Labs represents innovation-friendly learning environments, one in higher education, one in corporate setting, one within an international professional network focused on eLearning quality, which will test and support selected TEL innovations in real-settings.

In a nutshell, the HOTEL Innovation Support Model is putting forward six "structuring assumptions" that should be taken into account when we want to support mainstreaming and scalability and to speed-up the adoption of TEL innovations. First, **recognition of the diversity of innovation paths**, along with innovation channels, start points, contexts, expected outcomes, success criteria and, in general, every single step and factor of the support model and the setting. Second, **recognition of an existent difficulty on measuring 'success' within a TEL innovation setting**. How is success defined? Do we use pedagogical, technological, socio-economic, business-economic, or other criteria to determine what can be considered as being a success? Third, **embedded flexibility and adaptability of the support model** in order to match different stages of innovation development and different contexts and innovation paths. The support model must take the various key factors from every context, stakeholder, and user, to integrate them into the innovation, so that a unique experience is produced.

Fourth, the core concept in the support model is that of a “**multi-stakeholder ecosystem**” (with different stakeholder representatives according to the nature of the innovation proposed) that analyses and eventually tests the proposed innovation from a multi-perspective approach, identifying all the strengths and the weaknesses from each relevant stakeholder’s perspective. This test might be either a) Practical, on the ground, with real users and in a real context-setting or b) Theoretical, with a deep-thinking test bench by experts and qualified users. Fifth, **context-sensitivity of the analysis and support** action proposed, in order to distinguish transferable from non-transferable success factors, according to a well-defined set of criteria. Last, if implemented, the innovation must take from the support model all the required input for a fresh start, making a **two-step implementation phase**. With this approach, the implementation makes use of all the lessons learnt and best practices from the theoretical phase with the Lab, but it will not be restricted by them when it comes to a market-context, which might take into account an additional set of success criteria and specific implementation conditions.

HoTEL calls for a multistakeholder and context-sensitive approach to TEL support, where it is fundamental to look at innovations by keeping in mind all the specific challenges that they have been facing, are facing and will be facing in the next steps of their development. What should be done – in the HoTEL view – is instead to consider innovations as “system-activities” which aim at a specific innovation “objects” and which lead to a set of desired “outcomes” for the involved communities. This will enable us to understand the dynamic nature of these innovations and their relationship to the dynamics of knowledge creation within the communities involved.



## **LIFE-WORLD FACTORS OF DISTANCE EDUCATION STUDENTS AND THEIR INFLUENCE ON LEARNING ACHIEVEMENT**

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Every human being has an individual demand for specific (further) development of competence, depending on his or her personal life phase. On the grounds of its history, development, experiences, and the structure of its modularized study programmes, the FernUniversität in Hagen as a lifelong learning university in the German-speaking world helps to satisfy this demand (Vogt, 2012). The seamless learning approach supports flexibility of “distance” studies in terms of place, time and content (see for example Krey et al., 2014), which attracts above all non-traditional students (Alheit et al., 2008) who have completed a first degree and are now working.

Analyses of the studies or learning achievements of distance education students take into account in particular the motivation for studying (Kaiser, 1997; Baacke, 1978), the particular socio-economic situation of female distance education students (Prümmer, 1997), or study materials (Richardson et al., 1999). Statements concerning the education and employment biography and the students’ personal situation display very high educational backgrounds, but do not supply any information about the competencies possessed by the distance education students.

This paper focuses on the influence of life-world factors on the learning achievement of students, looking at the example of the Bachelor degree course in Education Science at FernUniversität in Hagen (life-world study). The Life-World Study (commencement March 2014) examines the question:

*What influence do life-world factors have on the learning achievement of students in the Bachelor course at FernUniversität in Hagen?*

The task of the study is to record the life-world connexion explicitly in order to obtain a specific insight into the conditions and challenges as well as already existing potentials of the students. The narrative interview method is used. The MAXQDA software serves to evaluate the contents of the interviews (Mayring, 2008).

At the present stage of evaluation are currently produced three core statements:

1. Students in the Bachelor degree course on Educational Science at FernUniversität in Hagen are characterised as a heterogeneous group involved in a large number of life-world areas. The concentration on this target group implies diverse individual learning and acquisition processes.
2. Despite the emerging diversity, it is clear that the singular empirical knowledge is in no way accompanied by competitive mechanisms among students (Ortmann, 1977), but instead it creates learning in solidarity in different learning settings.
3. Studying together improves the learning achievement. The learning form of direct social exchange preferred by all interviewees indicates a certain isolatedness of the students, however. Autonomous action strategies in the individual acquisition of knowledge arise from the individual diversity of life-world contexts, as is confirmed by the life-world shaping according to Kade and Seitter (1999).

Presumably it is the time flexibility of distance studies, which is viewed as so advantageous, that is responsible for students not being able to study jointly together over relatively long periods.

## **PROMOTING AWARENESS AND OWNERSHIP IN DIGITAL PROCESSES OF TEACHING & LEARNING**

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This paper addresses the challenge of teaching and learning in a blended, collaborative Digital Context. It reports on a case study in which the promotion of learners empowerment and meta-learning are key objectives. The findings of the case study suggest the presence of a promising potential in a marriage between theory-led designs, digital technology, and dialogic collaborative knowledge building for cultivating and enhancing student empowerment.

Collaborative digital e-learning communities and the cultivation of student empowerment through digital technologies are phenomena constituted on the premise that individual learners bring to the learning community knowledge and experience with the aim and potential of generating in a shared endeavour new knowledge for the group. Especially, this is important in domains where new knowledge is developing at a fast pace.

In digital e-learning communities learners are able to generate and share new ideas and concepts in relation to knowledge they have already acquired, and to associate the new generated knowledge with their own professional contexts. In digital e-learning communities, both the individual learner and the entire group of learners gain new knowledge and understandings.

This paper reports on a case study, – a blending learning course where 18 learners with full-time jobs engaged in an online course using a variety of digital environments and Web 2.0 software to facilitate their collaborative learning process. The paper outlines the research design and its ethos in terms of student empowerment. The digital design of the course is described, and the use and delivery process is analysed.

The findings of the study suggest a promising potential in the marriage between theory-led designs, digital technology, and dialogic collaborative knowledge building in communities of communication and learning for cultivating and enhancing student empowerment.

A tentative conclusion is that the findings from this case study (student responses from the questionnaire) show some indication that this course and its combination of pedagogical design, digital learning architecture (including web 2.0) and (meta)dialogic collaborative knowledge building promotes development of learner

empowerment and meta-dialogic learning and awareness. Dialogic meta-awareness and the resulting visibility to meta-inspect ones own competencies and communicative actions seem to create the personal initiative and the transparency needed to implement and maintain democratic forms and attitudes in intercultural participation, negotiation and dialogue.

It seems nearby to conclude that the course to a certain degree seem to have increased student empowerment through enhancing student initiative and incitement to express opinions and dialogue with peers. However, a remaining issue to investigate further and possibly to resolve is the more specific affordance of each technology in this respect, and to identify more the more specific correlations between each of the technologies and the activities implemented in the blended learning architecture across spaces and media.

## **CHALLENGES BEHIND RESEARCH-BASED PRACTICES AND PRACTICES-FOCUSED RESEARCH IN DISTANCE EDUCATION**

*Selçuk Karaman, Engin Kurşun, Ataturk University, Turkey*

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### **Introduction**

This study is based on six years experiences of a team of distance education practitioners in ATAUZEM and is composed of two parts. In the first part of the study, it has been explained that why practitioners could not adequately benefit from research findings during planning and designing of distance education programs. In the second part, challenges behind producing practical results or why distance education research is limited in practical use have been discussed.

In this sense, the aim of present study is two-fold:

- to understand challenges behind research-based practices in distance education;
- to understand challenges in undertaking practice-focused researches in distance education.

### **Challenges behind research-based practices**

In this part of the study, impact of low and high research support (L-HRS) on effectiveness of practices (EP) is modelled. According to this model there are four cases for distance education programs. These are low research support-effective practice, high research support-effective practice, low research support-non-effective practice and high research support-non-effective practices. In the paper, challenges behind in undertaking practice-focused researches in distance education were discussed.

### **Challenges behind practice-focused researches**

In the second part of the study, different challenges in undertaking research which yields practical results for distance education problems are discussed. These challenges are briefly discussed considering main scientific research components (e.g., research design, sampling, data collection etc.) in the following subtitles:

- Challenges in conducting experimental studies, and collecting valid and reliable;
- Heterogeneous sampling;

- Various dependency of distance education;
- Lack of consistent terminology and theoretical framework.

## **Conclusion and suggestions**

It is clear that there is a serious gap between theory and practice in the field of distance education. In order to close this gap, every stakeholder should take their responsibility. First of all, to ensure successful practices, these practices should be based on sound theoretical underpinnings. Therefore main aim of all stakeholders in distance education should leverage research studies and practices to HRS-EP level. To do this, different suggestions can be proposed to practitioners, researchers and leaders in the field of distance education. Practitioners can convert their experience, trial and errors or tacit knowledge into research findings (LRS-EP to HRS-EP). They can propose practitioners guidelines combining their tacit knowledge together as well. Instead of undertaking research isolated from practices, researchers can conduct practice-focused research by considering challenges behind it (HRS-NEP to HRS-EP). To decrease level of challenges, they can be more careful in the selection of research design, detail explanations of sampling, environment, and procedures in their research studies in order to ensure transferability of their practical findings into different cases correctly. Finally leaders or organizations (e.g., EDEN, ICDE) in this field should take main responsibility of structuring consistency in distance education terminology and proposing new theoretical framework for distance education.

## **LEARNING ANALYTICS IN PRACTICE: SETTING UP A LABORATORY FOR ACTION RESEARCH AT THE UNIVERSITAT OBERTA DE CATALUNYA**

*Julia Minguillón, Christine Appel, Francesc Santanach,  
Universitat Oberta de Catalunya, Spain*

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The intensive use of ICT for both the teaching/learning processes and management allows researchers and practitioners to obtain data about what takes place in a virtual learning environment (VLE). This is the case of the UOC Virtual Campus, which is continuously being improved according to such findings. In this scenario, one of the challenges is how to analyze all the available data from a perspective wide enough to understand the relationships among users, services and resources, as well as the implications in the student and university interaction through the Virtual Campus. This is why the eLearn Center aims to provide both the framework and the ground for implementing these changes in a controlled environment, measuring their impact, collecting the necessary data and evaluating their scalability in order to convert every teaching experience into a good practice, facilitate rapid adoption and dissemination. In doing so, the eLearn Center ensures the continuous contribution of the UOC to e-learning research and innovation. In this paper we describe how the eLearn Center addresses the problem of both supporting and analyzing UOC's educational model whilst providing teachers, researchers and practitioners with an experimental space where they can design and implement new educational practices. We provide also an example of the kind of analysis that can be carried out within this framework.

## **PEER REVIEW OF OER IS NOT COMPREHENSIVE – POWER AND PASSION CALL FOR OTHER SOLUTIONS**

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The aim of this article is to support the discussion on the role of OER for sustainable development by (i) highlighting the need for a critical debate on issues related to quality of OER and (ii) emphasizing that both accuracy and legitimacy is essential for quality.

Higher education has a societal responsibility to formally educate students and to be involved in informal learning of members of society. OER are used as a hybrid of learning artefacts and methodology in this process, but quality assurance systems may influence trust and therefore the scale of OER adoption. Quality of research and traditional resources used in higher education are assessed by the use of peer review, but this process has been criticised for neither being standardised and objective, nor reliable for detecting fraud. Furthermore it is questioned because it is time consuming and expensive, and has been accused for stealing ideas, and for blocking and slowing down the publication of scientific results of competitors.

Peer review is sometimes used in the quality assurance of OER, but has been criticised since OER are constantly changing and centralised control systems are lacking. Furthermore, OER can with reference to the wisdom of the crowd be argued to be of higher quality than resources developed by single individuals, since it is a collegial activity similar to the creative exchange in research when researchers are building upon each other's work and discuss their findings with fellow researchers in order to get a shared understanding.

Different types of index are sometimes used in peer review based on tools which measure different dimensions. Such tools tend to be instrumental and some academics are considering other and more inclusive approaches such as ratings and recommendation. The balance between accuracy and legitimacy in OER practices deserves further research, especially when dealing with contested subject areas. Thus, the question is not only if the OER is accurate, in the sense without errors or demonstrating scientific reliable results, but if it shares with you the value-laden presuppositions about what is important.

Food quality and animal welfare are aspects of sustainability which are of high interest not only to scientists and students but also to citizens and consumers. Individuals need to be assisted to become more aware of the complexities surrounding ethical decision making and more conscious of their own ethical



orientation in the contested areas of food quality and animal welfare, in order to make informed consumer choices, influence the food production methods and levels of animal welfare and articulate their stance in sustainable development. Consequently, food quality and animal welfare have legitimacy because of ethical concerns in the society. To access the adequacy of those scientific conceptions the research community must therefore be in dialogue with society and address the current ethical concerns.

This article presents empirical research highlighting the interplay between accuracy, meaning if the content is current knowledge without errors, and legitimacy, meaning if the content is relevant to the learner and based on the value system of the learner or the general accepted value system in a certain context. It highlights the power structures and question if higher education has the authority to be the main assessor of OER in the future, and if peer review is the only and preferred methodology for quality assessment. It asks the question if the wisdom of the crowd and its demand for knowledge is building the legitimacy of OER and how that corresponds to the quality assessment of OER, and therefore how this might contribute to a sustainable development of society.

The fourth generation activity theory is about expansive learning, and builds on the idea that there are inner contradictions within the learners' activity system and that knowledge creation transcends the context given, and is therefore found to be a useful framework for analysing the peer review process. Since openness is both the objectives and the instruments in OER a peer review assessment of the artefact cannot be comprehensive but requires a complex mix of quality instruments enabling users to be involved in the quality process. As previously suggested the interaction between (i) the network of users of OER and (ii) the network in publishing industry and formal education may form the future solution for the quality of OER and for sustainable development.

## **A MOOC AVANT LA LETTRE: DAVID HARVEY'S LECTURES ON 'READING CAPITAL' AND WHAT DISTANCE EDUCATORS MAY GET FROM IT**

*Thomas Hülsmann, UNISA, South Africa*

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From a South African vantage point education (including distance education) is expected to help addressing the 'triple challenge' of *unemployment, inequality and poverty*. In the tradition of Human Capital Theory (HCT) a 'skills gap' is seen as the root of the problem. Various educational reforms have been tried to address the skills gap, all of them floundered.

This paper revisits the skills gap discourse from a vantage point quite different from that one of HTC. At its starting point it takes note of a recent increasing openness to discuss if Marx was right in his criticism of capitalism (Eagleton, 2011; Reheis, 2011; Henwood et al., 2014 in the *New York Times*). The author followed that lead and went back reading Marx's *Capital* under the guidance of, what can be considered a MOOC *avant la lettre*, the Marx lectures by David Harvey.

It comes to no surprise that for Marx poverty, inequality and unemployment are not accidental features of capitalism which are likely to be ironed out eventually, but that they are persistent characteristics of capitalism. While the author refrains from discussing the truth or validity of Marx's theory, he acknowledges that unemployment, inequality and poverty do follow from Marx's theoretical approach (his version of the labour theory of value) with surprising clarity. The reason for this may be due to the fact that neoliberalism has brought about "A Return to a World Marx Would Have Known" (Henwood, 2014).

HCT has informed educational reform and, indirectly, the related discourses on distance education. The skills gaps discourse is largely based on assumptions rooted in this theory. It is argued that the emerging 'knowledge economy' requires skills level which the education system persistently fails to supply while the jobs are 'out there' if only learners would invest in themselves and governments would reform the educational system to be more responsive to labour market needs, i.e. the needs of the employers.

Taking the Marxian vantage point things look differently. While HCT assumes that employees get a cut of the surplus value they have helped to produce in proportion to their productivity, the labour theory of value argues that employees are paid according to their value, i.e. the reproduction costs of their labour power. Skilled

workers get a higher wage because the costs of production of skilled labour are higher, and not because they are, any more than other employees, entitled to an extra cut of the surplus value they helped to produce. Distance education prides itself of widening access to education and, due to its efficiency, to reduce the production costs of education and training. From the vantage point of the labour theory of value this will, on the long run, bring down the cost of education and erode the 'graduate premium'. Labour power is the property of the worker (which he must sell), but it is capital only in the hands of the employer. And, indeed, the high level of student debt in the US and the UK shows an erosion of the graduate premium.

The other persistent feature of capitalism is unemployment. In Marx's framework, again, this comes to no surprise. Together with the production of surplus value, the production of a surplus population of unemployed workers is rooted in the logic of capital accumulation which responds to worker demands with technological change. The skills gaps argument puts pressure on the education sector to reform according to the script of employers while, at the same time, technological change produces structural unemployment, such that the labour market cannot absorb the increasing numbers of skilled workers coming out of the education sector. In fact, instead of enabling the graduates of universities and colleges to find jobs, formal requirements are often used to deny jobs. It has been suggested that the expansion of the education system is used to keep a sizable portion of youths out of the labour market in order not to aggravate the unemployment problem. It seems, that what Klees said about distance education, that it often serves to 'cool out aspirations'<sup>1</sup>, applies for the education sector as a whole: expanding the supply side of education in face of a labour market characterized by severe structural unemployment leads to cycles of reforms which, unable to address the triple challenge of poverty, unemployment and inequality, ends in a 'blame game' where students are criticized for not investing enough or making the wrong choices, and governments for setting wrong incentives.

Marx's framework may help freeing education and distance education from a straitjacket of expectations it cannot meet. It forces educators and distance educators alike to rethink its research agenda which may be based on a worn out research program.

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<sup>1</sup> "Moreover, the independent nature of distance education lets fewer students through the education pipeline. Those who do not get through are often "cooled out" from higher expectation and society is absolved of blame for not having given them a fair chance. Indeed, more broadly, distance education systems have been seen to help maintain the stability of unfair societies by legitimating what is only a pretense of equal opportunity." (Klees, 1995).

## **ACHIEVING IMPROVED QUALITY AND VALIDITY: REFRAMING RESEARCH AND EVALUATION OF LEARNING TECHNOLOGIES**

*Adrian Kirkwood, Linda Price, Institute of Educational Technology, The Open University, United Kingdom*

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In recent years open and distance education (ODE) has increasingly been equated with digital learning technologies. Through the use of technology, universities in many countries now offer aspects of ODE, whether they are dedicated ODE institutions or teach primarily face-to-face. While the investment in technology has been considerable, findings from research and evaluation studies of learning technologies have had little impact on implementation decisions and teaching practices. Has research contributed to building a body of evidence that can inform and provide a firm foundation for subsequent developments in academic practice? Is evidence being generated and reported that can inform the practices of university teachers and students? Innovation and change should be evidence-informed and we need to ensure that the research and evaluation of learning technology produces findings that can inform other practitioners and policy-makers.

A critical reading of research literature relating to teaching and learning with technology reveals a number of shortcomings in how investigations are conceptualised, conducted and reported. Projects often lack clarity about the nature of the *enhancement* that technology is intended to bring about. Frequently there is no explicit discussion of assumptions and beliefs that underpin research studies and the approaches used to investigate the educational impact of technologies. This presentation summarises a number of the weaknesses identified in published studies and considers the implications. Some ways in which these limitations could be avoided through a more rigorous approach to undertaking research and evaluation studies are then outlined and discussed.

If the guidelines in this presentation are followed, it should contribute to research and evaluation studies achieving higher quality and validity and to results and conclusions that avoid many of the pitfalls and shortcomings that we – and many others – have identified. Consequently, the potential for achieving greater impact will be improved.

## **BELONGING AND MATTERING THROUGH A TECHNOLOGICAL LENS – MEETING ONE CHALLENGE FOR OPEN AND DISTANCE LEARNING IN 21<sup>ST</sup> CENTURY**

*Rhonda Leece, University of New England, Australia*

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The student experience for online and distance learners in Australia has generally been considered from the perspective of 'study-load' and separate from the personal, emotional and social context of the student's 'life-load'. The action research project reported here contributes to the existing body of knowledge by examining the way in which engagement with students at a regional Australian tertiary institution can be developed and maintained by actively listening and responding to the voice of the student through a mixed suite of technological tools. This paper presents one component of a larger study designed to develop a greater understanding of the nuances of the lived experience of student engagement. This work aims to understand the role that technology can play in the developing the emotional dimensions of belonging and mattering as experienced by students who are dis-located from their campus.

Current work at the University of New England (UNE), Australia is based on a strong belief that self concept is central to the engagement of online and distance learning students and that this self concept needs to be situated within the academic sphere as a compensation for the dis-located sense of place and community they experience. The UNE Early Alert Program (EAP) is an innovative program which identifies and supports students, irrespective of where they study. It uses multiple data sources to automatically highlight students who may be 'at risk' of disengagement and through case-management afford them every chance of success. A suite of wrap-around services, which are aligned to the student lifecycle, ensure that a consistent and cohesive model of support is centred on building pride in studentship, enhancing the sense of belonging and mattering of students, and providing students with instrumental resources which enable them to develop self management skills. Analytics perform a gatekeeper function, assessing, the impact of specific interventions on the student experience and determining if activities are retained or discarded according to the level of resonance with the student population. The project unpacks the issues of concern identified by individual students; the way in which these concerns are ameliorated and the impact this has on student progression into the next teaching period. Within these parameters, the dimensions of mattering and belonging are measured according to student feedback.

### *Research Approaches and Perceptions in ODL*

The Early Alert Program is underpinned by four key technological approaches to identifying the individual needs of students. These are the self reported student happiness (or satisfaction reported through tools such as *Emoticons* and the *Vibe*); system reported wellness (or preparedness for study) reported through the *AWE* and a communication strategy which utilizes a range of media such as a blog, Facebook and Twitter. Early Alert has established a distinctive process through which to identify students who may be at risk of disengagement, to intervene early, diagnose potential areas of concern and refer the student on to appropriate support services. This process supports the emotional dimensions of belonging and mattering of students and is consistent with the belief that a sense of belonging involves support and respect for personal autonomy and for the student as an individual.

## **PEDAGOGICAL SPEEDBUMPS AND LIFE'S POTHoles AND DIVERSIONS ON A DISTANCE LEARNER'S JOURNEY**

*Anthea Wilson, The Open University, United Kingdom*

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This poster presentation reports on a pilot study aimed at testing out a range of diary data collection methods. Over a two-month period, I engaged with a small sample of distance-learning students studying an introductory health and social care module to assess their subjective experience of studying. One aim was to evaluate the quality of data obtained by the different diary methods and the practicalities of handling the different formats and incoming flow of diaries. A second aim was to determine what aspects of the student experience the diaries were able to reveal. Third, this pilot sought to inform a more extensive longitudinal study of the student experience in our health and social care courses. The pilot study also represented a useful 'public engagement' exercise that encouraged students, as our 'public', to help shape the research questions and methods of any subsequent study.

### **Diary keeping**

K101 'An introduction to health and social care' is a core introductory undergraduate module for the Faculty of Health & Social Care at The OU. As well as providing an overview of experiences and practices in health and social care and introducing theoretical concepts, K101 also has a role in developing study skills in a way that is accessible to a 'widening participation' audience. Volunteers were invited to choose from a menu of several different diary methods:

- Receive a regular call from me, in an agreed time slot
- Call a phone line to record a message (as often as required, but once a week minimum encouraged)
- Make a short voice recording on a smartphone, tablet or pc and uploading it to a secure website (as often as required, but once a week minimum)
- Make a short video recording on a smartphone or tablet and uploading it to a secure website (as often as required, but once a week minimum)
- Keep a written log of study experiences and send it to me (as often as required, but once a week minimum)

## *Posters*

Seven students proceeded to keep study diaries. Five chose to send weekly written diaries by email, and two elected for a weekly or fortnightly phone call. None chose to keep audio or video diaries.

## **Findings**

The diaries revealed that time and pace were essential concerns for all participants. The students experienced many life events and study situations that presented obstacles to achieving their study goals during the diary period. Through qualitative content analysis, I developed themes and applied the metaphor of a road journey to represent these tensions. I also reflected on the affordances of diary methods in revealing students' use of their time.

## **Discussion**

Although this study involved a very small sample of students, it did facilitate theme development and a process of coming to improved insights about K101 student experiences of study. It has also provided important insights into how students interact with the study materials and some of the choices they make regarding the use of their available study time.



## **ICT IN EMANCIPATORY EDUCATION: AN APPROACH TO CRISIS ALLEVIATION**

*Maria Fragkaki, Research Academic Computer Technology Institute and  
Press- Diophantus, Greece, Lampros Stergioulas, University of Surrey, United Kingdom*

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This paper suggests a model for the integration of Information Communication Technology (ICT) in Emancipatory Education as an approach to crisis alleviation, seeking to explore the social, economic and political benefits it can provide for individual and society (including the world society in a globalised context). This research application has been developed in the backdrop of a European Union in a deep and unprecedented economic, social and political crisis, manifested in a dramatic increase of poverty, unemployment and racism too (Eurostat 2013). During the past decade ICT has evolved and grown to play an increasingly important role in fostering and driving education innovation and addressing the above challenges (e.g. EESC 2013, UNESCO 2011, Eurydice 2012), and it has been a key priority in several flagship initiatives of the Europe 2020 strategy.

Summarizing our review of the state-of-the-art in ICT in Education and our criticism of the current educational projects, we accuse that several ICT approaches in Education, so far, have been purely technocratic through Positivist-Technocratic Models that do not originate from the educators' personal and professional needs but from the "objective" propositions scientifically documented for society, politics, and organization, which they then transform into recommendations for educators' training and professional development, while focusing only on the practical aspects of education. The connection between emancipatory learning and technology is loose; so far, it is mostly of the "nice-to-have" type: either emancipatory learning with technology or alternatively technology-enhanced with emancipatory goals, whichever is the most feasible. The connection between economy-driven training and education for the labour market on the one hand and educational theory and methodology that promotes 21st century skills and emancipatory goals on the other is missing.

Our approach will add value to Education for the alleviation of the economic/social/cultural impacts of the economic crisis on society by achieving the following objectives: Introduce and investigate a conceptual framework of the innovative "Emancipatory Technology Enhanced Learning" (TEL) paradigm with a view to alleviate individual and communal global crisis consequences; provide an ICT Critical-Reflective model to crisis alleviation ("ICT-EmanALL") with three dimensions: (i) training, (ii) researching and (iii) acting/teaching. Critical

communities of educators are going, on the one hand, (i) to be trained on the emancipatory TEL paradigm, and, on the other hand, they are going (ii) to investigate their work in real conditions. We intend to apply the ICT-EmanALL model through an emancipatory Massive Open Online Course (“eman-MOOC”). The Research Methodology part of this proposal, which follows in the next section, shall address the Critical-Reflective Model.

Our main principles for planning the ICT integration in Emancipatory Education through our model concern an *Emancipatory TEL* that means the integration of ICT in education within the framework of “emancipatory cognitive interest” (Habermas, 1972) with the goal of forming a critical consciousness in individuals and communities, aiming at autonomy, responsibility, justice, equality and action for social change (Carr & Kemmis, 1997); the educational subjects are authentic and with social meaning, concerning the learners interests and the issues/problems of the wider society in which they live. Educators have the opportunity to co-develop, together with their learners, the content of the educational material and the educational process; Learners function as vehicles and not as instruments of change and educators are transformed from facilitators of the learning process to “critical friends” and advisors; ICT tools are integrated in the pedagogical process through emancipatory action- research and problem solving methodologies and they are transformed from technical to cognitive tools, and from those, to emancipatory.

In view of the above factors, our approach will add value to Education towards the alleviation of the economic/social/cultural impacts of the current crisis. The development of ICT-enhanced environments, as well as a range of educational e-Learning resources and their integration in practice does indeed fulfil the heralded potential of ICT for an education that will link employment-oriented skills and knowledge with high level “21st-century” cognitive skills [OECD 2013] and emancipatory life attitudes.

## DIGITAL LEARNING – EXPLORING THE LEADERSHIP FACTOR

*Colum Foley, Dublin City University, Ireland*

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As a medium for higher education new digital media now available present unlimited potential to engage and interact on a global stage, like never before. However, traditional educators in Ireland have been slow to recognise and react to the potential opportunities these platforms present, which a new National Digital Learning Roadmap (2014) is seeking to address. The poster asks the question: What type of leadership is required in higher education to unleash the potential of new digital media in developing a 21st century learning environment? Drawing on the literature on leadership, and in particular the concept of 'Turnaround Leadership' (Fullan & Scott, 2009), the intent of the poster is to raise greater awareness of these questions and to seek feedback on the types of issues that are relevant to the study of leadership in the Irish higher education context.

The questions explored are:

- **Who** – can benefit most from digital learning? We need to understand who has the most to gain from access to new digital learning solutions and what support strategies are required for different groups of learners;
- **What** – media should be used by educators? Selecting the right media for the particular students and learning outcomes is not as straightforward as often implied. We need to consider a range of technologies from a technical and pedagogical perspective;
- **How** – should teachers and students use digital media? The value of digital learning depends to a large extent on how it is used. Therefore educational leaders need to recognise that;
- **When** – should we learn online? The real strength of digital learning is that the learner can customise the timing and sequence of their individual studies to match the demands of their personal requirements;
- **Why** – should teachers use these tools? If new digital media is the solution to 21st Century learning, then we need to understand the problem that is being addressed by the technology. When used appropriately, teachers can provide students with a consistently high quality experience along with providing the flexibility demanded by today's students;
- **How** – can we encourage educators to use online tools to enhance the student experience? What needs to be done to allow teachers to recognise that digital media enhance their teaching and expertise rather than inhibit or hinder it?

The research aims to investigate this tension with a relevant sample of educators in order to better understand how to harness the support and micro leadership of individuals in helping to overcome the challenge of institutional inertia in such uncertain times.

## **SPEAKAPPS: STUDIES ON ORAL PRODUCTION AND SPEAKING INTERACTION**

*Christine Appel, Maria Luisa Malerba, Universitat Oberta de Catalunya, Spain*

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### **Summary for the printed book of abstracts**

Task design is key to providing appropriate contents for Computer-mediated Communication in an L2 language learning context. Online spoken conversation amongst language learners does not always flow easily: awkwardness, shyness about their L2 performance and nervousness about being able to understand their interlocutor are some of the issues students report. From a linguistic point of view, there is the risk of *avoidance*: it is important that students are pushed to attempt complex structures beyond their level of interlanguage. Here I describe four studies conducted within the framework of the SpeakApps<sup>1</sup> project looking into L2 speaking interaction task design in the context of the virtual classrooms of the School of Languages in the UOC.

The first study (Appel & Borges, 2012) explored the use of a videoblog, LANGblog, by instructional designers and teachers in the School of Languages in the UOC. Task design and discrepancies between learner and teacher perceptions are analysed. The second study (Appel, 2012) focuses on the impact of task design on affective factors and in particular anxiety experienced by students of English in the UOC during the completion of tandem tasks with native speakers of English learning Spanish. The third study (Appel, Robbins, More & Mullen, 2012) focuses on interface design issues of the SpeakApps tandem tool and the impact they have on learner performance during conversation amongst learners of English B2. Learner performance using three formats of interface for the same task are compared. The analysis focusing on turn-taking unveils four patterns of learner behaviour. Finally, the fourth study (Gràñena & Appel, work in progress) will compare learning gains after doing a jigsaw task individually via an online handout and in pairs via Tandem. We anticipate that the interactional processes that will take place in Tandem will promote greater L2 learning.

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<sup>1</sup> Funded by the European Commission, Lifelong learning programme, KA2 Languages, 2010.

## **SOCIAL NETWORKING IN (L2) SECOND LANGUAGE LEARNING**

*Maria Luisa Malerba, Open University of Catalonia, Spain*

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The evolution of the Web and its applications has been crucial for changes especially for L2 learning environments because it has determined a shift from information retrieval and rote trainings to the hypertextual content that learners generate in collaboration with other people. In other words, the current Internet scenario seems to meet the needs of language learners and enable them with good opportunities to become active members of online environments, conferring potentially great autonomy to learners. This scenario mirrors the current policies undertaken by the European Union, emphasizing the value of community-based learning, lifelong learning and formal, non-formal and informal learning as synergic dimensions.

This PhD study adopts a longitudinal multiple case study approach to investigate the social networking experience of second language learners on *Busuu.com* and *Livemocha.com* online communities. Drawing on the accounts of learners' experiences and on their perceptions about the communities, the study aims to address how these communities are used by learners for their informal L2 learning practices, what their behaviours are, and how they respond to the conditions of total autonomy that these platforms provide.

The results of the semi-structured interviews provide insights on learners' level of engagement over time, on their ability and inability to learn autonomously through the aid of these platforms, as well as on their perceptions and awareness of the uncontrolled environment of these online communities. The final phase of the study analyses informal online conversations between learners and native speakers (NSs) and learners and non-native speakers (NNSs) in the absence of teachers and pedagogical tasks. The results of this phase provide insights on learners' ability or inability to manage both the social and the pedagogical trajectories simultaneously and to the different forms of assistance they are able to provide to each other.

All these deliveries shed more light on their interaction patterns and provide a better understanding of nowadays' lifelong L2 learning practices in the naturalistic and out-of-class contexts of online communities.

## **VISION, SCENARIOS, INSIGHTS AND RECOMMENDATIONS ON HOW ICT MAY HELP MAKING LIFELONG LEARNING A REALITY FOR ALL – THE STAKEHOLDERS’ VOICE**

*András Szűcs, Livia Turzó, European Distance and E-Learning Network (EDEN),  
United Kingdom*

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VISIR – Vision, Scenarios, Insights and Recommendations on how ICT may help making lifelong learning a reality for all is an EU-LLP-KA3 project finishing this year<sup>1</sup>. The rationale of the project is that whilst the use of ICT for learning in Europe is gaining ground, in order to uncap its potential as a driver of change for our economies and societies, we need to move from fragmentation and piloting to effective systematic adoption. Seven European networks and two research centres have joined forces to address three major gaps: the ‘understanding gap’, the ‘networking gap’, and the ‘mainstreaming gap’ of ICT for learning in Europe.

The present paper gives an outline about the process and results of the VISIR Stakeholders’ Consultation, which aimed gathering relevant and up-to-date information, ideas, on the contribution of ICT for learning to digital and key skills acquisition in Europe from wide range of stakeholders.

The consultations held in 2012-14 focused on themes like Identification and analysis of trends on ICT and learning in Europe – The contribution of ICT to effectiveness of learning, transferability of learning outcomes and to the attractiveness of learning – What may promote or discourage changes towards innovation friendly learning systems – What actions should be taken to boost and scale e-learning Micro Innovation in Europe?

Online tools as Userveice and Surveymonkey were used for the surveys. The consultation has reached a community with effective practice, experience, motivations in learning innovation and good understanding of the scene

From the results of the consultations, we can notice as directions for progress and further actions:

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<sup>1</sup> <http://visir-network.eu>

***Re the networking gap:***

- ICT is contributing to the collaborative aspects and the scalability of innovation in learning by sharing experience, peer collaboration, networking of students and families.
- Attention to learning communities as extending beyond education, becoming engines of active citizenship, social participation, innovation and individual development. Overall learning in society is the real patrimony of innovation.
- The way how learning is organized in learning communities and spaces may be instrumental: e.g. intergenerational, cross cultural, cross-borders and interest-based learning settings.
- For valorisation of innovation, sharing knowledge and networking is necessary. Innovators should have access to resources for networking, sharing of practices and for promotion of innovation accelerators.

***Re the understanding gap:***

- Innovation is an important tool to motivate students, enhance learning experience and develop their full potential.
- ICTs contribute to the development of transversal-horizontal and soft skills (communication, critical thinking, collaboration, etc.) and promotion of entrepreneurship.
- Better understanding and proper use of the existing tools is recommended - rather than new paradigms or concepts: Well organized environment, flexibility, increased cost and resource awareness, attention to quality, assessment and legislation/accreditation issues.
- Technology infrastructure enhancement is not core issue as bottleneck.

***Re the mainstreaming gap:***

- Holistic approach – Integration, collaboration, strategy – better understanding of relationships between learning, living and society needed to realise the potential of ICTs.
- to boost and scale micro-innovation, comprehensive action is awaited from the EU, as the innovation movement requires conceptual-strategic approach and sustainable operative action.

## *Posters*

- Positive impact of the work-based, workplace related learning, and „real-life situation embedded“ instruction, the need of bringing real-world applications and experts in the classroom.
- An important barrier is the competence of teachers and trainers, together with lack of appropriate methodology.
- Need for evidence of the usefulness of innovative methods and research, justified interpretation and presentation of the results.
- Role of leaders: solid pedagogical vision and ICT strategy needed at institutions, with open-minded, flexible organization culture and motivation towards innovative teachers.
- lack of reward and recognition, paying respect to innovation performance is long standing unsolved question.

The results provide good basis to formulate specific and conceptual recommendations by the VISIR Consortium, outlining and encouraging further developments in ICT-supported lifelong learning.



## **PATTERNS OF NON-ENCOURAGED IN-CLASS MOBILE TECHNOLOGIES USE AT BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS (BME)**

*Judit Vidékiné Reményi, Budapest University of Technology and Economics, Hungary*

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Although mobile technologies have been revolutionizing the classrooms globally, not much has happened in the field of integrating them into university classrooms in Hungary. As the use of mobile technologies and mobile internet access has also become a mainstream feature of business, work and social contexts in Hungary due to decreasing equipment prices, enhanced popularity, increasing volume and improving quality of digital content, it is still a rather long way until mobile technologies (MT) are harnessed in higher education. Hungarian higher educational institutions tend to be failing to recognize the urgent demand for integrating their use into in-school teaching and learning practices, as their learning environments can still be characterized by the one-size-fits-all traditional approach of top-down, often authoritative, one-to-one lecture drive content transfer. The faculty and more often than not students as well are suffering from the distracting effects of non-encouraged in-class use of DT and digital media, as at the University there is no explicit policy on the in-class use of MT. At present it seems innovation and experimentation is not being fuelled to experiment with the integration. Still, inspirations may come from the faculty's lower satisfaction with their own pedagogical performance.

A research – surveying the patterns of non-encouraged in-class MT use at the Department of Technical Education, Budapest University of Technologies and Economics, interviewing faculty members about their readiness to integrate MT into their classes, and analyzing the results and producing recommendations – focuses on what characterizes Hungarian students' in-class use of MT compared to their foreign peers studying at the University. The research focuses on:

1. what mobile devices students use,
2. how often they tend to use MT in ninety-minute classes, that is, whether they are light or heavy media users, and
3. what purposes they use MT for

## *Posters*

in order to find answers for the following hypotheses:

1. The great majority of the students at BME bring MT into class.
2. Students at BME use their MT several times in class in a non-encouraged way.
3. Students at BME use the MT for non-academic purposes more often than for academic purposes in class.
4. The majority of the faculty members at BME do not encourage the in-class use of MT.

The knowledge of the dominant patterns can help faculty members to initiate innovations by designing and introducing appropriate new methodologies and activities for in-class use of MT.

The research has three stages: surveying Hungarian and international students doing different courses at the University by using a short questionnaire of close questions, interviewing teachers about their readiness to integrate mobile technology into their classes, and analyzing the results and producing recommendations concerning the optimum in-class use of MT.

The preliminary results show that the use of smart phones can be considered general at BME, and almost as many respondents use MT for academic purposes as for non-academic purposes in class. The former ones use them for checking online dictionaries, checking course related information, accessing outside resources, taking notes, taking photos and recording. However, almost half of the respondents report using MT for reading and writing text messages and using social networking websites. The respondents use MT at least 1-3 or 4-8 times during a ninety-minute class. These results necessitate experimenting with innovative approaches, which should be based on theoretical and practical considerations.

## **FROM LIBRARY PLACE TO LIBRARY SPACE: INVESTIGATING DISTANCE LEARNER ENGAGEMENT WITH ONLINE LIBRARY SERVICES**

*Jacqueline Baxter, Megan Doolittle, Non Scantlebury, Sam Thomas,  
The Open University, United Kingdom*

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This scholarship research project investigates distance learner engagement with online Library Services at The Open University, UK. Students studying at Levels 1 and 2 of three Social Sciences Qualifications were chosen to investigate perceptions, expectations and actual usage of online Library Services. Quantitative and qualitative methods were used to specifically explore elements of learner engagement. The potential pedagogic and employability value in providing digital library content and services to distance learners were explored.

## **ASSESSMENT STRATEGY – DESIGNING AND DEVELOPING ASSESSMENTS FOR ONLINE DISTANCE EDUCATION**

*Elaine Walsh, James Brunton, Dublin City University, Ireland*

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Assessment has the potential to be a driving pedagogically instrument in third level education. The function of assessment should not merely be to measure learning, it should be an occasion for students to engage with and develop their learning. Successfully engaging in the assessment process is an opportunity for students to achieve and demonstrate key knowledge, skills and competencies.

The Open Education Unit (formerly Oscail), the main provider of online, 'off-campus' programmes in Dublin City University (DCU), was established in 1982 as the National Distance Education Centre (NDEC). This Unit has seen many changes since its establishment in 1982, including a full transformation from being a separate organization, working in conjunction with a number of Irish universities, to being the main provider of online distance education programmes for DCU. The Open Education Unit is now located within DCU's National Institute for Digital Learning (NIDL). In 2012, a project with the aim of improving the quality of assessment writing in an online Bachelor of Arts (Hons) in Humanities Programme began with the development of a guide for designing and writing assessments for online distance education students. In 2013, an audit of the programme's learning outcomes and their inherent assessment types was conducted, with some deficiencies being identified. The appropriate assessment types required to provide students with reasonable opportunities to achieve the programme's learning outcomes, as well as each module's learning outcomes, were identified. This resulted in the creation of an assessment matrix, which involved a structured and transparent programme-level plan for the assessments across all modules within this flexible modular programme, where students may take a number of different progression routes. Prior to the introduction of the assessment matrix, while some variety in assessment type was evident, the choice of assessment depended on decisions made by individual assessment writers, and often tended to rely on the essay-style assessments and the end-of-year examination. A need for training of assessment writers was identified and in 2014 an online assessment writing course was developed and associated training workshops delivered.

This poster will present the process involved in: the creation of the guide for writing assessments; identification of the appropriate assessment types for the achievement of learning outcomes; the development of the assessment matrix and; the on-going development of an online assessment writing course and training workshops. The paper also details the lessons learned from the project thus far and outlines our plans for the project.

## **DIGITAL LEARNING OBJECTS DESIGN FOR TEACHERS CONTINUING PROFESSIONAL DEVELOPMENT**

*Daina Gudoniene, Danguole Rutkauskiene, Kaunas University of Technology, Lithuania,  
Emma Beatty, Fast Track into IT, Ireland, Brigita Latvelyte, Kaunas University of  
Technology, Lithuania*

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This paper presents digital learning objects model for teachers and trainers continuing and professional development at schools and universities, that ensure not only availability of equipment, broadband internet/intranet connectivity and control, but also services that meet the educational needs of large-scale, quality and delivery and to have digital educational content based on new information and communication technologies that helps in a digital way to design learning objects, to collect, to store, transform and disseminate. It should be noted that technologies for information transmission such as communication, collaboration and information sharing very often provide a variety of ICT tools. This paper presents the issues educators face and addresses how to design interactive lessons or training sites that are adaptive, personalized, and motivational and express the desired content to be easily created, exported in various formats, and so on.

Many authors are analysing the interactive learning objects design which identify several critical challenges educators face when selecting learning objects: the learner's cognitive process, levels of interaction, evaluation, and instructional design; learning object repositories and learning object evaluation; and reusability of learning objects.

Technical specifications are also important to consider when choosing the system for interactive learning objects development. They can play a crucial role in determining whether the content can be used and reused. Besides the common used standards and specifications also influence which learning management system may be used for distance learning.

In addition, there is a subset of educational institutions in the world that have not yet applied ICT in classes (or who are just beginning to). To tackle this problem, topic about ICT & institution integration should be discussed. Especially: teaching about information communication technologies, using information communication technologies in various lessons or lectures, applying newest technological solutions into the management of educational institution, creating a virtual learning environment.

## *Posters*

Guiding Principles to Design learning objects for teachers in CPD its important to know that the most frequently mentioned guiding principles are 'the use of new technology in the classroom', together with 'quality of teaching' (90%). Directly followed by the 'student's needs', 'teacher's needs' and 'college/organisation needs' (87-82%). Personal growth is mentioned by 54% of the 22 respondents who answered this question. National priorities, responding to change and reflective practise are mentioned by about 72% of the respondents.

What is interesting about the results of the question concerning the CPD curricula which are delivered in the institutions is the fact that some respondents report lists of more than 20 different courses and learning activities. The type and content of the reported courses are consistent with the guiding principles of the design. There are courses reported in the field of: teaching, learning, ICT (in the classroom), Professional expertise, mostly reported is the knowledge of technical changes and progress, for teachers in technical colleges, Personal growth and effectiveness.

The learning objects designed at the HE level by pre-service and experienced teachers maintained that learning objects need to be sufficiently challenging, so experienced teachers were asked to brainstorm about and select areas where their students had the most difficulty. Learning objects designed and developed using a multicomponent model are viable learning tools for students as well as learning objects which were beneficial, particularly when they had a motivating theme, with visual supports, and interactivity.

## **CRITICAL REFLECTIONS ON COURSE DESIGN IN OPEN UNIVERSITY**

*Satu Hakanurmi, University of Turku, Finland*

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Open University in University of Turku has widened the use of ICT in teaching since 1980's. Online elements have a crucial role in most of the Open University courses as classroom aids or as part of blended learning. During the years new technologies have emerged and course designers have embedded them to existing courses. At the moment learning environment of different Open University courses varies course designers' work rather individually. Open University has common guidelines in administration of studies but in pedagogical design there is more freedom. Based on this kind of development shared interest was to evaluate current models of learning environments and provide recommendations common to all Open University learning environments. Evaluation criteria were decided together. Course designers agreed four topics as most critical factors in the quality of Open University studies. These are guidance/tutoring, interaction, information and communication technology used in teaching and learning and the course design process.

During the self-evaluation process the Open University aims to modernize the learning environment and way of working in Open University. This paper describes steps done so far and in the near future beside the findings during the process.

Open University will add peer support in course design and in evaluation of learning environments. There is lot of everyday communication between course designers but it is not easy to ask wider attention to own course design and evaluation without officially defined roles or periods of wider collaboration. At the moment we are looking for how to add peer support in a more systematic way inside the Open University. But we still don't want to miss the informal way to do that. Nobody wants to add bureaucracy and reporting without reason and clear benefits to Open University practice.

When working many years together the way of thinking and problems of has also become more uniform. Already a trainee supports professional development of teachers because it helps to think differently. This is why effective cooperation only inside the Open University is not enough. And because technology is never stable education based on information and communication technology must conform and be renewed in time with pedagogical reflections taking place all the time. This

## *Posters*

is why benchmarking against other institutions is seen an important part of self-evaluation process in the near future.

Best way to support the quality of Open University's learning environment seem to include similar kind of elements in the working environment like does an effective and interesting learning environment; there is tutoring & guidance, interaction & discussions, problem-based working with authentic questions and supporting materials online for individual working. Open University has to move towards peer supported working and international benchmarking.



## **THE SOUTH BALTIC WEBLAB: CAPTIVATING PUPILS IN MARINE SCIENCE**

*Dalia Baziukė, Klaipeda University, Lithuania*

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It is almost fifteen years then the number of pupils who associate their future profession with mathematics, science and technology is dropping down particularly in all European countries. A group of five marine research institutions from five Baltic Sea countries worked together with computer scientists in a project to promote the field of oceanography among pupils. The project South Baltic WebLab<sup>1</sup>, funded by the South Baltic Cross Border Cooperation has followed different approaches to raise interest among school students, to train their skills, and to support their access to marine sciences. The main components of the project are web-based e-learning modules on a range of different topics, which pupils can explore in a problem-based, self-directed and playful way. Five web-based learning modules, which invite the users to act as marine scientists by meeting current research questions and developing by themselves strategies to solve them. Biological as well as chemical, geological and physical aspects of modern oceanography are dealt with. The modules include topics on the History of the Baltic Sea – long-term geological processes – to decipher the sediments' message and discover the past, Coastal Dynamics – to understand it and deduce respective protection measures, Ecology of the lagoons – to study the ecology of South Baltic lagoons and bights, Water exchange processes – to track the traces of North Sea water in the Baltic Sea and analyse the impact, Biogeochemical and physical processes in the open Baltic Sea – to learn how the cycles of essential elements are functioning in the sea.

Each module is designed to have four stages. The first one provides an introductory story to motivate student to get deeper into the content. Students can follow the content on full screen mode passing to the experimental part, where with the use of virtual tools they are asked to solve practical issue. The second one gives additional materials. This could be glossary or additional content to be studied. The third one requires answering quiz or solving some puzzle and the fourth one asks the students for give the project team their feedback. Our team was happy to get know that at least half of pupils who took part in the virtual laboratory and real science camps answered "Yes" for associating their future with the science, in this case the marine science.

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<sup>1</sup> <http://southbalticweblab.eu/>

## *Posters*

The activities were supported by the South Baltic Cross Border Cooperation Programme. Five marine research institutes were involved: Leibniz Institute for Baltic Sea Research, Warnemünde, Germany; Institute of Oceanology PAN, Sopot, Poland; Klaipeda University, Coastal Research and Planning Institute, Klaipeda, Lithuania; Technical University of Denmark Riso, National Laboratory for Sustainable Energy, Denmark; Lund University Dept. of Earth and Ecosystem Sciences, Sweden; Szczecin University, Faculty of Geosciences, Poland. The job has been done with tide participation of computer scientists from the University of Rostock, Institute of Computer Science and Klaipeda University, Virtual Learning and Information Systems Centre.

## **E-LEARNING PARADIGMS IN APULIAN LIVING LABS**

*Gianna Avellis, InnovaPuglia, Adriana Agrimi, Apulia Region, Gaetano Grasso,  
Marco Di Ciano, Francesco Surico, InnovaPuglia, Italy*

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The issues of the most advanced paradigms in e-learning, such as social learning, adaptive learning, e-learning 3.0, augmented reality and virtual reality, and robotics applications to e-learning have been tackled in Apulian ICT Living Labs projects. The Living Labs approach stimulates the social and organizational innovation as they transfer the Research & Development (R&D) from the close of the companies laboratories toward contexts of real life, where the citizens and the users become themselves "co-developers". This new approach is emerging in several productive situations at international levels, as defined by the ENoLL (European Network of Living Labs) network and allows the Small and Medium Enterprises (SMEs) in particular to create experimentation on the real scale in "pilot market", to advance the current prototypes and anticipate the problems in post-sale phase.

Apulian ICT Living Labs is an action of the FESR 2007-2013 of the Apulia Region, which allows Apulian ICT SMEs to experiment innovative ICT solutions and prototypes of new products and services, through shared knowledge and exchange of researchers, enterprises and organized groups of citizens: they are regarded as a way of meeting innovation challenges faced by ICT service providers. In the context of the Apulian Living Labs, seventy six projects have been funded in eight domains of reference, namely Environment, Education and Training, Cultural Heritage and Tourism, Creative Industry, Active aging and Health, Mobility and Transport, E-government, and Energy.

This paper tackles the main issues on most innovative aspects of e-learning in Apulia Living Labs coming from the Education & Training (E&T) domain. E&T domain resulted very complex to perform the end users needs analysis because expressed users needs show several and different themes in fields: we currently have about 100 users needs expressed by the end users domain. This paper introduces the e-learning projects in the Education & Training domain of the Apulian ICT Living Labs and reports the e-learning technologies developed to address the end user needs in the domain above. It also underlines the clusters of the e-learning projects in Apulia Future Learning 3.0 Living Lab. Apulia Future Learning 3.0 arises to transform the threats of the digital divide into opportunities of developing new knowledge paradigms for the transformation of the processes of learning, coherent with the European standard of all levels of education. New technologies could have an extraordinary effect on efficiency, access and equity of education. Teaching and learning could be optimised by supplying individual

pathways of learning, improving the cooperation online and the mix between formal and informal learning. Thanks to Web 3.0 and new multimedia tools as well as virtual reality and augmented reality, the informal way of learning has become dominant, conditioning the evolution of Education. Innovation leads to an upgrade of the *“old” virtual learning environment*, based only on the use of LMS/LCMS platforms, with the more flexible *personal learning environment*, i.e. the education environment is oriented to the individual user, supplying both informal learning, based mainly on web resources, and formal learning based on conventional designed e-learning platforms. It is then aimed at the *analysis and experimentation of new learning methodologies starting from the demand for innovation of the regional context*.

The organisation model of Apulia Future Learning 3.0 is characterised by the cooperation between SMEs, Education Institutions, Public Schools, Universities. Conscious that *“Knowledge is OPEN when it is available through accessible tools for all citizens and for all social levels”*, AFL 3.0 would stimulate both offer and demand in producing advanced contents in the European context, by using new technologies. The Open Educational Resources are fundamental for spreading learning environment contexts where the contents could be adaptable to the user needs. Apulia Future Learning 3.0 is aligned with the approach *“Open Access”* and stimulates the use of *“Open Source”* tools with the aim of efficiently sharing research results by open access to scientific productions; defining new standards of learning contents and sharing them; helping educational institutions to improve their digital performance; connecting classrooms; improving multilingual thesaurus for better availability of content translation. Referring to the involved structures of AFL 3.0, it is clear that the available technological resources cover a wide range of application. This kind of technological potential could be available through an Open Lab approach offering:

- technical-educational Laboratories with advanced instruments;
- spaces for conferences or public meeting / focus group with communication instruments (videoconference, web streaming);
- interactive spaces based on virtual reality and augmented reality;
- co-working locations.

## *Posters*

Thanks to the wide range of services offered and in respect of a global market focused on continuous evolution, Apulia Future Learning 3.0 places itself in different learning sectors:

- Public Education;
- Professional training;
- Commerce;
- Communication and marketing;
- Industry;
- Agriculture;
- ICT e new media;
- Special education needs.

## **EMPORT – IMPROVE EMPLOYABILITY AND ENHANCE EUROPEAN COMPETITIVENESS THROUGH THE ACQUISITION OF LANGUAGE AND CULTURAL COMPETENCES IN PORTUGUESE**

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The EMPORT project was created with the following motto and slogan: improve employability and enhance European competitiveness through the acquisition of language and cultural competences in Portuguese.

Based on the current job crisis in Europe and the rapid economic growth of some of the Portuguese-speaking countries, specially Brazil, but also Angola and Mozambique, learning Portuguese has become a useful work tool, especially for companies that have or aspire to have economic relations with Lusophone countries.

Thus the reason for having created a multimedia Portuguese course is based on real company needs. The language is acquired through practical cases that represent real-life situations from the business world. The course will allow both employees and employers who travel to a Portuguese speaking country to maintain simple conversations and to negotiate with their counterparts. They will also acquire essential vocabulary on such topics as marketing, banking, business, customer support or entrepreneurship. EMPORT also teaches everyday functions, such as introducing yourself, giving directions, getting a taxi or booking a hotel room. Therefore, it is a very useful tool for users who are not directly related to the business world, as it also allows tourists to involve themselves more easily with the local people. Furthermore, it allows European citizens to access the culture of Portuguese speaking countries, with a particular focus on Brazil.

EMPORT uses ICT based resources: animations, pictures, sound files, etc. This not only makes learning more dynamic and fun, but it is also more effective and long-lasting. EMPORT takes advantage of new technologies so that the time spent

## Posters

studying is as low as possible. At the same time, and since it is an online resource it is accessible anywhere, at anytime. This results in a very flexible study system, which allows each user to suit their needs and at the same time fits with the business person's profile.

Besides the language tool, the website aims to be a portal of information about Portuguese and the countries that speak it. We have therefore created a section for each of the countries with business focused information. There is also a section with more educational resources for learning Portuguese and links to interesting news on the topic. EMPORT is also present in the most used social networks like Facebook, Twitter, YouTube and LinkedIn.

*These are the partners that have participated in the planning and execution of this project: Dirección General de Educación FP y Innovación Educativa, Asesoramiento, Tecnología e Investigación S.L, European Distance and E-Learning Network, Università Degli Studi di Roma "Tor Vergata", Universidade Lusófona de Humanidades e Tecnologias, Magensinus, Empresa Promotora de Serviços de Ensino, S.A., Euroroc Brussels/Wiesbaden, Universidade de Brasília.*

## **THE ONLINE CLASSROOM – DEVELOPING LEARNING SPACES USING BLOGS, WIKI AND TWITTER**

*Per Arne Godejord, ICT-Pedagogical Centre, Nord-Trøndelag University College, Norway*

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This poster describes an ongoing project investigating the use of blogs and wiki as main tools for delivering lectures both in connection with the concept of flipped classroom and in e-learning courses. All lecturing blogs within the project are rooted in Kolb's symbolic and perceptual learning ideas (Kolb, 1984), and in MASVIS (in Norwegian MAKVIS); A set of principles focusing on Motivation, Activation, Specification, Variation and Individualization. The project has been going on since 2006 both at Nesna University College and Nord-Trøndelag University College. In the now last stages of the project, focus is on how looping the content in the lecture blogs may enhance retention in students, the use of blogs to deliver lectures, and twitter and Paper.li as tools for creating student products and content sharing, as well as facilitating student to student and student to lecturer interactions.

Since its start in 2006 the project has been investigating

- the blog as supplement to other lecturing tools used within and outside LMS in distance education;
- the use of various Web 2.0 tools for distributing, and binding together, video, sound and written lectures in distance education;
- the use of real life projects in distance education;
- the use of blogs as learning space, both delivering lectures in various forms as well as engaging students in interactions with other students and the lecturer;
- the use of blogs within the concept of flipped classroom;
- the use of Twitter and Paper.li as tools for engaging students in dialogue and content creation.

The conclusion so far is that while blogs and the wikis seems to function well as distributing lectures in various forms, both to students on campus and distance education students, it is difficult to engage students in interactions online unless required as part of student tasks. The project will close at the beginning of 2015, and results will be analysed and presented.



## **INTERNET SERVICES IN THE WORK OF UNIVERSITY TEACHER**

*Alexey Kozlov, Tatiana Kozlova, Ilya Ashavskiy, MESI, Russia*

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An important part of the educational process is the teacher who has the theoretical and practical skills in the discipline, and also able to use external resources to find right and relevant information for further development. Modern development of the Internet allows each user to find their niches for development, but it does not always explain what and how to use. Therefore, it is important to teacher's role not simply to use modern Internet services in their work, but also to teach students to use these services.

Using of Web 2.0 technologies in learning process is quite popular topic that is discussed all over the world. The research in spring 2014 in the Moscow State University of Economics, Statistics and Informatics (MESI) on the use of Internet services in the work of the teacher showed that teachers are active users of Internet services as for professional purposes, as well as in everyday life.

Special survey has been made within the limits of this research. The respondents have been asked some questions that helps to understand how deep the teachers are engaged in the use of advanced Internet services including web 2.0, whether they accept these services in a professional activity or not. Total number of respondents was 209 tutors and 97% of them responded that they use internet "Several times a day", which has already shown high activity of teachers in the use of Internet services in general. Also very important result that 82% of respondents pointed that they use Web 2.0 services for learning, which means only one thing: the majority of teachers are information seekers and use modern Internet resources to develop themselves as professionals. Such teachers are always interested in students, and they can build the learning process more effectively by involving students in the decision of not always interesting tasks using creative approaches.

Main feature of Internet services is that a professional interest in using of Web 2.0 quite often coincides with the personal interest: spending time in Facebook teacher is not only talking with friends, but also discussing different questions in professional societies, receiving relevant and useful information on their discipline. About 70% of the respondents said they were not only aware of the professional societies, but also periodically read them, and 17% of them are active users. Around half of the teachers reported that they recommend to students professional communities as sources of useful information for development skills in discipline. Answers also demonstrate great yearn of teachers to use Internet services in professional life: on the first position we can see professional Internet services

## Posters

(e.g. professional social network LinkedIn, professionali.ru). Open encyclopedia (Wikipedia, the Chronicle) and cloud storage (Skydrive, Yandex Disk) are located just on the second place in popularity. Despite the fact that MESI uses LMS that allows to exchange and share learning materials in a document library, the interest to new instruments is unabated.

In the pilot project, which was proceeded in 2010, tool for the exchange of documents – Google Drive was also studied, but the result was not very positive: at that moment Google was not so popular in Russia (and in MESI in particular – just several tutors had accounts there), beside this the service was entirely in English and technical failures not allowed to actively use it. In 2010, teachers and students have chosen LMS MESI, which also had (and has) a tool for sharing files, which did not require to create a separate account, and could trace versioning of published documents with review results from the teacher. To date, cloud storage services came to a more convenient way to use in its development, you can even download special app to your smartphone and be notified about the changes directly to your phone. Therefore, this type of Internet resources has become more attractive for teachers. Beside this in pilot project that was proceeded in MESI in 2010 there was a question about using of blogs and websites in tutors profession. If 4 years ago blogs were considered as tool for self-praise of the teacher, now teachers themselves read as Russian-speaking as well as foreign blogs and websites for their professional development.

Another question of the survey was about using of Internet services in 2014 (concerning use of social networks in the learning process) and about 40% of respondents reported that they use them. Second place was shared by two opposing views: 23% of teachers want to try to use them in the learning process, while 22% do not see any sense. Truth is, most likely somewhere in the middle: there are disciplines that can effectively use social media in the learning process, bringing together students and point them to group tasks in Facebook with elements of the games, while for other disciplines more suited case or personalized with personal discussion in the classroom. In addition, the majority of teachers reported that set of LMS MESI functions satisfy their requirements around the group work with students instead of using social networking as it relates to the additional time for authorization and information search, whereas LMS MESI all clearly structured. But it should be noted that today teachers classify social networks to the category of Internet services as Twitter in 2010, considering them as information resources for urgent alerts students. Studies on the use of Internet services of teachers provide the belief that modern teachers and students become closer and it will allow them to learn effectively, using modern technology in teaching.

## **BLENDED LEARNING: A VIEW FROM A RESEARCH ANGLE**

*Alla Nazarenko, Moscow State University, Russia*

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Blended learning is spreading around the world. There exists a large amount of literature describing the use of it but at the same time there is a lack of research which could lead to understanding its nature and transformational potential which, in their turn, can help develop effective strategies and teaching models.

The research takes into account the fundamentals of pedagogical psychology ("how learning occurs") and tries to consider the course in the system of four "coordinates" – main elements of a successful learning environment: knowledge-centeredness, learner-centeredness, assessment-centeredness and community. They were all present in the course which is discussed in the paper.

To get feedback on how these elements "work" in the course it was decided to add one more criterion of assessment of learning effectiveness – "student satisfaction" – because generally all factors in a learning process are more or less related to the satisfaction of learners and can be looked at through the prism of the latter.

The aim of the research was to confirm a positive attitude of students to learning in a blended format as stated by the results of research in this area, find out their attitude to the structure of integrated learning and to self-study in a virtual learning environment (VLE).

To obtain the necessary data an anonymous survey of the students was conducted on completion of the course. The survey involved 21 students of the 2nd year (Bachelor program) and 25 students of the 4th year (traditional Russian "Specialist" programme).

The quantitative data obtained in the survey demonstrate that a *positive attitude* of both cohorts of students towards learning in a blended format is convincingly dominating, which correlates to the results of research in this area in the West. The majority of the students emphasized the *learner-centred* character of learning in a blended mode as its certain advantage as compared to a traditional classroom format. Students' attitude towards the "*knowledge*" element differed depending on the character of the knowledge: the bias was definitely to "practical", not "theoretical" knowledge. *Assessment* was implemented via tests and performing tests was nearly unanimously interpreted as "the most effective means to control learning" and a stimulus to review the studied material.

On the basis of the results obtained by the survey and their interpretation the following conclusions can be made:

1. Blended learning **enhances** the efficacy of learning since in the framework of the course (in which in the traditional format there is only discrete learning activity once a week in the classroom) with an electronic learning environment students are involved in a permanent learning activity so that the process of learning is constant and uninterrupted. A score-and-rating system of assessment (apart from the testing) stimulates them to study regularly to get the scores for successful completion of the course.
2. Blended learning contributes to **transformation** of learning because:
  - the joining of two formats: traditional and e-learning – are not just a mechanical bringing them together, it is a “homogeneous blend” of the two. The virtual learning environment initially created by a teacher is extended due to the contribution of every member of the *learning community*: the results of their regular involvement in a learning activity are “materialized” (posts in the Discussion and Annotation sections) and accumulated, and a new and more comprehensive learning resource is created;
  - students learn in a new style:
    - § when, where and how it is convenient to them (in a virtual learning environment)
    - § they get information not only from lectures and textbooks but also search for it themselves, select and process it, so that the learning content is constantly widening, updating, supplemented with various and different interpretations which gives food for critical thinking and helps develop analytical skills;
  - students get acquainted with and try new forms of learning activity (discussion, in our case).
3. The experiment also showed that for the “Western pattern” of blended learning to be effective in Russia it should be adapted to the national educational system affected by traditions and stereotypes.

## **AN EXPERIENCE OF BLENDED LEARNING IN AN INTERNATIONAL DISTANCE EDUCATION CONTEXT**

*Jose I. Navarro, University of Cadiz, Spain*

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### **Higher Education in teaching Preschool and special education teachers**

During four academic years an international cooperation agreement between University of Cadiz (Spain) and Technological University of Quito (Ecuador) allowed to develop an international full master degree program based on blended learning methodology. Master program was in Special Education and Preschool Education (3 to 6 year) Teachers. Teacher's education carried out for two years per each group of participants. During the first nine-month long academic year, 10 courses using Moodle-UCA online platform were implemented. For each course, a Professor from Spain imparted a 12 hours face-to-face class, distributed in two full time days in Quito (Ecuador). Then for 4 weeks long, same professor followed class using the Moodle-UCA online platform. Professor used an interactive program previously designed and supervised by experts. During this teaching period, a collaborative on line methodology was used. The second 12-months academic year, students developed their master thesis supervised by a Professor of the same program. Students were tutored using a distance education procedure, and then they defended master report by an International Master Committee. Students were involved in several national and international research projects in order to complete the master report. 180 students participated on this program. Successful rate was 92%. In order to control the external validity of the program, individual questionnaires and interviews were completed. Then country-impact was measured considering the added value of this kind of higher education program, and considering the effect over the human capital in Ecuador for Special Education and preschool education teachers in Ecuador. In this poster presentation the results and efficiency of this blended learning in an international distance education context is discussed.

## **FROM BEANS ON TOAST TO MOLECULAR GASTRONOMY (AND A BIT OF MASTERCHEF): LINKING LEARNING DESIGN WITH LEARNING ANALYTICS**

*Bart Rienties, Denise Whitelock, Lisette Toetenel, Vicky Marsh, Alison Ashby,  
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Using a “MasterChef” format with initial tasting and judging (first part of workshop) and participating in designing own recipes (second part of workshop), we will provide an interactive, hands-on workshop on learning design and learning analytics. Like a chef in Noma restaurant, in blended and online education educators have an almost infinite number of decisions to make when designing a module. Furthermore, given the inherently complex and dynamic nature of learning processes, educators find they have to continuously fine-tune these learning designs based upon the (changing) tastes of its customers, the quality of the ingredients, the interactions of the chosen flavours and the rediscovery of the science of the culinary arts. Over the last twenty years, a range of pedagogical approaches and learning designs have been suggested (Garrison, 2011; Conole, 2013). Nonetheless, few such learning approaches have been robustly analysed to ascertain whether they indeed lead to consistent learning designs that enrich and improve learning performance (Kirschner, Sweller & Clark, 2006). A recent review of 118 learning designs in 22 countries (Rienties et al., 2012) found that teachers used fairly similar learning designs when the context and pedagogy is known. A study amongst 45 online MBA courses followed by 633 students (Arbaugh, 2014) indicated that institutions get “most bang for its buck” in terms of optimizing the learning experience of their students by investing resources in teachers’ technological expertise (and teacher presence) rather than investing in elaborate LMSs, as teacher presence (i.e., what chefs are doing in the kitchen) was found to be the most important predictor for enhancing the learning experience.

Several authors have suggested that linking learning design with actual behaviour of students and teachers may provide an in-depth understanding of which ingredients in learning designs work well, and which do not (Miller & Mork, 2013). Learning analytics may offer many opportunities in an educational context, such as an improved understanding of learning processes, abilities to provide personalized support and feedback (Richardson et al., 2014), and cost-effective interventions. In educational research, learning analytics refers to systematic measurements of learning related data and learning processes to provide informative feedback to learners and educators. In this workshop, using the experience from wide-scale implementations at the Open University UK we will link learning design with actual

## *Workshops*

behaviour of students and teachers to unpack which ingredients in learning designs may work well, and which do not. Just as Hester Blumenthal uses molecular gastronomy to analyse the physical attributes of ingredients, by applying learning analytics to learning design we can start to analyse the attributes that create a true gastronomic experience. But we are not just creating these dishes at Noma's restaurant, we are "cooking on a large scale", which will further enhance its impact. Join us for a "Masterchef" experience, come and make your own recipes in learning design in our kitchen (if you want to). "If you can't stand the heat in the kitchen", join us and taste whether other participants' recipes work for you and your organisation...

1. What is effective in learning design? A matter of taste? Or essential to keep the food safety inspector out?
2. What are essential, evidence-based ingredients in learning design?
3. How can organisations use the power of learning analytics to improve learning design?

## **FROM LIGHTNING TO ENLIGHTENMENT: HOW TO APPLY LEARNING ANALYTICS IN PRACTICE**

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Big Data and learning analytics in particular have created high or even lightning expectations. While some early adopters of learning analytics, such as Carnegie Mellon University and Open University UK, have realised and worked with the opportunities and the challenges learning analytics adoption raise, most institutions have either ignored the thunder of learning analytics. Learning analytics provide institutions with opportunities to support student progression and to enable personalised, rich learning (Siemens, Dawson & Lynch, 2013; Tempelaar, Rienties & Giesbers, 2014). With the increased availability of large datasets, powerful analytics engines, and skilfully designed visualisations of analytics results, institutions may be able to use the experience of the past to create supportive, insightful models of primary (and perhaps real-time) learning processes (Baker, 2010; Ferguson & Buckingham Shum, 2012). Education is getting very close to a time when personalisation will become commonplace in learning (Bienkowski, Feng & Means, 2012), although several researchers (Slade & Prinsloo, 2013) indicate that most higher education institutions (HEIs) may not be ready to exploit the variety of available datasets for learning and teaching. Early adopters of learning analytics approaches acknowledge that while HEIs may have access to large amounts of data, linking these various datasets together and making (pedagogical) sense of these vast data flows is challenging.

In this workshop, we will “enlighten” participants with a blend of lightening presentations and practical applications of real case-studies at the Open University UK. Using principles of role-play, participants will be able to play, experiment and learn from the leading early-adopter experience in order to allow participants to work with the originally presented frameworks and experiences of the four presentations. In this workshop, we will “enlighten” participants with a blend of lightening presentations and practical applications of real case-studies at the Open University UK. Currently over 200,000 students study at the Open University UK, primarily using distance learning formats. In 2014, a range of 15 different interventions across various faculties and academic levels have been designed, piloted, implemented and evaluated using our new intervention and evaluation framework. This will allow participants to play, adapt, adjust, criticise and re-create these frameworks. Role-play allows participants to act-out a different role than normal, thereby allowing them to freely engage in discussions (rather than



## *Workshops*

potentially defending their own position) and potentially learn from different perspectives. At the end of the workshop, participants / groups will present their experiences to one another in order to learn from each others' experiences.

The following main questions will be addressed during the workshop:

1. Which learning analytics data are actually useful to collect?
2. How can we measure the impact of learning analytics interventions?
3. What are the ethical considerations when implementing learning analytics?
4. How can organisations use the power of learning analytics to improve the students' learning experience and reduce drop-out?

## **TEACHING STRATEGIES AND DESIGN FOR ONLINE AND BLENDED LEARNING**

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Blending diverse learning experiences has been in existence since humans started thinking about teaching. Recently, the term blended learning emerged to describe the infusion of new technologies into the traditional learning and teaching process. In particular, the Internet provides the opportunity to create, support and/or maintain a community of learners in a blend of place-based and Internet-based environments. Still under discussion are the fine distinctions and effects of activities in learning environments touched by the Internet, and its social, instructional, and cognitive impact.

Online and blended learning is the inspiration of much of the innovation, both pedagogically and technologically, in higher education. By innovation we mean significantly rethinking and redesigning approaches to teaching and learning that fully engages learners. The essential function of blended learning is to extend thinking and discourse over time and space. There is considerable rhetoric in higher education about the importance of engagement, but most institutions dominant mode of delivery remains delivering content either through the lecture or self-study course modules. Blended learning is specifically directed to enhancing engagement through the innovative adoption of purposeful online learning activities.

Virtually all courses in higher education incorporate online information and communication technologies to some degree. These technologies create new opportunities for students to interact with their peers, faculty, and content. The infusion of information and communications technology in higher education draws attention to the theory and practice of blended learning. Online and blended learning offers the opportunity to reshape classroom hours through web-based content deliver and interaction. It provides new opportunities for type of delivery, interaction, and facilitation of learning. But in order to use online and blended learning to enhance teaching processes, the ability to understand and apply appropriate pedagogical strategies is needed.

This workshop will focus on teaching practices required of blended learning approaches and designs in higher education. In the context of higher education is a

## *Workshops*

growing demand for improved teaching. Traditionally, faculty members served as content experts, selecting disciplinary content to be transmitted to students largely through lectures. Unfortunately, most faculty members do so with limited knowledge of pedagogy and appreciation of the value and growing importance of engagement in a community of inquiry. This workshop, with direction from the book ***Teaching in blended learning environments: Creating and sustaining communities of inquiry*** by Vaughan, Cleveland-Innes and Garrison, will provide a coherent and comprehensive practical view of teaching in higher education with a map to the future in terms of integrating face-to-face and online learning.

## LEARNING ACROSS DISCIPLINES: A STEP TOO FAR FOR EDUCATIONAL RESEARCH?

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This workshop aims at **challenging researchers to get involved in a meta-engagement exercise** whereby they reflect (individually and in groups) on some of the salient issues currently linked to researching learning design. Would a cross-disciplinary approach to educational research help shift the focus from discipline specific issues towards essential pedagogical considerations that transcend the disciplinary silos? Or would that level of abstraction be one step too far and actually lead to an even greater disconnect between researchers and teachers? Can valuable lessons be learned by building bridges across disciplines and trying to involve teachers as much as possible in a sort of “crowd sourcing of learning design” exercise?

These are a few of the main questions to be debated in an attempt to work towards a research framework combining in the right proportion the practical value of (discipline) specific learning designs with the structure and coherence provided by a sound theoretical framework focusing on the essential pedagogical principles. The challenge is finding the right proportion as well as finding the best ways of engaging teachers, as stakeholders, in co-creating and sharing research designs, ideally in a cross-disciplinary context.

The goal of the workshop is to engage the participants together with other interested researchers and practitioners attending via social networks in an open discussion about how we can best research on **how to teach**, leaving aside our disciplinary backgrounds and focusing on learning objectives and how to design learning activities aligned with them, and to offer the participants the chance to **meta-engage with their own research** and brainstorm about different perspectives for looking into their topics.

## DECISION MAKING ON E-ASSESSMENT CRITERIA

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Assessment guides student learning, but assessment methods are rarely at the focus of interest of educators and open and distant learning (ODL) practitioners. On the other hand, a deep learning is enhanced when assessment procedures emphasise and reward student understanding (Entwistle, 2000) and when assessment methods are clearly connected with intended learning outcomes of the study program or the course (Biggs, 2003).

In several reports on e-assessment prepared by JISC (Joint Information Systems Committee) there are many references that “a pedagogically driven model for e-assessment” is needed, that assessment should be reliable, valid and consistent but it also has to incorporate group projects and creativity. Clearly, it is widely accepted that assessment should be based on well defined assessment criteria, but it is very rarely explained how to define them. Furthermore, when assessment criteria and learning outcomes are defined, they can easily be implemented by rubrics in a virtual environment. Well defined rubrics can help to communicate to students what is asked from them and support their reflection and critical skills (deep learning); they are especially useful when more than one teacher is involved in the process of assessment and grading and when combination of teacher and automated grading is implemented; they are vital in a case of a complex task including problem-based learning, group work or peer assessment that are authentic to the skills being tested. But in process of building comprehensive and consistent rubrics there are two essential steps that have to be considered carefully. Firstly, it is a **process of formulating and describing assessment criteria that are clearly connected to defined learning outcomes**. Secondly, it is a **process of determining weights of assessment criteria that take into account different perspectives** (teachers’, students’, employers’, other experts’ & stakeholders’).

We recommend a comprehensive method to prepare, moderate and execute two above mentioned steps that, beside sound pedagogical approach, incorporates the use of multicriteria decision making method. The Analytic Hierarchy Process (AHP), introduced by (Saaty, 1980), is a multicriteria decision making technique that supports group decision making performed by heterogeneous group. There are successful implementations of multicriteria decision making in the context of higher education, especially the AHP in e-learning and ODL (Begicevic, Divjak and Hunjak, 2011; Begicevic, Divjak and Hunjak, 2007).

## **THE IMPACT OF OPENNESS ON TECHNOLOGY ENHANCED LEARNING INTEGRATION IN EDUCATION ORGANIZATIONS**

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Education organizations struggle with the technology enhanced learning. During the last years, universities have been experimenting with the use of technologies in order to look at what technologies can offer to create interactive, flexible and student – centred learning. In the run, competition increased among education institutions trying to differentiate their services by target groups, quality procedures and openness of their curriculum. Though openness intrigued a lot of education service providers, it challenged academic community in terms of curriculum designing, and institutions – in terms of technology enhanced learning integration.

Technology enhanced learning integration is based on the following parameters: strategy and management, curriculum designing, infrastructure development, support systems and services, quality procedures, staff continuous professional development and marketing strategies. However, new parameter of openness raises a lot of challenges for education institutions and the border line and the level of impact of openness to all technology enhanced learning areas is not clear, even though it is a very important topic for all institutions wishing to embed the culture of open learning.

This workshop will be dedicated to discuss the challenges raised and the following topics among them:

- Which of technology enhanced learning areas are mostly affected by openness?
- How openness should be created at education institutions?
- Is this an institutional task or a broader perspective?
- How not to get confused by the models of openness and how to choose the best ones?

## **GOOD PRACTICES OF E-LEARNING SOLUTIONS FOR VOCATIONAL EDUCATION AND TRAINING**

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Internet has by now become an everyday part of the 21st century life. Everyone and everything is getting online. The rapidly changing technological background, the new social media are all providing new platforms for online education.

Over the past few years many innovative ideas have materialized with the support of the Lifelong Learning Programme from different areas of the VET system, which are worth to share with a broader audience of VET stakeholders, including training providers and developers of e-learning programmes.

The E-SOLVE project and its research aims at distilling knowledge on Leonardo da Vinci (LdV) projects dealing with e-learning, categorizing them according to several aspects, selecting sectorial good practices and disseminating them among VET stakeholders throughout Europe. The reason behind this was the lack of knowledge on truly working e-learning methodologies and the gap in pedagogical and methodological practices.

The main objective of E-SOLVE is to exploit the results of previously implemented or ongoing projects that had been financed within the LdV programme. However the implemented Evaluation System can also be used to evaluate a wider scale of e-learning programmes for VET – not just those within LdV.

The basis of the E-SOLVE evaluation system is ECBCheck. The ECBcheck criteria system is comprehensively elaborated. It is based on experiences of several acknowledged experts and education practitioners. The results are accepted and used by many educational institutes. However, the partners of the E-SOLVE project found that at some points minor additions may improve the criteria system, particularly with respect of new pedagogical aspects as collaborative learning and learner support that can be expected from the providers and the system. The extended criteria system consists of 8 dimensions and several criteria and subcriteria within the defined dimensions. The maturity level can be calculated for every e-learning solution. In this way the good practices can be selected, and sectorial best practices can be compared.

The evaluation and nomination of best practice examples were done in a two stages. First, based on EDEN's pre-filtering of online databases of VET solutions, the E-SOLVE partners carried out a first selection based on a small subset of criteria. The

### *Workshops*

primary selection criteria was excellence in conjunction with online accountability for the evaluation process. As a result we gained a shortlist of solutions consisting of 112 candidates to be nominated as good practices. At the end of the preselection phase the results have been tested by Reliability Analysis. Sectorial practices were compared by Multivariate Analysis of Variance.

During the second stage the full criteria system was used to evaluate the solutions and rank them accordingly by using the 8 dimensional Evaluation System. Sectorial good practices were compared, and sectorial rankings for e-learning solutions were calculated.

During the presentation at the EDEN 8th Research Workshop the new evaluation system, some sectorial comparisons and a few best practices will be presented.





