EDEN
EUROPEAN DISTANCE AND E-LEARNING NETWORK

User Generated Content Assessment in Learning

Enchancing Transparency and Quality of Peer Production

Emerging Educational Technologies and Digital Assessment Methods

24-27 October, 2010
Budapest, Hungary

BOOK OF ABSTRACTS & WORKSHOP PROGRAMME

User Generated Content Assessment in Learning

Enhancing Transparency and Quality of Peer Production

Emerging Educational Technologies and Digital Assessment Methods

Budapest University of Technology
and Economics Budapest, Hungary

24-27 October, 2010

WORKSHOP PROGRAMME
&
BOOK OF ABSTRACTS

Edited by
Morten Flate Paulsen and András Szűcs
on behalf of the European Distance and E-Learning Network

European Distance and E-Learning Network (EDEN) Conference Proceedings

Sixth EDEN Research Workshop
Budapest, Hungary

Published by the European Distance and E-Learning Network

Editors:

Morten Flate Paulsen
András Szűcs

Editorial co-ordination:

Anna Wagner

Conference organised in collaboration with
International Council for Open and Distance Education
&
European Foundation for Quality in E-Learning

WORKSHOP PROGRAMME

WORKSHOP STRUCTURE

24 OCTOBER, SUNDAY

19:00 − 21:00   **WELCOME RECEPTION**

25 OCTOBER, MONDAY

9:00 − 11:00   **PLENARY SESSION 1**

PARALLEL SESSIONS A 11:30 − 13:00		PARALLEL SESSIONS B 14:30 − 16:00		PARALLEL SESSIONS C 16:30 − 18:00	
A1	New Methodologies and Learning Tools: Concept and Practice	B1	E-Learning Theory, Strategy and Cultural Features	C1	New Methodologies and Learning Tools: Concept and Practice
A2	E-Assessment Experience and Experiments	B2	Valuing Economic Aspects of ICT Supported Learning	C2	Video and New Media for Upgrading Learning Performance
A3	Workshop: International Trends and Perspectives	B3	STELLAR NoE – TELEUROPE: Contributing to Shape European Research Agenda on Technology Enhanced Learning	C3	STELLAR NoE – TELEUROPE: Contributing to Shape European Research Agenda on Technology Enhanced Learning

26 OCTOBER, TUESDAY

9:00 − 11:00   **PLENARY SESSION 2**

PARALLEL SESSIONS D 11:30 − 13:00		PARALLEL SESSION E 14:30 − 16:00	
D1	Focus on the World of Work : Corporate-Academic e-Learning Cases	E1	The SHARE Workshop: 3 Takes on Quality Assessment for ICT-Supported Teaching and Learning
D2	Social Media Customized for the Support of e-Learning	E2	E-Assessment Experience and Experiments
D3	Workshop: Creating the Future for Learning	E3	Posters

16:30 − 18:00   **PLENARY SESSION 3**

27 OCTOBER, WEDNESDAY

PARALLEL SESSIONS F 9:00 − 10:30	
F1	Institutional Case Studies for Professional e-Learning Introduction
F2	Management of Knowledge in e-Learning Institutional Settings
F3	Workshop: Developing Online Diagnostic Assessment – Experiences of a Large Scale National Case Study in Public Education in Hungary

10:45 − 12:15   **CLOSING PLENARY**

12:15 − 13:30   **FAREWELL COFFEE**

	24 October, Sunday

16.00 – 19.00	**Registration**
	Venue: Budapest University of Technology and Economics, Central Building, "K" (Budapest, Muegyetem rkp, 3-9.)

19.00 -20.30	**Welcome Reception**
Main Hall (Central Building, ground floor)	**Presentation of the EDEN Fellow Awards** Morten F. Paulsen, President of EDEN

	25 October, Monday

09:00-11:00   Plenary Session 1

Ceremony Hall	*Chair: Morten F. Paulsen, EDEN President*

Opening Address

Professor Andras Benedek, Budapest University of Technology and Economics, Head, Department of Technical Education, Director, Institute of Continuing Engineering Education, President, Hungarian Pedagogical Society, President, National Association for Vocational Training

Keynote Speeches

The Tree of Learning: Nurturing its Growth

Gilly Salmon, University of Leicester, United Kingdom

Exploring the Map of Distance and e-Learning Research: A Bibliographic Analysis

Olaf Zawacki-Richter, Carl von Ossietzky University of Oldenburg, Germany

Connecting Research with Policy and Practice

Grainne Conole, The Open University, United Kingdom

11:00 - 11:30   Coffee Break

| 11:30-13:00 | **Parallel Sessions A** |

| **Session A1** | **New Methodologies and Learning Tools: Concept and Practice** |

Room No. 66.

Chair: Wim Van Petegem, K.U. Leuven and EuroPACE, Belgium

Online Support for Online Graduate Students: Fostering Professional Identity Development through Web-based Discussion and Support

Martha Cleveland-Innes, Athabasca University, Canada, Sarah Gauvreau, Athabasca University, Canada

Student Assessment of Affective Variables in an Internet-Based "Introduction to Quantitative Research Methods" Course

Yaacov Katz, Bar-Ilan University, Israel, Yaacov Yablon, Bar-Ilan University, Israel

Factors Influencing Lecturer Uptake of e-Learning

Jill W. Fresen, University of Oxford, United Kingdom

| **Session A2** | **E-Assessment Experience and Experiments** |

Room No. 65.

Chair: Antonio Teixeira, Universidade Aberta Lisbon, Portugal

Towards Feedback Personalisation in Adaptive Assessment

Christian Saul, Fraunhofer Institute of Digital Media Technology, Germany, Mari Runardotter, Lulea University of Technology, Sweden, Heinz-Dietrich Wuttke, Ilmenau University of Technology, Germany

Digital Assessment in Mathematics, Wiris Quizzes

Carles Aguilo, Maths for More – WIRIS, Spain, Ramon Eixarch, Maths for More – WIRIS, Spain

Assessment as a Strategy to Promote Elearning Quality: Lessons Learned from Higher Education Postgraduate Modules

Maria Joao Loureiro, Universidade de Aveiro, Portugal, Lucia Pombo, Universidade de Aveiro, Portugal, Antonio Moreira, Universidade de Aveiro, Portugal

THE EDEN BEST RESEARCH PAPER AWARD – 2010, BUDAPEST

Since 2008, EDEN continuously granted the Best Research Paper Award at EDEN's Annual Conferences as well as at EDEN's bi-annual Research Workshops. A high quality standard selection process guarantees the branding of a distinguished award for scholarly conference papers in the field of open, distance and e-learning.

The selection process takes place in collaboration with the **Ulrich Bernath Foundation for Research in Open and Distance Learning** and is supported by a reputable Jury.

Members of the Jury for the EDEN Best Research Paper Award in Budapest are **Gilly Salmon** (Chair of the Jury, Professor of E-learning & Learning Technologies, University of Leicester/UK); **Karen Swan** (Stukel Distinguished Professor of Educational Leadership, University of Illinois Springfield/U.S.); **Ross Paul** (Adjunct Professor, The University of British Columbia/Canada); **Andrea Kárpáti**, Professor of Education, Eötvös Loránd University/Hungary, representing EDEN's EC, **Ulrich Bernath & Thomas Hülsmann** (Trustees and Directors of the U. B. Foundation).

32 conference papers have been evaluated against the following criteria: (i) contributes convincingly to the theme(s) of the conference; (ii) deals with a research question of relevance for conference participants; (iii) rigorous examination/research methods are applied; (iv) findings, results and outcomes are convincingly presented and critically examined; (v) conclusions are thoroughly discussed (including aspects like applicability, transferability, and/or further research); (vi) literature is reviewed against the state of art. In addition, authors needed to confirm that at least 30% of their paper has been originated for and at least one author has registered for participation at the 6th EDEN Research Workshop in Budapest.

The Jury nominated the following FINALISTS (as in the programme schedule):

A1 **Student Assessment of Affective Variables in an Internet-Based "Introduction to Quantitative Research Methods" Course**
by Yaacov J Katz & Yaacov B Yablon, School of Education, Bar-Ilan University (Israel)

A1 **Online Support for Online Graduate Students: Fostering Professional Identity Development Through Web-based Discussion and Support**
by Martha Cleveland-Innes & Sarah Gauvreau, Athabasca University (Canada)

A2 **Towards Feedback Personalisation in Adaptive Assessment**
by Christian Saul, Fraunhofer Institute for Digital Media Technology (Germany), Mari Runardotter, Luleĺ University of Technology (Sweden) & Heinz-Dietrich Wuttke, Ilmenau University of Technology (Germany)

C2 **Teaching with Youtube: Quality Assessment of English and Hungarian Videos on Physical Education**
by Sára Tímár, Corvinus University, Ágnes Kokovay, Semmelweis University, Andrea Kárpáti, Eötvös Loránd University (Hungary)

D2 **Establishing a Foundational Framework for Development of Reflective Thinking: Learning Journals in the MDE**
by Lisa Maria Blaschke & Jane Brindley, Carl von Ossietzky University of Oldenburg (Germany)

Session A3	Workshop

Ceremony Hall	**International Trends and Perspectives**

Carl Holmberg, International Council for Open and Distance Education – ICDE, Norway, Narimane Hadj-Hamou, Middle East e-Learning Association and Hamdan Bin Mohammed University, United Arab Emirates, Don Olcott Jr., International Consultant ODL, USA

13:00-14:30	**Lunch**

14:30-16:00	**Parallel Sessions B**

Session B1	**E-learning Theory, Strategy and Cultural Features**

Room No. 66.	*Chair: Airina Volungeviciene, Vytautas Magnus University, Lithuania*

The Changing Role of the Instructor in the Digital Age

Michael Beaudoin, University of New England, United States of America

Embedded Quality: A Cultural Approach to Quality in e-Learning

Davoud Masoumi, University of Gothenburg, Sweden, Abasalt Khorasani, Shahid Beheshti University, Iran

Development of a Self-Adaptive Environment for Learning

Francesco Agrusti, University Roma III, Italy

Session B2	**Valuing Economic Aspects of ICT Supported Learning**

Ceremony Hall	*Chair: Alan Bruce, Universal Learning Systems, Ireland*

Ducking and Diving: A Research to Practice Approach

Gilly Salmon, University of Leicester, United Kingdom

The Cost of Marking Time: Adjunct Faculty and Alternative Assessment Practices in Online Learning

Anne Forster, Forster & Gibson Pty Ltd, Australia

Understanding the Value of e-Learning in Business Administration in Higher Education

Thierry Garrot, University of Nice Sophia Antipolis, France, Catherine Papetti, University of Nice Sophia Antipolis, France

Session B3	Workshop

Room No. 65.	**STELLAR NoE – TELEUROPE: Contributing to Shape European Research Agenda on Technology Enhanced Learning**

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

Three Grand Challenges have been identified in the way forwards in TEL research:

1. *Connecting learners*
2. *Orchestrating learners*
3. *Contextualising virtual learning environments and instrumentalising learning contexts*

The dialogue with the stakeholders (policy makers, researchers, practitioners) should validate the Challenges, their coverage and gather new inputs to define a relevant agenda for TEL research.

The workshop will discuss the 3rd STELLAR Grand Challenge: "Contextualising virtual Learning environments and instrumentalising Learning contexts".

The workshop will be structured around two blocks.

1) first block focused on CONTENT: discussion of the related research questions: are they relevant and is their coverage complete? Which further research questions are urgent to be answered?

2) second block focused on PROCESS: STELLAR will explain how the Network of Excellence is open to integrate the research community in its stakeholders community, to contribute to the definition of a renewed research agenda in TEL, and which specific instruments it offers to connect with the researchers.

16:00 - 16:30	**Coffee Break**

16:30-18:00	**Parallel Sessions C**

Session C1	**New Methodologies and Learning Tools: Concept and Practice**

Room No. 66.	*Chair: Denes Zarka, Budapest University of Technology and Economics, Hungary*

Campus Assessment

Markus Schmees, E-Learning Academic Network E.V. – ELAN, Germany

Moodle-based e-Portfolio Used in Teacher Training

Andras Benedek, Gyorgy Molnar, Janos Horvath Cz., Budapest University of Technology and Economics, Hungary

Teachers' Training in the Era of Access – Content, Metadata, and Recognition of Self-learning Activities to Shape an Open Training of Trainers Model

Juliana Raffaghelli, Centro Interateneo per la Ricerca Didattica e la Formazione Avanzata, Italy, Paolo Tosato, Centro Interateneo per la Ricerca Didattica e la Formazione Avanzata, Italy

Session C2	Video and New Media for Upgrading Learning Performance

Ceremony Hall	*Chair: Henrik Hansson, Stockholm University, Sweden*

Throw Away Your Television! – Interactive Movie Educational Content and 3 Screen Convergence

Asen V. Asenov, ASECO Consulting Ltd., Bulgaria

Teaching with Youtube: Quality Assessment of English and Hungarian Videos on Physical Education

Sara Timar, Corvinus University of Budapest, Hungary, Agnes Kokovay, Semmelweis University, Hungary, Andrea Karpati, Eotvos Lorand University – ELTE, Hungary

Some Experiences of Using Videos to Promote Learning in the Context of University Level Courses

Sonia Isabel Fernandes Borges Pena Seixas, Universidade Aberta, Portugal, John Bostock, University of Stirling, United Kingdom, Bernd Ueberschaer, Leibniz-Institute of Marine Sciences at the University of Kiel, Germany

Session C3	Workshop

Room No. 65.	**STELLAR NoE – TELEUROPE: Contributing to Shape European Research Agenda on Technology Enhanced Learning**

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

See description at Session B3

26 October, Tuesday

09:00-11:00   **Plenary Session 2**

Ceremony Hall

Don Olcott Jr., International Consultant ODL, USA

The Challenge of Quality in Peer-produced e-Learning Content

Ari-Matti Auvinen, HCI Productions Ltd., Finland

Open for Use? The Challenge of User Generated Content and its Impact on Open Educational Resources

Steve Wheeler, University of Plymouth, United Kingdom

A Holistic Approach to Defining Excellence in Online Education: Challenges and the Way Forward

Narimane Hadj-Hamou, Middle East e-Learning Association and Hamdan Bin Mohammed University, United Arab Emirates

11:00 - 11:30   **Coffee Break**

11:30-13:00   **Parallel Sessions D**

Session D1   **Focus on the World of Work: Corporate-Academic e-Learning Cases**

Room No. 65

Chair: Asen V. Asenov, ASECO Consulting Ltd. Bulgaria

From Pen and Paper to IT Based Business – Tracing Employees Learning Progress in an E-Learning Program

Bent Soelberg, Copenhagen Business School, Denmark

Distance Learning Methodologies and Tools for Lowering the Administrative Burden of Rural Entrepreneurs. The Case of Rural Inclusion Project

Fotis Kouris, Ellinogermaniki Agogi, Greece

Adult Distance Learning in Entrepreneurship: Designing Educational Material for the Development of Local Products

Mary Kampouropoulou, Costas Tsolakidis, Persa Fokiali, Angeliki Nikolaou, University of the Aegean, Greece

Session D2	**Social Media Customized for the Support of e-Learning**

Room No. 66.	*Chair: Michael Beaudoin, University of New England, USA*

Assessing the Added Value of Web 2.0 Tools in e-Learning: the MDE Experience

Lisa Marie Blaschke, Carl von Ossietzky University of Oldenburg, Germany, Gila Kurtz, Stella Porto, University of Maryland University College, United States of America

Establishing a Foundational Framework for Development of Reflective Thinking: Learning Journals in the MDE

Lisa Marie Blaschke, Jane Brindley, Carl von Ossietzky University of Oldenburg, Germany

Babel Web Anthology Goes Web 2.0

Zsuzsa Votisky, Typotex Electronical Publisher, Hungary, Serge Yablonsky, Technical University of St.Petersburg, Russian Federation

Session D3	**Workshop**

Ceremony Hall	**Creating the Future for Learning**

Gilly Salmon, University of Leicester, United Kingdom

What future(s) for learning? Participants in this workshop will engage in hands-on exercises on imagining possible futures quickly and collaboratively, and how to escape routine thinking patterns. The workshop will discuss emerging visions for the future of learning, technological innovations and their implications for learning and teaching today.
Participants will be invited to consider a series of "what-if" statements about the future of learning, discuss them in small groups and present the outcomes. In order to be able to respond to the questions of the facilitators of the workshop, participants will need to collaborate and work as a team, both in imagining the possible outcomes of the "what-if" futures, and the implications for their own practice.

13:00-14:30	**Lunch**

| 14:30-16:00 | **Parallel Sessions E** |

| **Session E1** | **Workshop** |

| **Ceremony Hall** |

The SHARE Workshop: 3 Takes on Quality Assessment for ICT-Supported Teaching and Learning

Deborah Arnold, Vidéoscop – Université Nancy 2, Ildiko Mazar, EDEN Secretariat, Anne-Christin Tannhauser, SCIENTER, Airina Volungeviciene, Vytautas Magnus University, Denes Zarka, Budapest University of Technology and Economics

HEXTLEARN, SEVAQ+, REVIVE: three Lifelong Learning Programme projects dealing successfully with quality assessment of ICT-supported learning and teaching. Put the letters of their acronyms in a bag, shake it up, and one of the words which comes out is: SHARE! The respective approaches applied by the projects can be summarised as peer-review, self-evaluation and reflective curriculum designing through quality assessment. But are they fundamentally different or are there points of intersection? What synergies could be developed for the wider benefit of lifelong learning organisations?

The aim of this 90-minute SHARE workshop is to engage participants in exploring these three approaches, apply them concretely to a real-life case-study and design scenarios in which they could be used in synergy.

| **Session E2** | **E-Assessment Experience and Experiments** |

| **Room No. 66.** |

Chair: Ene Koitla, Estonian Information Technology Foundation, Estonia

Comparison of Self-Evaluation Tests and Exam Results in Technology of Programming

Sandor Kaczur, Dennis Gabor Applied University, Hungary, Eva Pamulane-Borbely, Dennis Gabor Applied University , Hungary

The Practice of e-Assessment at Széchenyi István University

Lajos Nyeki, Szechenyi Istvan University, Hungary

Developing Learners' Investigative Skills Using Value-based e-Learning Programmes Facilitated Via Regional Capacity Enhancement Hub

Khar Thoe Ng, SEAMEO Regional Centre for Education in Science and Mathematics, Malaysia

Session E3	**Posters**

Foyer 1st Floor

Moderator: Helga Dorner

Transparent Scores and Rating System of Students' Knowledge Evaluation: Experience of Development and Implementation in Moscow State University of Economics, Statistics and Informatics (MESI)

Vitaly G. Minashkin, Moscow State University of Economics, Statistics Informatics (MESI), Russian Federation, Lyubov Dubeykovskaya, Moscow State University of Economics, Statistics Informatics (MESI), Russian Federation

Orbis Dictus – An Innovative Platform for Multi-Language Learning Environments

Cinzia Angelini, University Roma III, Italy

Testing English for Specific Purposes in Science (TESPIS)

Walter Zeller, Astyle, Linguistic competence, Austria

Knowledge-Based Educational Technologies

Maret Branten, Eurouniversity, Estonia,
Ylo Kess, Eurouniversity, Estonia

Promoting the EQF Learning Outcomes Approach within European Universities

Krisztina Feher, Budapest University of Technology and Economics, Hungary

Cloud Learning

Gyorgy Seres, Zrinyi Miklos National Defence University, Hungary, Peter Gero, ABECE Bt, Hungary, Ildiko Miskolczi, College of Szolnok, Hungary, Krisztina Forika, Zrinyi Miklos National Defence University, Hungary, Piroska Lengyel, Zsigmond Kiraly College, Hungary

16:00 - 16:30	**Coffee Break**

16:30-18:00	**Plenary Session 3**

Ceremony Hall	**Quality Issues for Open Educational Resources**

Rory McGreal, Athabasca University, Canada,
Grainne Conole, The Open University, United Kingdom,
Demetrios G. Sampson, University of Piraeus, Greece,
Morten Flate Paulsen, NKI Distance Education, Norway,
Don Olcott Jr., International Consultant ODL, United States of America

19:30	**Cultural programme – Social gathering**

"Hungarian Rhapsody" – folk dance programme performed by the Hungarian State Folk Ensemble Venue: Hungarian Heritage House
(address: Budapest, I. Corvin ter 8.)

Coach transport to the venue will be organised. Buses will leave from Building "K" (Central) of the University, at 18:45

At the beginning of the performance:

Presentation of the Best Research Paper Awards and IMS Learning Impact nominee
Morten F. Paulsen, EDEN President and Gilly Salmon, Chair of the Best Research Paper Award Jury

The programme will be followed by a Conference Reception where Hungarian wines and special dishes will be served.

After the evening programme, coaches will leave to Gellert and "Fovam" Square at 22:30.

The International Council for Open and Distance Education (ICDE)

The International Council for Open and Distance Education (ICDE) was founded in 1938 in Canada and is today the leading global membership organization for the open and distance education community with members from sixty countries worldwide. ICDE has its headquarters in Norway and is supported by a grant from the Norwegian government.

Mission

ICDE seeks to promote intercultural cooperation and understanding through open and distance learning throughout the world. ICDE works to foster international collaboration between developing and developed nations and to support and develop networks at national, regional, global and linguistic affinity group levels. ICDE provides forums where individuals, corporations, institutions, governments and associations can engage in professional interaction, contributes to the development of new methodologies and technologies and works to encourage the development of good practice and standards in flexible learning.

UNESCO relations

ICDE is a non-governmental organization in formal consultative relations with UNESCO. This status grants ICDE's members a voice at UNESCO, while obliging ICDE to acquaint its members with UNESCO programmes activities and achievements pertaining to open and distance education. ICDE shares UNESCO's key aim of the attainment of quality education for all.

Conferences

ICDE's key activities are the organization of conferences and meetings, including the biennial World Conference, the annual Standing Conference of Presidents meeting, and regional conferences. The 24th ICDE World Conference on Open and Distance Learning will be held on the island of Bali, Indonesia on 2-5 October 2011.

Projects

ICDE both initiates and partakes in projects together with member institutions. Present initiatives include an investigation of the regulatory frameworks for distance education, a project to develop international web-based data on the use of open and distance education, and participation as a project partner in the European Commission funded Open Educational Quality Initiative. As a network organization, ICDE is also well placed to provide support and strategic advice to members seeking to undertake collaboration projects and obtain funding.

Information and publications

ICDE performs a key role in the global dissemination of research reports, conference outcomes, and news and developments from the world of distance education. ICDE publishes the online journal Open Praxis as well as a twice monthly electronic newsletter. In addition to being a source for news, the ICDE website describes the key actors in distance education worldwide, is a repository for resources and reports and enables interaction with the worldwide distance education community.

www.icde.org

09:00-10:30	**Parallel Sessions F**

Session F1	**Institutional Case Studies for Professional e-Learning Introduction**
Room No. 65	*Chair: Costas Tsolakidis, University of The Aegean, Greece*

User Generated Content in Higher Education: Approaches to Quality Assurance

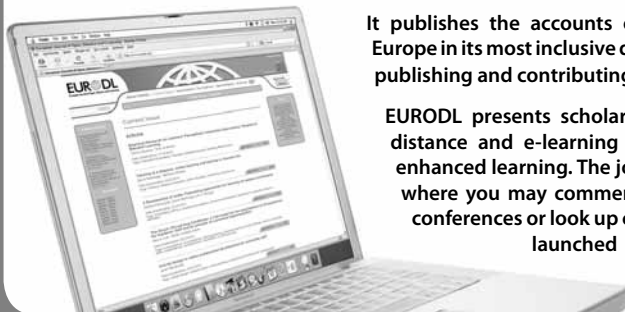Thomas Kretschmer, Institute for Learning Innovation (FIM – NewLearning), Germany

Can a High-tech Learning Environment Enhance the Development of Self-assessment Skills?

Judit Videkine-Remenyi, Budapest University of Technology and Economics, Hungary

Experiences of Actuation of an On-line Learning Support System at Budapest Business School

Eva Sandor-Kriszt, Budapest Business School, Hungary, Istvan Kovari, Budapest Business School, Hungary, Krisztina Zimanyi, Budapest Business School, Hungary

Session F2	# Management of Knowledge in e-Learning Institutional Settings
Room No. 66.	*Chair: Deborah Arnold, Université Nancy 2, France*

Navigating People in the Enterprise Personal Assessment Process – Case Study

Asen V. Asenov, ASECO Consulting Ltd., Bulgaria

Sci-Pro: Improving Universities Core Activity with ICT Supporting the Scientific Thesis Writing Process

Henrik Hansson, Jonas Collin, Ken Larsson, Gunnar Wettergren, Stockholm University, Sweden

Raising Up Annotations in Pedagogical Resources by Human-Computer Collaboration

Armelle Brun, Hala Skaf-Molli, LORIA – Nancy Universite, France, Anne Boyer, Ministere de l'Enseignement Superieur et de la Recherche, France

Session F3	# Workshop
Ceremony Hall	### Developing Online Diagnostic Assessment – Experiences of a Large Scale National Case Study in Public Education in Hungary

Gyongyver Molnar, Krisztina R. Toth, Edit Toth, University of Szeged, Graduate School of Educational Sciences, Institute of Education, Research Group on the Development of Competencies, Center for Research on Learning and Instruction, Hungary

A long-term project in Hungary aims to devise an online formative assessment system for the first six grades of primary school. The objective of the first phase is to adapt the system in 150 schools and study the related technological and methodological issues in detail.

In this workshop we (1) outline the formative (diagnostic) assessment system; (2) present the results of the first two years of the project, in which online testing was introduced and piloted in various age groups in different school subjects; (3) compare results on paper-and-pencil and online testing in order to identify domains and item formats where the two media may influence the achievements; and (4) present teachers' opinions and attitudes towards assessment and accountability and introducing computer-based assessment in national high stakes testing.

**European Foundation
for Quality in eLearning**

EFQUEL Company Profile:

The European Foundation for Quality in E-Learning (EFQUEL) is the leading European network in the field f E-Learning quality, open to institutions dealing with E-Learning, open and distance education. The Foundation serves as sustainable and proactive network and provides valuable services to the worldwide E-Learning community, including support, transparency, open participation and leadership for a broad range of topics related to E-Learning quality.

The purpose of the Foundation is to involve actors in a European community of users and experts to share experiences on how E-Learning can be used to strengthen individual, organisational, local and regional development, digital and learning literacy, and promote social cohesion. By joining the Foundation members become a part of the largest European network of organisations and professionals dedicated to quality in the field of E-Learning - currently with over 80 member organisations from Europe and beyond such as other educational networks (EFMD, EDEN etc.), universities (Leicester, Aberta etc.), corporations (Adobe, Toshiba etc.) and national agencies (NAQAAE, AKKORK etc.).

The EFQUEL approach is based on extensive dialogue and collaboration with organisations that share our objectives and concerns. The partnership is constantly growing and represents a broad range of organizations from all educational sectors from all over Europe and beyond.

EFQUEL and its partners are working on improving the quality of:

- Open Educational Resources and Practices (*www.oer-quality.org*)
- User Generated Content (*www.concede.cc*)
- Game-based Learning (*www.engagelearning.eu*)
- Higher Education using ICT for learning and teaching
  (*www.hextlearn.eu / http://unique.qualityfoundation.org*)
- E-Learning in Vocational Training (*www.cerorganic.eu*)
- Peer Production of electronic learning content (*www.qmpp.net*)
- Innovative Adult Learning Centres (*www.qualc.eu*)
- Capacity Building (*www.ecb-check.org*)

The European Foundation for Quality in E-Learning (EFQUEL) is represented on:

More information:
www.efquel.org

| 10:45-12:15 | **Closing Plenary** |

Ceremony Hall

Chair: Andrea Karpati, Eotvos Lorand University, Hungary

Openness and Quality – beyond User Generated Trash: Outcomes of the EFQUEL Innovation Forum 2010

Walter Kugemann, European Foundation for Quality in E-Learning (EFQUEL) and MENON Network

Technology-based Assessment: Challenges and Promises

Gyongyver Molnar, University of Szeged, Graduate School of Educational Sciences, Institute of Education, Research Group on the Development of Competencies, Center for Research on Learning and Instruction, Hungary

Conference concluding remarks:

Don Olcott Jr., International Consultant ODL, USA

| 12:15-13:30 | **Farewell Coffee** |

BOOK OF ABSTRACTS

Introduction

Learning and (e)-Valuation in Integrated e-Learning Settings

E-learning increasingly becomes the inevitable form of creating, acquiring and transmitting knowledge. In the field of assessing student performance, evaluating the quality of teaching, judging the value of a digital educational solution, research has recently been intensive and successful. For many e-learning programs however, methods of assessment remain traditional. Accreditation of online courses may be difficult because evaluation methods are not fitted to the e-learning context.

The **real value of e-learning**, which is questioned for different reasons in different contexts, may be boosted by credible and appropriate evaluation methods and practices.

In the context of assessment, the quality dimension is emerging as contribution to the **valuation** of ICT supported learning, its re-positioning by better evaluation methods. The quest for **added value** – how can contribute the new forms of learning, in circumstances of hard socio-economic challenges – is strongly coming forward.

The Challenge of Quality in Peer-Produced e-Learning Content

New approaches for new ways of evaluation, instead of basic ones are becoming apparent in the web 2.0 – social networking dominated environments. The impact of peer-to-peer networks on the Internet is evolving. Peer production and user-created content are becoming important elements as learners are no longer just consumers, but they actively participate in the process and influence it. Producers and consumers ("**prosumers**") of the learning content are working together on the peer-assessment. When we evaluate user generated content, quality may be both the result of the interplay between peer production and peer validation processes of digital content.

The issue of transparency, together with credibility is high on the agenda. Sensitive and prospective territories within this field are the convincing assessment and evaluation of the diversity of personal learning environments (PLE), the workplace learning, competence based assessment, media development, e-portfolios and the accreditation of informal learning.

Online Adaptive Testing in the Classroom and the Workplace

Evaluation of skills and competences are in the foreground of educational innovation. Traditional instruments are becoming however inadequate because of lower efficiency and as they hardly offer authentic testing situations.

Online assessment techniques are among the hot topics in educational research, as they provide opportunity to assess skills and competences in the context they occur. Tools include the assessment of open-ended questions, essays, drawing and design tasks. Tests may include animation, simulation and a responsive to user needs selection of items of different difficulty level.

The 2010 Research Workshop is continuing EDEN's tradition of highlighting bi-annually the relevant emerging fields in research and innovative professional practice. The Budapest event offers platform to present newly born research, theory and practice about assessing the value and impact of e-learning, exchange ideas about the objectives, methods, tools and results of making assessment personalised and inspiring experience in schools and workplaces of the future.

Ari-Matti Auvinen, Andrea Kárpáti and András Szűcs

Acknowledgement and thanks are given to EDEN Officers and EDEN Fellows who supported the organisation of the event

TABLE OF CONTENTS

HIGHLIGHTS FOR THE CONFERENCE

NEW METHODOLOGIES AND LEARNING TOOLS: CONCEPT AND PRACTICE

E-LEARNING THEORY, STARTEGY AND CULTURAL FEATURES

E-ASSESSMENT EXPERIENCE AND EXPERIMENTS

VALUING ECONOMIC ASPECTS OF ICT SUPPORTED LEARNING

VIDEO AND NEW MEDIA FOR UPGRADING LEARNING PERFORMANCE

FOCUS ON THE WORLD OF WORK – CORPORATE-ACADEMIC E-LEARNING CASES

SOCIAL MEDIA CUSTOMIZED FOR THE SUPPORT OF E-LEARNING

MANAGEMENT OF KNOWLEDGE IN E-LEARNING INSTITUTIONAL SETTINGS

WORKSHOPS

POSTERS

THE CHALLENGE OF QUALITY IN PEER-PRODUCED ELEARNING CONTENT

Ari-Matti Auvinen, HCI Productions Oy, Finnland

Summary

Peer production and user-created content is becoming an important element in modern eLearning, supported by the development of the Internet from a one-way information distribution channel to a two-way communication channel. In the peer production of eLearning content, the essential feature is that the learners are also acting as creators of the content and that the separation between an "author" and a "consumer" is blurring. In practice, learners are no longer purely consumers but they actively participate in the learning process and thus influence it. This fundamental feature is also imposing a different view on quality.

Peer production is not only a novel method to produce eLearning content, but it is also an approach to empower a wide variety of professionals to the learning content production. However, the quality management challenge related to this kind of content can undermine the merits of the method.

A number of useful tools and approaches are currently being applied to ensure and improve the quality of peer produced eLearning content. This article introduces QualityScape, a method developed by the European QMPP project, as an important approach in assuring the quality of peer-produced eLearning content. The fundamental finding in our work is that quality is the result of the interplay between peer production of digital content and peer validation processes of digital content. Overall, the key issue in this project is to develop a holistic approach to the peer production, which enables the effective utilization of this unique method of content creation.

eLearning content creation and peer production

Definition of peer production

Peer production as a method in content creation for eLearning can be defined to include the digital content created, edited, enriched and validated by peers, in other words by people on the "same hierarchical level". The contemporary

examples in the Internet of peer-produced digital content include popular sites by e.g. YouTube, Facebook, MySpace, slashdot.org etc. Often "peer" is described as "a person of equal social standing, rank, age, etc." However, in the context of eLearning content creation, the peers should also be defined by their characteristics. Thus they should also be open-minded, perceptive and aware of their competencies and responsibilities in terms of effort, attention and reaction rate. They can also be expected to possess strong relational and auto-critical skills, exhibit good relationship management and a deep subject matter competence in a specific sector of knowledge. (Fischer & Kretschmer, 2008).

In the context of involving peers in the educational process, some use also the term "peer-to-peer education". Peer-to-peer is also often linked in the technical sense with the "peer-to-peer networks", which describe mainly the technical linking of several computers with another as equals. Some authors claim also that the concept of peer-to-peer networks is increasingly evolving to an expanded usage as the relational dynamic active in distributed networks - not just computer to computer, but human to human. Thus e.g. Yochai Benkler claims that associated with peer production are the concepts of peer governance and peer property in the digital world (Benkler, 2006).

The term of "peer production" in the learning context has similarities with the term "user-created content". User-created content has no widely accepted single definition, but according to the guidelines published by the OECD in their study, user-created content can be defined with three criteria, which are the following: a. content is made publicly available over the Internet, b. it reflects a "certain amount of creative effort", and c. it is "created outside of professional routines and practices". (OECD, 2007).

The research literature on this area has been mainly describing the digital artefacts produced by various individuals. The importance of the peer groups is growing, and in eLearning content area the impact of the peer group is essential, as the members of the peer groups can take different roles and as the members of the peer groups also possess different competences. The peer group members should be willing to share materials, re-edit existing ones and create knowledge and they should have a clear and explicit objective to support each other in order to grow together (Fischer & Kretschmer, 2008). The "group emphasis" is also highlighted in the discussion of "informal learning" – e.g. Jay Cross states that informal learning is strongly fuelled by the communication of peers and that this communication is the critical element in informal learning (Cross, 2006).

In the European project "Quality Management of Peer Production of eLearning" (QMPP) we also emphasized that the communicative element is essential – and the communicative element should be fostered by the strong involvement of the peer

group in the eLearning content creation. The focus of the work of the QMPP project according to the different approaches is summarized in Figure 1 – QMPP scope.
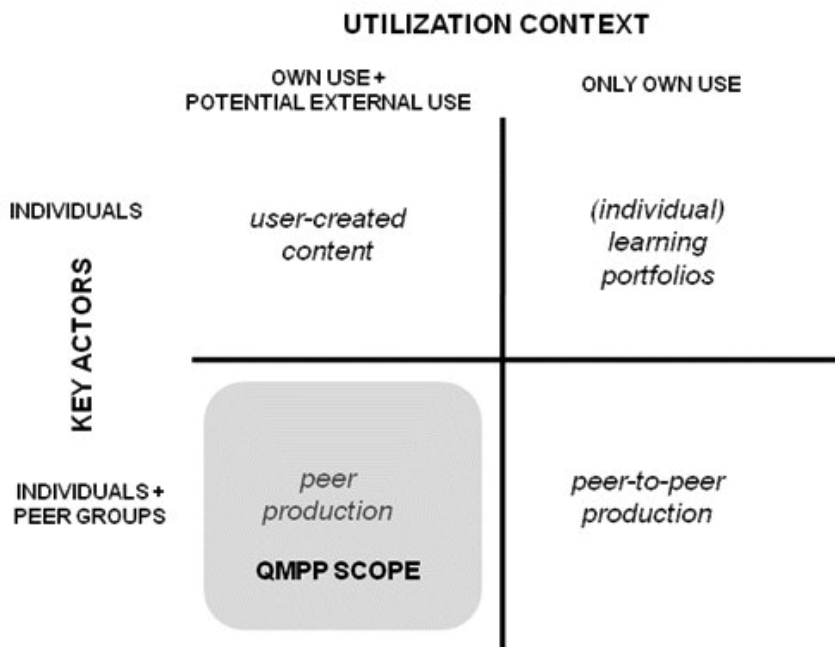
Figure 1 – QMPP scope

Growing importance of peer production

The potential peer production and user-created content has been supported by the development of Internet from one-way information distribution to two-way communication – the Internet browsers with their various plug-ins have been becoming essential tools for wide distributed content creation. Many scholars, such as Yochai Benkler, claim that ordinary users will enter the nucleus of digital content production (Benkler, 2006).

In particular, these novel opportunities have been discussed in conjunction with the development of "Web 2.0", which has opened up new opportunities also for peer production. The "Web 2.0" development is enabling the participation of a wide amount of individuals and peer groups to various discussions and development activities. The peer production mechanism has been central e.g. in the development of Linux software and the Wikipedia movement (on Wikipedia, see Lih, 2009). The new working forms and their consequences have been discussed in more detail e.g. by Don Tapscott and Anthony Williams (Tapscott & Williams, 2006).

The peer produced content can also reach through the Internet new users. Thus it can be also described as the "long tail" of learning provision – i.e. providing also such content elements, which are not used by a wide audience, but which might be critically important for certain target groups. The "long tail" idea and its opportunity for endless demand has been discussed in more detail by Chris Anderson (Anderson, 2006).

An elementary discussion linked with the potential of the peer production has been sparkled also by the work of James Surowiecki and his notion of the "wisdom of the crowds" (Surowiecki, 2005).. Surowiecki as well as Charles Leadbeater (Leadbetter, 2008) have discussed the theme how "many are wiser than few" and how this knowledge creation and knowledge assessment can be distributed and thus also made more precise and efficient. However, in the contemporary discussion peer production of digital content has also been criticized in promoting "the cult of the amateurs" and thus promoting the content creation of amateurs without appropriate quality approach. This discussion has been initiated in particular by Andrew Keen (Keen, 2007).

Furthermore, in modern management literature the importance of co-creation experiences and their importance to the value creation has been emphasized in particular by C.K.Prahalad and Venkat Ramaswamy (Prahalad & Ramaswamy, 2004). Their main argument is that the market is becoming a forum for conversation and interactions, and that the management and facilitation of this dialogue is the key in value creation process. Their view of the market means that the market is becoming instead of a seller-buyer-market rather the arena for co-creation of value. According to their definition, the key building blocks for the interaction between users and providers of services can be defined as dialogue, access to important information and resources, risk-benefit assessment by the users, and transparency of work and working methods (Prahalad & Ramaswamy, 2004).

The aspect of "dialogue" is the essential element in eLearning content creation by peer production. It is elementary that the dialogue focuses on issues that interest both the users and the providers; that there is a forum in which the dialogue can occur; and that there are clear rules of engagement that make for an orderly, productive interaction. The web-based environments provide usually such a "forum", where not only the users and the providers can meet, but also the users can meet with another. C.K.Prahalad and M.S.Krishnan develop this idea further in claiming that the co-creation of value can also occur on the global level, and that the co created experiences can be even more personalized (Prahalad & Krishnan, 2008).

Thus it can be concluded that the facilitation of peer involvement is seen as one elementary factor in the overall improvement of learning and training provision.

However, regarding the quality aspects and quality mechanisms of peer production it can be seen that relatively little attention has been paid to the quality assurance of this new production mechanism of eLearning content.

Peer production of eLearning content in vocational education and training

Peer production in the work context

In the vocational setting, it is important to understand how work-related knowledge should be managed. The views expressed more than ten years ago by Ikujiro Nonaka and Hirotaka Takeuchi in their work on the knowledge creation in companies, and in particular, on the models and patterns how to alter personal knowledge to corporate knowledge, and how to collect tacit knowledge and convert tacit knowledge to explicit knowledge, are essential also in organizing and utilizing peer production (Nonaka & Takeuchi, 1995). The essential challenge for peer production of eLearning content is to accelerate the transformation of personal knowledge towards corporate or common knowledge.

The essential element in successful knowledge management is that the creation and utilization of knowledge is not limited to some key individuals, but is rather seen as an elementary part of the work of all co-workers. However, it is also important to highlight that effective knowledge management can be an important – if not the most important element – in creating learning resources within a company (Ahmed et al., 2002).

In addition to the general description of the novel opportunities of the "Web 2.0" and its various tools and methods, one of the essential aspects to be discussed in linked with the ownership of jointly created content, which will be an important issue to solve in any organization (see Ghosh, 2005; Hietanen et al., 2007).

The potential of peer production is not only limited to the knowledge creation and distribution by the professionals. For instance in the health care sector, Internet is growing in its importance as a critical resource provider for other non-professional users. In many cases, the critical amount of content in the healthcare area is created by peers – providing their experiences, hints, examples, and providing also space for empathy and camaraderie. Numerous studies show also that an important proportion of the users utilise - in addition to the "clinical content" provided by the official healthcare sector - also these user-created Internet resources (Houston & Ehrenberger, 2001; Demiris, 2006).

The peer production as a production mechanism has been challenging the conventional production metaphor in some interesting areas. The most well-known

example the development of Linux – based on the open-source ideology. As Tapscott et al. note, the creation of Linux illustrates how the Internet has enabled many contributors – all acting independently in their own self-interest, create a highly integrated "good" that provides value for themselves and to others (Tapscott et al., 2000).

It is also interesting to note that the corporate field has taken new technologies and solutions in peer production on board differently. The recent Finnish study showed that the wikis are increasing in various companies as an important method to document and distribute important knowledge (Henriksson & Mikkonen, 2008). However, in the virtual worlds the experience is negative – according to the studies of Gartner Research, the vast majority of virtual world projects launched by businesses fail within 18 months. In addition, fully 90% of business forays into virtual worlds fail because organizations focus on the technology rather than on understanding the needs of the employees using it (see Information Week, 2008).

Peer production in vocational education and training

If peer production is an inspiring method in the joint knowledge creation and knowledge refinement, it also has a lot of potential in the area of vocation education and training. As many authors have claimed – and Jay Cross with his concept of "informal learning" (see Cross, 2006) probably with the sharpest edge – the companies and organizations have hugely underutilized in their training and learning activities the potential of the employees with practical experience and thus created learning resources and materials, which do not correspond to the needs and style of the users. In addition, in many organizations much additional work is undertaken due to this "doubling" and "re-authoring" of the same content.

The new opportunities for peers in different organizations have been created by the various professional online communities known as "communities of practice" (see Wenger, 1999). Although already previously the professionals of different areas have been networking and exchanging their experiences, the Internet has opened novel avenues for sharing experiences and insights. As Moore also points out, networking is taking place both between the organizations as well as within the organizations among peers (Moore, 2003).

We came out in the QMPP project with a simple classification of the various critical dimensions of peer production in eLearning content. The two critical (see Figure 2 – Structure vs. Setting of objectives) dimensions are

- setting of objectives – who is setting the objectives for the peer-produced content: is it controlled and unified for all potential peer producers (e.g. a framework of a "course") or is it relatively loose (e.g. in Wikipedia authoring an article of my personal interest)
- structure – what structure is given: is the structure firm (e.g. composed of certain elements, tools and requirements) or the structure loose and not pre-defined (e.g. peers can use tools and structure of their own choice).

SETTING OF OBJECTIVES

CONTROLLED   LOOSE

FIRM   peer-produced structured   digital content production
            eLearning courses(based   based on on-demand
            on analyzed and defined   modality
            training needs)
                                    I   II

STRUCTURE
                                    III IV

            peer-produced course   communities of practice
LOOSE   works and learning
            resources (e.g. team   various self-help groups and
            works, blogs etc.)   autonomus web groups
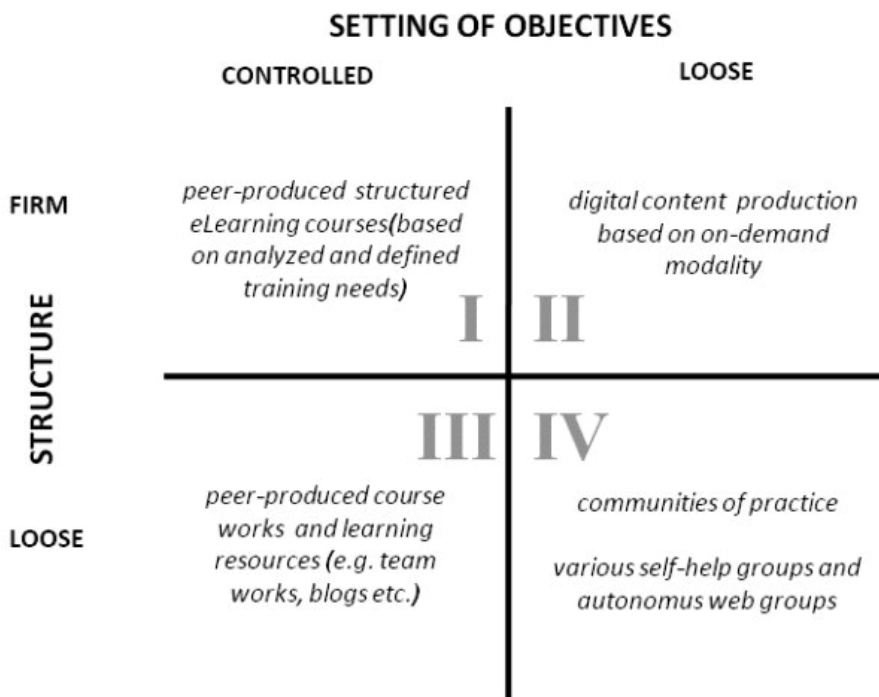
Figure 2 – Structure vs. Setting of objectives

Quality approaches to peer production of eLearning

Altering focus of quality

The quality of eLearning has been discussed and researched in many European projects as well as in many recent articles. Ehlers and Pawlowski describe that in the discussion on quality of eLearning one can distinguish between three different aspects in the discussion, namely

- different interpretations of quality
- different stakeholders with different perspectives on quality
- different forms of quality (input-quality, process-quality, output-quality).

This discussion has also lead to different interpretations of quality – and numerous definitions from various fields are available (Ehlers & Pawlowski, 2006).

In the peer production of eLearning content, the essential feature is that the learners are also acting as creators of the content – in the new learning settings the separation between an "author" and a "consumer" is blurring. In practice, learners are no longer purely consumers but they actively participate in the learning process and thus influence it. As the borders between user and author are blurring, so do the roles of student and teacher.

This fundamental feature is also imposing a different view on quality, as quality is often to be defined and assessed by the same group of actors as the actual creation of the learning content. However, the quality approach to peer production can be more than just an emphasis on self-evaluation and its practices.

Many quality approaches also in eLearning rely on the conventional quality cycle. This quality cycle has included – since the writings of W. Edwards Deming in the 1950s - the steps of PDCA (Plan, Do, Check, Act). This approach has been modified during the last decades in many different ways, and also applied into the area of vocational training. Wirth has presented that in eLearning the essential steps could be to plan, to do, to check, and to compare (Wirth, 2006).

In the development of a quality approach to peer production, the quality approach would mainly address the "process quality" issues – in other words: which processes implemented are assisting the quality of peer produced eLearning content. In addition, in regarding the quality processes, the peer production of the learning materials in their quality assessment can also be linked with benchmarking – or even more precisely, towards "benchlearning".

Quality development of peer production

Ehlers discusses the quality development in what he is referring to as "eLearning 2.0". In describing the phenomenon "eLearning 2.0", he points out that it describes a number of developments, trends and points of view, which require change from teaching to learning. The new point of view essentially connects e-learning with five characteristics:

1. Learning takes places always and everywhere (ubiquitous) and therefore in many different contexts, not only in the classroom.
2. Learners take on the role of organizers.
3. Learning is a life-long process, has many episodes and is not (only) linked to educational institutions.
4. Learning takes place in communities of learning (so called communities of practice). Learners participate in formal, as well as informal communities.
5. Learning is informal and non-formal, takes place at home, at the work place and during leisure time and is no longer centered on teachers or institutions. (Ehlers, 2008).

Initially it seems paradox to talk about the quality of "eLearning 2.0", as quality is often linked with checking by externally imposed standards. However, quality can also be understood in a development-oriented way, which means the enabling of learners to develop themselves in their own learning processes and consequently reach better results as far as quality is concerned. In this view, methods of self-evaluation, reflection and peer-evaluation are seen as more important. This kind of quality methodology does not have anything to do with normative, universally valid, but aims at improving the quality of the learning process. (Ehlers, 2008)

In the "eLearning 2.0" learning approach, the learner has an important role as active constructor of learning materials (co-creator), personal learning environments and initiator of his or her own learning processes. Interestingly, this is a characteristic, which is often felt to be a barrier for integrating eLearning 2.0 into formal educational processes. This is because the competition of learners and teachers and/or other institutional actors during quality assessment seems to be insurmountable and only resolvable through a loss of power for the institution. (Ehlers, 2008)

Technical tools supporting quality of peer production

The key to the potential to use Internet and its services in vocational education and training stems from the fact that the metaphor for using Internet has changed from information distribution and delivery (which we call the "Web 1.0") into active participation and information creation by the users (which we call the "Web 2.0"). In particular, with the introduction of "social media" and "social networks", the peer production has been recognised, not only as a challenge the traditional education and training, but also creating a new valuable approach into education and training - and particularly in the eLearning development.

In education and training development and implementing eLearning we also can claim that there is a move towards "eLearning 2.0" in which different web communication and information flow tools are used in educational and learning purposes. However, the (open) social networks and social media are critical for peer production and its integration to traditional learning approaches. We understand that "social media" is describing the media environment, which enables mutual participation, information production and receiving, handling and providing it for others to use. As discussed in previous chapters, the social media have been essential in the success of user-created content. We see the (open) "social networks" as a prerequisite for successful peer production.

One important feature in the recent development is also that the creative power of the users has been nurtured by the provision of different media for peer production. Thus the users are not limited to text only – they can also produce easily and cheaply their content by other media, such as photos, images, audio clips, video clips etc. Another important feature is also that in addition to the conventional computer networks, also novel networks – such as mobile networks – can be widely used.

At the moment there are already available a number of technical tools (often in the open source environment) supporting the quality of peer production in eLearning includes, among others, the following:

- blogs
- wikis and other text based collaboration formats
- tagging and social bookmarking
- media sharing
- podcasting
- social tagging and folksonomies (see e.g. Anderson, 2007).

The quality challenge

The quality challenge of peer production in eLearning

The importance of peer production of eLearning content will grow especially in the sector of vocational education and training as well as in professional continuing education. Many organizations face challenges of shortening life-cycle of learning content as well as operational challenges in providing required learning content with short lead times and lower costs. However, it is also understood that the learning content produced by peers (based on professional experience) can be more accurate and attracting than "clinically produced" learning content by external eLearning experts.

Peer production has great potential in the area of vocational education and training. The future workforce in Europe in many professions has not only to access and handle great amounts of information and knowledge, but even more importantly to produce various elements of information by themselves as an integral part of their work. Peer production is not only a novel method to produce eLearning content, but it is also an approach to empower a wide variety of professionals to the learning content production. Thus it has also an important democratic element in bringing the work-related learning content production to the actual level of users, tutors and learning supporters.

The quality management challenge in eLearning content produced by peer production can, however, undermine the merits of this approach and method. The quality work methodology in peer production is at its best dispersed and fragmented. Often it has also been claimed, that the very nature of peer production is its free flow and thus any formal mechanism (including the quality approach) would be drastically against the creativity factor. At the moment there are already a number of useful tools and approaches used (such as tools for peer reviews, tools for creating own wikis, dictionaries etc.) to ensure and improve the quality of peer produced eLearning content. However, it is important to emphasize that peer production requires also enabling and supporting structures and their effective management. The key issue in this project is to develop a holistic approach to peer production, which enables also the effective utilization of this unique method.

The QMPP model - QualityScape

The essential work of the QMPP project was to develop a solid approach on how to support the quality management of peer-produced eLearning content, pilot the approach four different VET (vocational education and training) entities, and to produce a joint toolset for the learning providers of quality management of peer-produced eLearning content.

The fundamental finding in our work on quality of peer production is that quality is created as interplay between peer production of digital content and peer validation processes of digital content. Naturally peers have different roles at different times – they can participate in the quality process as creators, but their role is essential also as validators (see Figure 3).
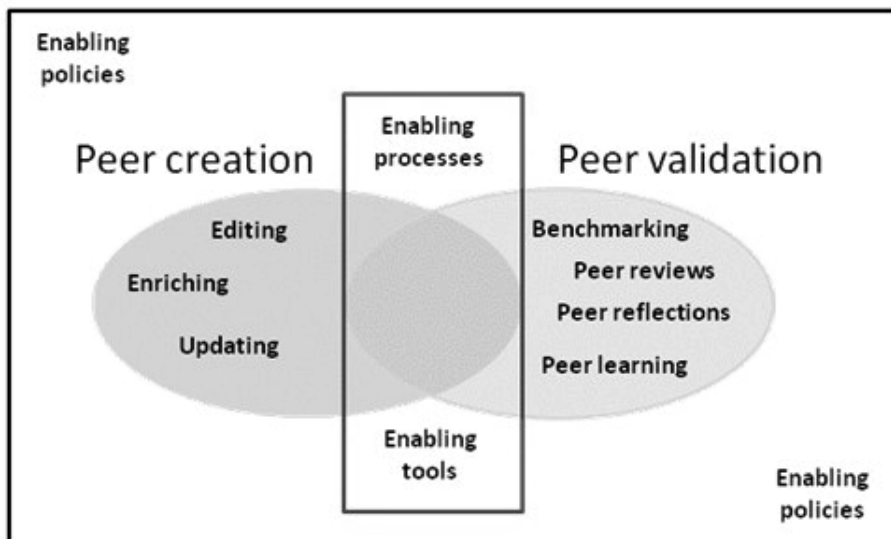
Figure 3 – QualityScape of the QMPP project

In peer creation there are different modes of work, which actualize on different times. The creation work can include authoring the content (such as making a new article or video), editing of the digital content (such as proof-reading), enriching the digital content (such as adding new information or new media) or updating the content (such as updating the existing content with contemporary data).

However, the key aspect in the quality management of peer production is the active and thorough peer validation work. The peer validation work can include benchmarking (comparing the produced content with other sources), peer reviews (systematically validating the content with other peers and peer groups), peer reflection (reflecting the content with other peers) and peer learning (joint learning and mutual development through continuous assessment).

In the following table (see Table 1) we have summarized some typical activities during in the peer creation – peer validation work.

Table 1 – Various steps in peer creation and peer validation

Peer creation (including peer authoring)	creating digital learning content by authoring, editing, enriching and updating using various media
Authoring	(shared) authoring of texts and other digital resources; creating images, audio materials, video materials; creating content for wikis etc.
Editing	(shared) editing of digital content (from proof-reading to translation), creating alternative navigational routes, creating collages etc.
Enriching	creating additional digital content, publishing individual works and team works, sharing or learning (b)logs, adding library links, social bookmarking etc.
Updating	monitoring existing content, updating existing content, adding specific area content etc
Peer validation	validating digital content with subject matter experts, validating content with peers, rating the validity and usability of the content etc.
Benchmarking	identifying of good cases and practices for comparative purposes, identifying of additional digital resources, identifying areas of lacking content etc.
Peer reviews	providing feedback by peers of learning goals, progress and aims within a learning community
Peer reflection	encouraging the reflection of learning processes by means of own experiences and sharing the reflections within the learning community or between different learning communities
Peer learning	joint learning also by the exchange of learning experiences and learning outcomes, such as e-portfolios

Quality management of peer production of eLearning must also focus on providing enabling processes and enabling tools to foster work phases in which peer-created content shall be peer-validated. The enabling policies for peer creation, peer validation and quality management must thus support the entire process of peer creation and peer validation, by providing enabling tools and suggesting enabling processes.

It is also important to emphasize that the different phases in the QualityScape are not always following each other in a linear order. Rather it can be seen in practical work in peer production that the different phases are intertwined with another. Thus it is obvious, for instance, that the validation phase can trigger additional content creation, which again can be validated.

Conclusions

Peer production of eLearning content is a growing trend. Peer production plays an elementary role in creating, validating, enriching, editing, and updating of digital learning content. It is important to pay growing attention to the quality management and support of peer production in eLearning, as peer production as a content production approach will also enable accelerated new learning material production and also updating of existing learning materials.

The very nature of peer production is its free flow and thus any formal mechanism (including the quality approach) could be seen to be in conflict with the creativity factor. At the moment there are already a number of useful tools and approaches used (such as tools for peer reviews, tools for creating own wikis, dictionaries etc.) to ensure and improve the quality of peer produced eLearning content. The challenge is to increase the understanding of the importance of quality also in the area of peer production; this would also enable to fluent exchange of peer-produced eLearning content.

The European QMPP project developed the "QualityScape" as an approach to the quality assurance of peer-produced eLearning content. The QualityScape emphasizes that quality is created as interplay between peer production of digital content and peer validation processes of digital content. Peers have different roles at different times – they can participate in the quality process as creators, but their role is essential also as validators.

References

1. AHMED, P.K.; KOK, L.K.; LOH, A.Y.E. (2002). *Learning through knowledge management.* Butterworth Heinemann.

2. ANDERSON, C. (2006). *The Long Tail: Why the Future of Business Is Selling Less of More.* Hyperion.

3. ANDERSON, P. (2007). What is Web 2.0? – Ideas, technologies and implications for education. *JISC Technology and Standards Watch*, Feb. 2007, retrieved July 24, 2008 from http://www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf

4. BENKLER, Y. (2006). *The Wealth of Networks.* Yale University Press.

5. CROSS, J. (2006). *Informal Learning: Rediscovering the Natural Pathways That Inspire Innovation and Performance.* Pfeiffer.

6. DEMIRIS, G. (2006). *The diffusion of virtual communities in healthcare: Concepts and challenges.* Patient Education and Counselling 62, 178 – 188.

7. EHLERS, U-D. ; PAWLOWSKI, J. (2006). *Quality in European e-learning: An introduction.* In Ehlers, U-D. – Pawlowski, J. (Eds.): Handbook on Quality and Standardisation in E-Learning. Springer.

8. FISCHER, T. AND KRETSCHMER, T. (2008). *Benchmarking Peer Production Mechanisms, Processes & Practices.* Deliverable of WP3 of the QMPP project. Retrieved September 23, 2009 from http://www.qmpp.net

9. GHOSH, R. A. (2005). *CODE – Collaborative Ownership and the Digital Economy.* The MIT Press.

10. HENRIKSSON, J.; MIKKONEN, T. (2008). *Wiki-kokemuksia suomalaisissa organisaatioissa* (Experiences of Wikis in Finnish organizations). Tampereen yliopiston hypermedialaboratorio, Hypermedian verkkojulkaisuja 18, 2008.

11. HIETANEN, H.; OKSANEN, V.; VÄLIMÄKI, M. (2007). *Community Created Content.* Turre Legal.

12. HOUSTON, T.K.; EHRENBERGER, H. E. (2001). The Potential of Consumer Health Informatics. *Seminars in Oncology Nursing* 17 (1), 41 – 47.

13. INFORMATION WEEK (2008). *Virtual Worlds*, retrieved July 17, 2008 from http://www.informationweek.com/news/personal_tech/virtualworlds/showArticle.jhtml?articleID=207800625

14. KEEN, A. (2007). *The Cult of the Amateur: How Today's Internet Is Killing Our Culture and Assaulting Our Economy.* Nicholas Brealey Publishing.

15. LEADBEATER, C. (2008). *We-think: The Power of Mass Creativity.* Profile Books.

16. LIH, A. (2009). *The Wikipedia Revolution: How a Bunch of Nobodies Created the World's Greatest Encyclopedia.* Hyperion.

17. MOORE, M.G. (2003). Network Systems: The Emerging Organizational Paradigm. *The American Journal of Distance Education*, 17 (1), 1–5.

18. NONAKA, I.; TAKEUCHI, H. (1995). *The Knowledge-Creating Company.* Oxford University Press.

19. OECD (2007). *OECD Working Party on Information Technology: Participative Web: User-created content.* DSTI/ICCP/IE(2006)7/FINAL. OECD.

20. PRAHALAD, C.K.; KRISHNAN, M.S. (2008). T*he New Age of Innovation – Driving Cocreated Value through Global Networks.* McGraw-Hill.

21. PRAHALAD, C.K.; RAMASWAMY, V. (2004). *The Future of Competition – Co-Creating Unique Value with Customers.* Harvard Business School Press.

22. SUROWIECKI J. (2005). *The Wisdom of Crowds: Why the Many are Smarter Than the Few.* Abacus.

23. TAPSOCTT, D.; TICOLL, D.; LOWY, A. (2000). *Digital Capital – Harnessing the Power of Business Webs.* Nicholas Bearley Publishing.

24. TAPSCOTT, D.; WILLIAMS, A.D. (2006). *Wikinomics.* Portfolio.

25. WENGER, E. (1999). *Communities of practice: learning, meaning, and identity.* Cambridge University Press.

Author

Ari-Matti Auvinen
Senior Partner
HCI Productions Oy, Finland
ama.auvinen@hci.fi

Copyrights

DUCKING AND DIVING: A RESEARCH TO PRACTICE APPROACH

Gilly Salmon, University of Leicester, United Kingdom

Abstract

The role of the Media Zoo is as a forum both for excellent practice in the use of learning technologies and the dissemination of the research findings of the Beyond Distance Research Alliance at the University of Leicester. It directly addresses the University's aspiration to lead on innovation for learning and teaching. Essentially the idea is that new and revised learning and teaching of all kinds use the latest, future-proofed thinking to sustainability and student experience

Within the context of the United Kingdom Higher Education sector in 2010 and beyond, the paper explains the metaphor of the Media Zoo before showing how it is central in continuing to drive institutional change through its advocacy of learning innovation in what is likely to be a very competitive period in the sector.

This paper links with my presentation during the EDEN Budapest research conference, where examples of the impact of research to practice on the student experience will be shown.

The metaphor of the Media Zoo

Higher Education Institutions (HEI) worldwide are being asked to do much more with far less yet still remain world class. 2010 is a pivotal year for leanness of budgets and increasing student expectation. In this environment, innovation in learning and teaching – with technology at the centre – will be crucial.

Formed in 2005 under the leadership of Professor Gilly Salmon, the Beyond Distance Research Alliance – which brings together teachers and researchers, interested in the field of innovation in teaching and learning, from any discipline or level of education – at the University of Leicester, UK, has been pivotal in bringing innovation to the University's Teaching and Learning Strategy, first through the E-learning and Pedagogical Innovation Strategy (from 2005) and now the Learning Innovation Strategy (from 2009). The Alliance's role in the University is to lead on educational research to practice, innovation to mainstream through the identification, experimentation and dissemination of knowledge and new practice for learning and teaching online. In doing this, it develops appropriate and learner-centred pedagogy deploying new technologies, especially those of low-cost and

high value, and strongly influencing the role, training, development and competencies of online teachers.

Learning innovation involves a complex relationship between research, pedagogy, learning and technology. It is the engagement of intellectual and scholarly effort that is likely to transform the students' learning experiences for the better. For learning, both radical and incremental innovation is needed.

In short, the need for learning innovation is driven by the student experience and the student demographic (part-time, work-based, informal learning), the necessity for improving the quality of teaching and the nature of its delivery, and the importance of institutional positioning in an increasingly competitive educational sector.

At the core of the outward-facing activities of the Alliance is the Media Zoo, which exists in the physical, Web and 3D worlds: as a well-specified physical learning laboratory, a comprehensive website (www.le.ac.uk/mediazoo) and an island in Second Life (Wheeler 2009). Built around the four quadrants that enclose the 'technological wildlife', the Media Zoo provides both a dissemination forum for the Alliance's research findings and a supportive, experimental environment where University staff can acquire understanding of the design of learning activities using learning technologies.
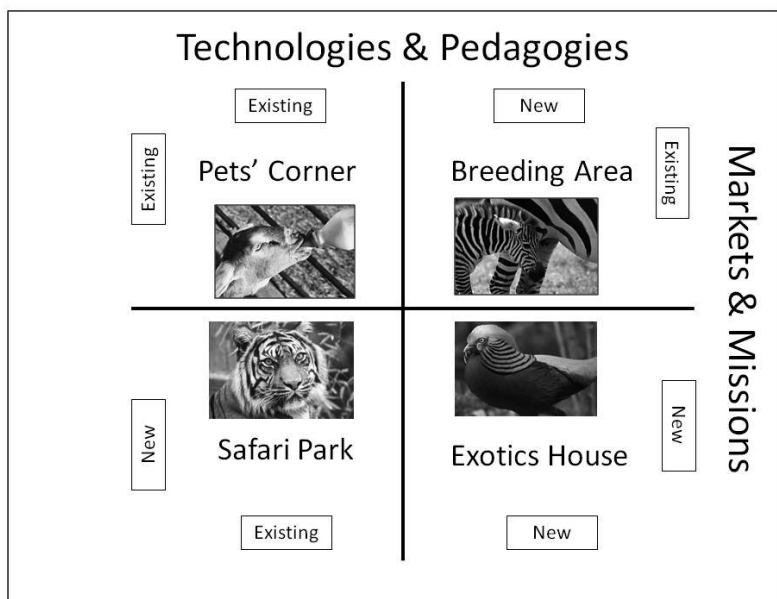
Figure 1 – The four quadrants of the Media Zoo

Technologies and markets are positioned within the quadrants depending on their pervasiveness and level of institutional support. Pets' Corner for example contains Blackboard™, the University's virtual learning environment (VLE), and asks staff whether they can do more to embed this stable, supported technology into their teaching, whether campus based or distance learning.

The Breeding Area focuses on the same student market, but examines technologies not originally intended for teaching such as smart phones and MP3 players.

The Safari Park takes established and supported technologies such as those in Pets' Corner and applies them to new markets and missions, for example ensuring that every student of the University, regardless of location or mode of learning, receives equivalent services and learning experiences.

Finally, the Exotics House is the riskiest area of the Zoo, focusing as it does on peripheral technologies and markets. For this reason, it also has the potential to be the most powerful agent for change.

The metaphor of the Media Zoo allows visitors to appreciate that there is an alternative to 'flapped' learning or the 'substitutional' approach to the use of learning technologies (Salmon 2005). For example, careful and intelligent learning design resulting in the introduction of well-moderated e-tivities (Salmon 2002, 2004) can alter dramatically the potential of the VLE, changing it from a simple file repository to a true learning tool (Pets' Corner). Alternatively, the increasing evidence of the educational benefits of 3D MUVES (multi-user virtual environments) such as Second Life to, for example, distance learning is available through the Exotics House.

The institutional role of the Media Zoo and the Zookeeper

The Beyond Distance Research Alliance is not part of the University's staff development unit, and it doesn't offer formal training programmes for academic teaching staff. Rather, it is a high-profile research unit, funded mainly through successful applications for external grants.

As the dissemination channel for the research projects of the Alliance, the Media Zoo is the forum whereby University staff are introduced to the potential benefits of incorporating learning technologies into their courses. This is an evidence-led, bottom-up strategy: an academic introduces changes in teaching methods because the research evidence clearly shows the merit of doing so. A target-driven, top-down approach would stifle innovation and in all probability would result in mediocre benefits at best for the learner.

The role of the Keeper of the Media Zoo adds another activity to any list used to define the learning technologist (see for example Peacock et al. 2009: 117). With what is a genuinely unique job title, the Zookeeper's raison d'être is to be a gentle, consistent and, where appropriate, persistent advocate for the increased use of learning technologies in teaching in Higher Education, where this increase is underpinned by sound and well-researched pedagogic reasoning rather than being technology-led.

This advocacy involves holding regular dissemination events (Zoo Days) on the Alliance's research projects for both internal and external visitors, helping the learning designer hold successful learning interventions (Armellini and Jones 2008), and delivering workshops and seminars for University staff that focus first on the pedagogical reasons *why* a technology might be useful before moving onto how to use it. The role also involves visiting teachers in their workplaces, and for this reason a Mobile Media Zoo is currently under development.

Learning interventions

Learning interventions can take a number of forms, from short, informal briefings to a full Carpe Diem (www.le.ac.uk/carpediem), which brings together an academic course team, a learning designer, a subject librarian and a learning technologist, the latter role often filled by the Zookeeper. At the heart of Carpe Diem, developed as part of the ADELIE (Advanced Design for E-Learning: Institutional Embedding) project, is a two-day workshop in which the course team plans, implements and reviews student-centred e-learning designs, focusing on learner activity, group work and assessment for learning. By the end of the second day, the course team have a blueprint and storyboard for their course, a set of peer-reviewed (reality-checked) online learning activities (or e-tivities) running on their institutional virtual learning environment (VLE), a transferable model for e-tivity design and a practical action plan (Armellini and Jones 2008).

Workshops

Either alone or with the help of other learning technologists within the Alliance, the Zookeeper frequently holds workshops – lasting for 1 or 2 hours – for University staff on a range of technologies. One of the most popular workshops is 'podcasting for pedagogical reasons'. Drawn from the research of the successful IMPALA (Informal Mobile Podcasting And Learning Adaptation) and DUCKLING (Delivering University Curricula: Knowledge, Learning and INnovation Gains) projects, participants are first shown the research findings and exemplars from the projects before being instructed in how to produce podcasts for themselves using freely available audio editing software. The final part of the workshop involves uploading a finished podcast to the VLE.

Another popular workshop involves producing online narrated Microsoft Power Point slideshows using Adobe Presenter. After being shown exemplars of Presenter learning objects, participants are shown the basics of good slideshow construction, including the importance of using copyright-free (i.e. Creative Commons) images as stipulated by the Alliance's OTTER (Open, Transferable and Technology-enabled Educational Resources) project. Finally, they are instructed in how to add narrative to the slideshow before uploading the presentation.

Participants at a workshop usually number 3-4 members of the same academic department. We have strong evidence that what is learned in the workshop is disseminated among academic colleagues, which is of course key to the Media Zoo's remit.

Measuring the impact of the Media Zoo

There is evidence of how change has occurred within academic departments as a result of the sessions offered by the Media Zoo, although this evidence is gathered through informal channels. For example, a participant from a recent Adobe Presenter workshop (a chemistry lecturer) – when requested – sent links to some presentations she'd made as a result of learning how to do so in the Zoo. These presentations are to be used both by undergraduate students on her courses and as a means of recruiting new students through 'taster' courses.

Additionally, it is possible to see the via the institutional VLE, Blackboard, the increasing number of undergraduate and postgraduate campus-based and distance learning students benefitting directly from learning design and Carpe Diem interventions. For example, following several learning design workshops and a full Carpe Diem in early 2008, the Department of Politics and International Relations began recruiting distance learning Masters students for September 2008, beginning with nine on two modules. As of March 2010, this had risen to over 130 students (Wheeler and Rofe 2009), with over 12 modules – each following the design and structure of the first two – being offered (design once, deliver often).

We are in addition starting to see big impact on the students. For example only today a lecturer in psychology wrote to me:

> *"not a single one of our dissertation students has needed an extension this year (this is unheard of and a very pleasant surprise!). All …have handed in their final dissertations on time. The only difference from previous years is that all have had access to the* **feedback podcasts** *on their draft dissertations" (personal e mail 24th Sept 2010).*

Conclusion

The Media Zoo is an innovative approach to promoting the potential of learning technologies to teachers at HEIs. Whether in the physical, Web or 3D world, it offers an area for all staff members and associates to explore learning technologies and their potential educational applications, and its strategy is to enable the sharing of good practice, to explore up and coming learning technologies and run seminars, workshops and demonstrations about new media and innovation.

The Beyond Distance Research Alliance and the Media Zoo have been highly successful in driving institutional change thus far, and both are ideally placed to continue to do so in the future as a significant part of the Learning Innovation Strategy.

By both advocating learning innovation and providing the necessary skills to do so, the Media Zoo provides an excellent example of generating excellent research to practice teaching practice in a Higher Education environment.

My presentation will give direct examples of the impact on student experiences of the Media zoo approach- surely the best test?

References

1. ARMELLINI, A. AND JONES, S. (2008) Carpe Diem: Seizing Each Day to Foster Change in *E-learning Design. Reflecting Education* 4 (1) (p. 17-29.)

2. PEACOCK, S., ROBERTSON, A., WILLIAMS, S., GIATSI CLAUSEN, M. (2009) The Role of Learning Technologists in Supporting E-research. *ALT-J: Research in Learning Technology* 17 (2) (p. 115.)

3. SALMON, G. (2002) *E-tivities: The Key to Active Online Learning.* Routledge: London & New York.

4. SALMON G. (2004) *E-moderating: The Key to Teaching and Learning Online.* 2nd ed., Routledge: London & New York.

5. SALMON, G. (2005) Flying not Flapping: A Strategic Framework for E-learning and Pedagogical Innovation in Higher Education Institutions. *ALT-J: Research in Learning Technology* 13 (3) 8p. 201.)

6. WHEELER, M. (2009) Developing the Media Zoo in Second Life. *British Journal of Educational Technology.* 40 (3) (p. 427.)

7. WHEELER, M. AND ROFE, J. SIMON (2009) *Contrast of Provision: Integrating Information Technologies into Politics & International Relations Courses.* ECPR General Conference, September 10, Potsdam.

THE CHANGING ROLE OF THE INSTRUCTOR IN THE DIGITAL AGE

Michael Beaudoin, University of New England, United States of America

Abstract

In this era of student-directed, collaborative, constructivist learning, augmented by social networks and other virtual environments that tout learner autonomy, the role of instructors in online education is undergoing further evolution since the advent of the Internet. This presentation is a sequel to my prior work on the 'invisible' learner, augmented by other research and writing by myself and others, and intended to examine what is, and indeed if, there remains a useful and meaningful role for the increasingly 'invisible' instructor in such settings. It may well be, in the current climate, that the cliché "Guide on the Side" may soon be replaced by a prospectively more appropriate one: "Guide on the Outside." Factors that contribute to this phenomenon, such as the proliferation of new technology, the increase of adjunct faculty, the cachet of self-directed learning, a changing clientele, attitudes regarding assessment, etc. are reviewed. Findings from a major international study of student perceptions of what is critical for success in online courses are analyzed, including the opinion of many respondents that the role of instructors is a relatively minor factor for achieving success in online learning experiences. The implications of these trends for the future role of the professoriate are considered.

Introduction

In one of his dialogues, Plato discusses the impact of writing on society, and the prospect that the role of the teacher might be diminished if more citizens were to get their information and ideas from the written word rather than from the mouth of a teacher. In a more recent era, educator Mark Hopkins decried the loss of intimacy between teacher and student, each sitting and discoursing from opposite ends of a see-saw, as education became more industrialized. Currently, there is discussion regarding the impact of Kindle and other such electronic devices for reading the written word, and the likely loss of such traditions as storytelling if the printed word becomes less common. Such changes, should they significantly come into play in this electronic age, suggest the potential loss of a so-called "embodied presence" best represented in face to face exchanges that are not compromised by any sort of phenomena functioning as an intermediary between the two parties.

The implications of this in the context of online teaching and learning are obvious and enormous.

Further, the alliance between the constructivist agenda and the ongoing effort for greater economies and efficiencies in education, reinforces the driving force that moves the teacher away from the epicenter of the teaching-learning dynamic, sidelining even more the so-called "guide on the side" and increasingly marginalizing him/her, arguably to the extreme edge wherein "guide on the outside" might be a more appropriate moniker. Indeed, this phenomenon is seen more and more by some as a criterion for not only improving the cost-effectiveness of online education, but enhancing its quality as well, as it is viewed, often mistakenly, as an indicator of a more active and engaged, and therefore, more successful learner.

Anderson and Garrison (1998) indicate that the isolation which, fairly or unfairly, characterized an earlier era of distance education, has been largely replaced by collaborative learning, suggesting that this trend demands emerging interactive skills of online learners, along with several attendant skills: social, discursive, group and reflective skills. Similarly, the constructivist approach to learning also demands self-directed learning skills. Of course, the presence of these attributes in online learning environments presumes that those designing and delivering such courses possess the requisite competencies that lead to the implementation and application of those features in their courses. There is mounting evidence that some of the most active online instructors are focused on incorporating the latest technological tools into their courses, but may not necessarily be especially actively engaged themselves in that enhanced environment.

Facilitated by the advent of Web 2.0, the popularity of social networking tools, and the ubiquitous presence of various digital tools and toys, all are inexorably creeping into the changing learner landscape, there is mounting evidence that the age of the auto-didactic learner may not only be eminent, but indeed dominant. Note the proliferation of webinars offered every month on such topics as "Using Twitter to Enhance Collaborative Learning." The recent and intense enthusiasm for the merits of social networks as dynamic teaching-learning environment with almost limitless possibilities for learner-managed activity generates equally intense cynicism by those who see this phenomenon, when carried to excess, as little more than social forums that promote narcissistic behavior fueled by fragmented and frivolous communication. One European colleague refers to the 'web 2.0 temptations' (e.g.., the notion that there really is no need for course material development because 'it is all on the web'; there is no need for direct instruction, as peer support will do it; there is no need for technical infrastructure since it's all free on the web anyway. If this line of reasoning is accepted, online learning might be characterized, in

essence, as primarily as a process of "peer production" with relatively little contribution from instructional personnel.

In 1990, I authored an article which appeared in The American Journal of Distance education (Beaudoin 1990) that attempted to identify how the burgeoning phenomenon of distance education (DE) was demanding new roles and responsibilities of teachers that differed quite significantly from the conventional duties they have historically performed within a classroom. And contrary to the misgivings of many academics at the time, I argued that the role of instructor would remain central, and indeed, be more critical than ever. It should be noted that this piece was published just prior to the advent of the Internet as a major force in instructional design and delivery.

Ten years later, another area of inquiry I investigated and wrote about – the so-called "invisible learner" (Beaudoin 2000). In that work, I examined the phenomenon of online students who were, by all appearances, minimally active in their courses, and asked whether or not they were actually learning, despite their relatively passive role. I discovered that, in fact, even with a minimal online presence, most were indeed learning, though in a more reflective and less participatory mode.

Finally, I am currently engaged in a major international study with several colleagues worldwide to identify and promulgate as definitive set of validated competencies critical for online learning success. A key finding of this research to date (Beaudoin 2008) is that the defining elements in online learner success have less to do with the features of the course content, technology and instructor, than with the student's own volition to succeed through self efficacy and self determination. A rather striking finding was that, for many of the respondents, representing four different programs in four different countries, the role of the instructor in their respective courses was not seen as especially important to them to achieve ultimate success. This student perspective reinforces the notion that as more collaborative learning opportunities are created that facilitate self-directed learning, the instructor's role is primarily that of monitoring rather than directing students' educational activities.

The Current Context

At this juncture, as we witness the confluence of these several dynamic and powerful forces that are shaping the next wave of the e-learning phenomenon, with the prospect of a less prominent role for instructor involvement, it seems useful to examine the notion of presence in online settings, and to inquire if the historically significant role of the professoriate as the lead player in the teaching-learning relationship is still a viable one, as new ways of designing and delivering

technology-enhanced instruction creates new attitudes regarding the relationship between teacher and students, and perhaps a new balance of power in that equation.

Presence in the distance education arena is characterized in several ways. The literature identifies three types of faculty presence in this milieu- social, cognitive and psychological. Some institutions closely monitor the degree of faculty presence, usually by tracking the frequency of postings by instructors. Some require faculty to post a certain number of times (e.g., at least one announcement each week). Ironically, an instructor might frequently post comments in the discussion area, yet if the requisite weekly announcement is absent, even if there is nothing significant to announce), that instructor could well be cited for lack of presence in the course. Some institutions and programs engage in what is referred to as "forced" interaction, whereby students are required to post a minimum of, for example, three times weekly; if not, then the instructor is required, in turn, to deduct points for low participation. These measures seldom, if at all, take into account the quality of online postings, whether by students or instructors, but rather focus on regularity or frequency.

The term "Guide on the Side" that has been in vogue for so long that it has now become a cliché, is germane to this issue, as it might well be re-phrased now as "Guide on the Outside." I make this case, in part, because of a common phenomenon that occurs within the online course environment with instructors who opt for a minimal presence, as suggested by the guide label: this style can often result in the instructor being viewed almost as an interloper in the course discussion venue. This is evidenced by instructor postings, both topical and directional, that are largely ignored by students. In my own courses, I have offered substantive comments on aspects of a lively threaded discussion, along with those from students whose contributions are, frankly, rather "thin" yet students react much more frequently to their peers' comments than to mine. Is this because they do not see me as a legitimate participant in "their" dialogue? Or is it perhaps because they are somewhat intimidated if the instructor offers his/her ideas and opinions, and so they feel reluctant to say anything that might counter the instructor's post? Similarly, students might pose important questions regarding an assignment, but curiously, they may well pose such queries to their peers, rather than to their instructor. Equally problematic is when students largely ignore instructor directions, feedback, requests, clarifications, and other messages that can be critical to orderly progress in the course. How often does one diplomatically suggest guidelines for participating in the online discussion (e.g., post substantive comments related to the assigned topic, rather than personal messages addressed to a particular student) , only to read the following three student postings that exhibit behavior that is exactly the opposite of what had been requested by the instructor? Similarly,

Especially troubling is the critical area of assessing and grading student work. Long the exclusive province of the professor, providing feedback on the strengths and weaknesses of students' academic work, and assigning an appropriate grade is now increasingly being brought into question by students themselves. Indeed, it is not at all uncommon for a student to boldly indicate his/her displeasure at a grade and even demand justification from the instructor. In this era of the over-use and abuse of rubrics. A typical student stance is that as long as s/he has submitted an assignment that includes the 7 items listed in the rubric provided by the instructor, then what authority does the latter have to then give anything less than a perfect score? The implication here is that faculty who are presumably expert in the field of study, do not have the liberty of making any subjective judgments regarding the quality of the student's presentation, as long as the constituent elements as prescribed in the rubric, are evident. Judging the merits of students' online participation also seems to have become an occupational hazard for some faculty. If, for example, one gives 2 rather than 3 points for weekly discussion, and even if feedback is given to a student explaining the reasons for the deduction, it may elicit a response to the effect of: "Who are you to decide I should not get all the points I deserve?"

This climate regarding assessment has, in my view, exacerbated the phenomenon of grade inflation. Why? Because too many faculty, especially adjuncts who may feel their status is relatively precarious, simply give the maximum point value for assignments, even those submitted as draft items, including those that often require further work, and so presumably ought not be receiving maximum scores. My point here is that grade inflation, as is the case with many other trends in education, can be traced, at least in part, to the weakened authority and unfortunately, in too many instances, the faculty's abdication of responsibility to function as true mentors to learners, lest they be seen as overly directive, as less supportive, and not sufficiently committed to student-directed learning.

Which brings us to yet another trend that is in vogue currently – the desire of academic programs to demonstrate that they are genuinely committed to allowing their students to design and control their program of study, even within some highly specialized graduate level professional curricula. This too is likely to relegate faculty to the limited role of monitoring students' choices, intervening only in the more egregious circumstances that might truly compromise the integrity of a student's academic progress and success. For example: students enrolled in a highly regarded graduate program with demanding courses and a strong faculty, are allowed to enrol in the more advanced, specialized courses, without having to first take the introductory foundations course that provides the historical and theoretical ground in the field, indeed the critical context in which all future study ought to emanate from. Without a clear course sequence prescribed, a student may ask fellow students what should take as the next course in the program, potentially

skipping to one of the more interesting sounding advanced courses, prior to enrolling the initial foundations course. Again, the point here is that educational providers often appear reluctant to dictate to their "customers' what is most advantageous for them to do next, perhaps for fear of seeming overly autocratic.

In examining the role of instructors within online settings, the case of adjunct faculty requires some careful consideration. It is my contention that, despite increasing reliance on this cadre of practitioners as teachers, their somewhat tenuous status in many institutions, programs and departments, contributes to their reluctance to exercise a forceful presence in the courses they are assigned to teach. Many view themselves as role models, rather than content experts, and as practitioners, few have maintained an academic orientation, and so may not be especially informed when it comes to recent scholarship, grading protocols, or even such matters as APA guidelines. As a consequence, they typically defer to their full-time counterparts, acquiescing to whatever course changes are implemented, and are usually exceptionally supportive of busy, working adult learners, even to those who generally present rather mediocre academic work.

However competent, committed or conscientious faculty may be, this does not always translate to a strong presence on their part in courses for which they are responsible. This is particularly so with adjunct faculty, many who apparently see their role as that of graders, rather than actually instructing, acting more as coaches than as mentors, and praising students' efforts rather than providing critical feedback. If this style is prevalent among adjuncts within a program, yet their full-time counterparts on the faculty are more demanding, a mixed message may be sent to students, who are thus subjected to a double-standard (i.e., some courses that require greater rigor of mind vs. others that expect primarily a good effort). If the consequence of this disparate means of assessing student learning is that some students who do mediocre work are just as likely to earn grades similar to their peers who consistently do superior work, then not only are grades inflated for some, but more egregiously, they are given the message that their work warrants high grades, regardless of its true quality. Thus, faculty who willingly or unwittingly exercise a reductionist role as educators, compromise not only their own value, but in the process, short-change their students in need of more adequate academic mentoring.

My research on what I termed as 'invisible' learners revealed that even students who were minimally active in online threaded discussion forums were nonetheless engaged in the course in other ways (e.g., looking at peers' postings, reading assigned material, submitting written assignments, etc.). Furthermore, these low visibility learners earned grades slightly better than their peers who exhibited average participation in the online dialogue. Thus, we were able to conclude, at least on the basis of that limited study, that students who seemed only minimally engaged in the more visible aspects of the online course experience still felt connected, and indicated they derived significant benefit from the course Many explained simply that they were reflective learners who spent time processing information, and thus were better able to integrate information and ideas derived from the course. Somewhat harshly, I have characterized these students somewhat harshly as "parasitic" in that they derived benefit from their online courses, yet their learning style minimized their contribution to their learning community.

But, what might we say about faculty who show a similar penchant for low visibility in online courses they teach? Are they abdicating their responsibility? Have they been given inadequate training regarding how to establish an effective presence within their courses? Do they feel it is more appropriate to maintain a low profile and intervene only when there is obvious need for them to do so? Have they had prior experiences in which students questioned their authority, and so they recede into a peripheral role? Do they espouse the notion of self-directed learning to the degree that they consciously choose to remain largely 'invisible"? If there is some evidence that 'invisible' online learners still derive benefit toward their learning goals, despite their minimal presence, can we state the same for instructors- that they still play a useful role, even if it is not a prominent one?

In my earlier piece on the distance instructor's changing role (1990), I suggested that a major trend was the instructor being less involved in transmitting content to students, instead being more engaged in process- specifically, in facilitating the learning process for students, by creating conditions within the course environment for them to derive maximum benefit from diverse means of acquiring information and ideas, with the instructor being just one source of the resources needed to achieve learning objectives.

In the current era, we must now ask if indeed, that instructor is particularly engaged in process-related functions, let alone actual instructional activities. In research I conducted in 2000, surveying 50 faculty at five institutions who had moved from classroom to distance teaching, I found that when asked to define their role in the DE setting, the majority chose the term: mentor, rather than: teacher, to best characterize their perceived role in that context. It would perhaps be interesting to survey these respondents or a similar cohort today, to determine how they might refer to themselves. I am tempted to speculate that not only would fewer of them

be inclined to view themselves as teachers, but quite possibly, fewer would even classify themselves as mentors, perhaps feeling that even this label connotes a more activist role than they typically play.

The Changing Learner Landscape

How, then, do online learners view their instructors, regardless of what they might be called? And how critical do they feel those instructors are to their learning well being and ultimate success? In 2007, the International Board of Standards for Training, Performance and Instruction (ibstpi) initiated an ambitious research project- to survey learners enrolled in diverse education and training offerings delivered in an online format. This data is intended to assist the research team in developing a set of universally applicable competencies which both learners and providers consider critical to success in online and blended learning environments. Among the 58 questions posed in the electronically-administered survey (distributed to students in the U.S., Mexico, Japan, and Israel in 2007 and 2008, yielding a total of 375 respondents), was a query regarding what aspects of their learning environment are critical for success.

For the majority of these respondents, the strongest determinant for success among these online learners was self-motivation, followed by time management, and capacity to learn with limited support. It is noteworthy that these choices relate to learner attributes, rather than to course features. This result would indicate that for most of these students, success was primarily dependent on learner traits and behaviors, rather than any factors inherent to the course, or to the role of the instructor. This implies that key competencies for online learning success emanate from the learner, rather than from characteristics related to the learning environment. The least critical items were: ability to cope with unstructured settings, familiarity with technology, and (perhaps surprisingly, as it tends to counter conventional wisdom), relationships with other online learners.

U.S. and Israeli respondents considered the role of instructors to be somewhat important to their success, but this was minimally important to Japanese and Mexican students. It seems that for many students, those in this role are viewed largely as facilitators, rather than actually providing instruction. Many commented that faculty are most useful in offering support by answering questions, clarifying requirements, etc., rather than serving as the expert in the course content. Some expressed the idea that knowing faculty were available to assist if need be, even if they were never pressed into service, was a sufficient enough role for them to play, however passive it might be. Thus, it would appear that facilitation and support is what they often expect will primarily be provided to them as needed in online environments.

This finding raises an interesting question: do students any longer need or want to be exposed to experts? It may be that their dependence on teachers has dwindled, and what they have now come to expect is for instructors to be available as resource persons should some need arise for course support unrelated to actual instruction. The fact that few respondents alluded to the role of online facilitator as that of managing discussion raises important questions. Do the majority of online learners somehow devalue the instructional role in that setting, compared to face-to-face faculty? And does the fact that the "self-motivation" is considered the most critical item for online success, while relationships with instructors ranked only 5th overall in importance among the choices, represent somewhat of an indictment of faculty effectiveness in this milieu, or is it more an indication of students' self-sufficiency?

What is the effect of the burgeoning phenomenon of social network tools that represent an increasingly appealing setting for the design and delivery of diverse objects intended to be manipulated and shared among peers, regardless of whatever role might be played by instructors. YouTube, for instance, seems to be increasingly in vogue in online courses for uses such as students and their instructor to introduce themselves with attractive visuals, and to articulate their objectives for the course. The creativity and skills in producing such presentations in this environment may be an enjoyable class experience, but as virtual venues such as YouTube become more popular for achieving various teaching and learning goals, one is tempted to speculate as to their relative merits over other learning resources housed in LMS' that rely primarily on the provider rather than the consumer for their design and creation.

For sure, many student-developed course materials and activities are carefully conceived and well crafted, involving many hours in planning and execution with high quality production, yielding satisfying and worthwhile benefits, regardless of hours required in the process. It might have taken four hours for one person to complete the activity, more or less for another. But of course, every activity has a cost, in time and energy, and it might well be very tempting for harried instructors, even those who has some reservations about the ultimate learning value of such projects, to nonetheless encourage students to engage in certain activities that at least seem to have enough value to justify delegating it to students rather than doing it themselves.

As the design of courses becomes more collaborative, and tools become more accessible, and students increasingly are expected to contribute to that process, will institutions be inclined to retain quality faculty, especially on a full time basis, particularly if any significant part of the cost of retaining them includes course development? Or will they abdicate this process, and choose instead to incorporate more student-generated elements into courses? Issues relating to quality

assurance, intellectual property, profitability, and the like, all factor into the equation, and as students arguably gain greater autonomy in an era of student-focused learning, will faculty be the part of the equation that becomes increasingly invisible?

We have witnessed a trend for disintermediation of various critical tasks related to the design, delivery and assessment of learning (e.g., the use of Virtual TA services from India for grading). Business models demonstrating significant cost-benefit ratios for out-sourcing functions are hard to ignore, and if these are arranged in such a way as to diminish rewards and incentives for instructors, and at the same time, students take on certain roles online instructors have typically performed, is there a danger that online instructors who have previously been innovative and inspirational with their classes may lessen their zeal and commitment, as they sense they may become supernumeraries in the age of digital education?

And yet, recent reports from colleges indicate that interest in virtual environments that were quite readily adopted as value-added into online courses, such as Second Life, have already lost favor as learning tools since the initial enthusiasm for them, and web pundits writing in the popular press (Dokoupll & Wu, 2010), indicate that activity in Wikipedia has waned since spring, 2010. A recent Pew study found that blogging has shrunken as a pastime, though Twitter now captures more attention, although many users of the latter are "lurkers" rather than frequent contributors. And many new bloggers and Twitter users quit within a month, according to a Nielson report. Despite this growing ennui, the number of online community sites continues to grow, and choices have increased exponentially, with fierce competition among them, and with all sorts of inducements to attract new users. One suggested reason for lessened enthusiasm for the more familiar sites is simply boredom; once the novelty or entertainment value of these tools (toys?) begins to wear off, users become restless for something new that is now in vogue. This phenomenon suggests, at least to me, that most of these sites serve a useful purpose in occupying those wanting popular social diversions, but as a means and method for more ambitious goals, such as teaching and learning, their effectiveness, in the long run, may have questionable value.

Technology of this type is simply a tool, and despite many newer features that quickly become fads, they ought not to become fetishes. Digital devices that are literally at one's fingertips do not necessarily make the user smarter, or better informed to offer more reliable opinions, nor does immediately available information, though it allows us to communicate faster, does not automatically make us more knowledgeable. And while their use by larger numbers may have somewhat of a democratizing effect on education, they do not always make more informed users more insightful scholars. While we place a premium on speed and efficiency, those virtues do not ensure that we arrive at a higher level of

understanding, just as social networks do not replace face to face human connections.

Columnist George Will (2010) warns that "the ubiquitous barrage of stimuli creates a chaos of constant connection that becomes an addictive electronic narcotic." The electronic playground, he adds, not only provides limitless distractions from boredom, but also leads to self-absorption, and some research suggests that constant short-term stimulation from digital prompting can impede memory on which intelligence depends. Might it be that the more we encourage our students to delve into their own constructs to create learning environments, we may inadvertently also be allowing them to select those "learning objects" that are entertaining, for the moment, but not necessarily ones that are resources for forethought and reflection? Student-centered activities in the virtual arena are not, in and of themselves, necessarily virtuous, unless they do, in fact, ultimately contribute to authentic learning.

What factors contribute to students' receptivity to the trend for greater learner activism? Is it simply the allure of new technological novelties, and their promise of new and engaging features that make satisfying course requirements less onerous? Is the prospect for a more sociable setting in which students can exchange ideas and information with their peers to give this new landscape more "sex appeal?" Or is it just that students aspire to more control over what they do in expensive courses in which they are enrolled, and wish a less dominant role for faculty?

Social structure has a strong influence on students` learning and satisfaction, and on the method by which the course is presented (Swan, 2001). Students have need for social connection and a sense of presence in electronically mediated distance education. (Paloff and Pratt, 1999). In these settings, participants can become part of a social milieu with anyone with a computer. The online learning environment is itself a unique cultural context. Students come to this setting with preconceptions based on prior experiences in virtual situations as well as off-line contexts. They bring with them differing norms, levels of proficiency, communication styles, comfort levels, expectations, etc. Some of these attributes and behaviors are appropriate to educational contexts, some are not. And Internet skills alone do not determine competency; it is also self-efficacy that enables them to adapt to effective usage of this medium.

Inner-directed student behavior is largely a function of locus of control. Dabbagh & Banna-Ritland (2005) report on the work of Dille and Mezack (1991), who studied the profile of distance learners, focusing on the locus of control. Students with an internal focus of control (those who attribute success and failure to personal behaviors and efforts) were more likely to succeed and persevere when faced with challenges. Thus, it appears that trends in the virtual learning world are

contributing to a shift in this locus of control, from instructor-dominant to increasingly student-centered, and it is a change that seems to be generally welcome among most students, and more generally, by academe, at least for the moment. Still, it must be asked if, according to Swank (1982), as students' self-efficacy strengthened, academic performance improved, and as Jonassen et al ((1995) suggest, the necessity for student self-regulation is greater in distance education than in face-to-face courses, can these attributes be acquired by students without a strong faculty presence?

Conclusion

On the basis of the evidence presented, we can conclude, at least preliminarily, that there are several factors affecting students, positively or negatively, that transcend the learning management system, the faculty, student support, or other institutionally-sponsored elements operant in their courses. Specifically, as reported previously, it is the learners' own internally-driven attitudes and behaviors (e.g., self-motivation, time-management) that ultimately have greater impact on their online studies, rather than externally-driven elements, such as provider services, course software, and perhaps most significantly, faculty. Thus, a subtle but important distinction can be discerned from responses regarding student satisfaction and success. When referring to satisfaction in their learning experiences, most of these online learners indicated such course elements as content, instruction, interaction (though not technology) affected this judgment. But, when asked about successful learning, most identified learner-directed factors (e.g., self-motivation). In short, it appears to be primarily what is often referred to as internal learner attributes, rather than course features, that ultimately affects students' experiences and opinions of what works and does not work in online settings, regardless of what role faculty might play, or what technology is utilized in those courses.

Is this further evidence that the faculty role is evolving from "Guide on the side" to "Guide on the outside?" Is the role of mentoring students' academic work to assist them to arrive at a higher level of knowing and enhanced competence becoming passé? Are faculty increasingly functioning as graders, merely confirming required assignments have been submitted in their entirety by the due date, and being on call, should a student decide their services might be needed to resolve some issue, or clarify an assignment?

I surely hope not. Indeed, it is my contention, in this digital era, that mentors who are compassionate of heart, who are committed to academic rigor, and to competent practice, are needed now, more than ever, to play a central role, as partners with students, in the teaching-learning process, certainly no less so in the online venues than in face-to-face settings. Institutional providers of online offerings must expect and insist that their instructional personnel orchestrate the

learning process, creating conditions for what might be called "guided discovery." It is my contention that education works best when student and teacher both learn together. To do anything less is to compromise our professional integrity, to do a disservice to our students, and to demean online education, even as it assumes a central role in the digital age.

References

1. ANDERSON, T. & GARRISON, D.R. (1998). *Learning in a networked world: New roles and responsibilities.* In C. Gibson, (Ed.). Distance Learners in Higher Education. (p. 97-112). Madison, WI: Atwood Publishing.

2. BEAUDOIN, M. (2010) *Experiences and Opinions of Online Learners- What Foster Successful Learning?* In: Learning Management System Technologies and Software Solutions for Online Teaching: Tools and Applications (Yefim Kats, ed.). Information Science Publishing.

3. BEAUDOIN, M. (2009) *Reflections on Seeking the 'Invisible' Online Learner (and Instructor).* In: Distance and E-learning in Transition-Learning Innovation, Technology and Social Challenges. (U. Bernath, A. Tait, M. Vidal & A. Szucs. New York: Wiley and ISTE.

4. BEAUDOIN, M. (2004). *Reflections on Research, Faculty and Leadership in Distance Education.* Oldenburg, Germany: Oldenburg University

5. BEAUDOIN, M. "The Instructor's Changing Role in Distance Education". *The American Journal of Distance Education*. University Park, PA: The Pennsylvania State University. 1992. Vol. 4. No.2, 1990.

6. BEAUDOIN, M. "From Campus to Cyberspace-The Transition of Classroom Faculty to Distance Teaching Roles". *Educational Pathways.* May 2002. Vol. 1, No 6.

7. BERGE, Z. AND HUANG, Y. (2004). A Model for Sustainable Student Retention: A Holistic Perspective on the Student Dropout Problem with Special Attention to e-Learning. Distance Online Symposium, *The American Center for the Study of Distance Education*. Vol. 13 (5).

8. BERNATH, U. AND SANGRA, A. (eds.). (2007). *Research on Competence Development in Online Distance Education and E-Learning.* Oldenburg, Germany: BIS-Verlag der Carl von Ossietsky Universitatat

9. CHANG, V. & FISHER, D. (2001, December 2-6). *The validation and application of a new learning environment instrument to evaluate online learning in higher education.* Paper presented at the Australian Association for Research in Education, Fremantle. http://www.aare.edu.au/01pap/cha01098.htm

10. DABBAGH, N. AND BANNAN-RITLAND, B. (2005). *Online Learning- Concepts, Strategies, and Applications.* Upper Saddle River, NJ: Pearson.

11. DOKOUPIL & A. WU (2010) Take This Blog and Shove It! *Newsweek,* 8/16, 2010 (p. 42.)

12. PALLOFF, R. AND PRATT, K. (2001). Lessons from the Cyberspace Classroom. San Francisco: Jossey Bass.IS-Vertag der Carl von Ossietzky Universitat. McLoughlin, C. and Oliver, R. (2000). Designing learning environments for cultural inclusivity: A case study of indigenous online learning at tertiary level. *Australian Journal of Educational Technology.* 16(1), 58-72.

13. PALLOFF, R. AND PRATT, K. (2001). *Lessons from the Cyberspace Classroom.* San Francisco: JosseyBass.

14. SHROFF, R. & VOGEL, D. (2009). Assessing the factors deemed to support individual student intrinsic motivation in technology supported online and face-to-face discussions. *Journal of Information Technology Education*, Vol. 8, 2009. Retrieved March 9, 2010 from http://ezproxy.umuc.edu

15. SWAN, K. (2001). Virtual Interactivity: design factors affecting student satisfaction and perceived learning in asynchronous online courses. *Distance Education*, 22(2), 306-331.

16. VISSER, J, & VISSER-VALFREY, M. (2008). *Learners in a changing learning landscape: Reflections from a dialogue on new roles and expectations.* Dordrecht, The Netherlands: Springer.

17. WILL, G. (2010) "Lost in Electronica" *Newsweek*. August 23 & 30, 2010. (p. 28.)

ONLINE SUPPORT FOR ONLINE GRADUATE STUDENTS: FOSTERING PROFESSIONAL IDENTITY DEVELOPMENT THROUGH WEB-BASED DISCUSSION AND SUPPORT

Martha Cleveland-Innes, Sarah Gauvreau, Athabasca University, Canada

Abstract

While participation in online graduate study is on the rise, questions remain about the outcomes of online graduate school (Rourke & Kanuka, 2007). This research documents student reaction to a web-based support site for online graduate research students, entitled the Research Exploration and Discussion Site (READS). This site was designed to support research skill and knowledge development, and thus role identity formation as a scholar and researcher, for graduate students in an online distance education Master's degree program. Student interest in, and visitation to, the site was very high, but participation in site activities quite limited. Participation patterns and interviews with students posting to the site suggest that, while interests vary widely, students are looking for general support around usual student issues: relationships with faculty, career choices, access to financial and other student supports, academic resources and library information.

Introduction

Graduate students are participating in online graduate study in increasing numbers (Allen & Seaman, 2007). However, neither the graduate student experience nor the student characteristics are the same for online students as traditional face-to-face students (Cleveland-Innes, Garrison & Kinsel, 2007; Coleman, 2005; Edmonds, 2010; Mullen & Tallent-Runnels, 2006; Song, Singleton, Hill, & Koh, 2004). The opportunity for informal social and academic interaction (Pascarella & Terenzini, 1991) that occurs in hallways and graduate student lounges is not readily available to online graduate students. This limitation means that a fulsome graduate student experience may not be readily available online, and must be carefully crafted.

While online graduate students, and their online learning experience, may be distinguishable from graduate students studying face-to-face, they also share the need for specific outcomes of graduate school. One of these outcomes is the development of a professional and scholarly identity as a researcher. Such an outcome is referred to as role-identity formation (Callero, 2003; Collier, 2001). It is plausible that this identity formation occurs, to some extent, during academic courses and formal leaning. However, the Canadian Association for Graduate

Studies has identified the need for professionalism through activities which complement discipline-based formal learning (CAGS, 2008). This need, in combination with the unique needs of online graduate students and their required adjustment to online learning environments (Cleveland-Innes & Garrison, 2009), means that support services are of equal or greater importance for online students.

In response to this need, an online, web-based environment was created for students in a master's program in distance education. The purpose of this support environment was to provide a central virtual location for research students to access resources, information, direction and advice regarding distance education research. This study reports on the student reaction to this web-based support environment.

Background information

The attitudes and skills associated with scholarly research are thought to be central processes in, and outcomes of, the graduate student experience; a central outcome of graduate study in distance education is to prepare some students for the role of practitioner-researcher (Jones & Cleveland-Innes, 2004). Development as a researcher, for graduate students online or face-to-face, requires training and experience; socialization that is part of being a student in higher education.

In simplest terms, this support web-site was designed to increase time spent interacting with faculty and other graduate students to improve socialization opportunities. In this instance, socialization is more than straightforward social time; here socialization is a "process by which people learn the characteristics of their group … (and) the attitudes, values and actions thought appropriate for them" (Kanwar & Swenson, 2000, p. 397). Through this process, students take on new roles and practice the required behaviors and activities of that role. In other words, students to engage in 'role taking', the trying of new behaviors exhibited and modeled by others, and 'role making', the creation of new behaviors and actions based on new ways of knowing and thinking (Blau & Goodman, 1995).

Given this, graduate education is more than a "simple extension of coursework beyond the bachelor's degree" (Gullahorn, 2003, p. 204). It requires emotional and social growth along with enhanced cognitive skills. For Van Maanen & Schein (1979), this includes the acquisition of a new socially–based identity and membership in an elite community (Anderson & Swazey, 1998). This is as much so for graduate students online as it is for those in traditional programs, where socialization occurs in the classroom and beyond.

For Gardner (2007), the graduate student experience involves socialization processes in five different areas: 1. dealing with ambiguity in program guidelines and expectations; 2. balancing graduate school responsibilities with those external to school; 3. developing the independence required in the role of scholar; 4. understanding the major cognitive, personal, and professional transition that is part of the graduate experience; and 5. offering and receiving support needed during this transition. How can these socialization opportunities be afforded to online graduate students?

This pilot study is a test of one possible answer to this question. The web-based support piloted in this study is to promote "students' active involvement in the learning and discovery process (through) frequent interaction between faculty and students as well as among students in … informal settings" (Gullahorn, 2003, p. 204). By design, it provides a central virtual location for research students to access resources, information, direction and advice regarding distance education research broadly or the process of designing and implementing research on the topic of distance education and all its sub-fields. The objectives are as follows:

- Provide opportunity for students and faculty to develop a community of inquiry regarding research in distance education.
- Provide a source of advice, information, and encouragement in a moderated environment to student researchers.
- Provide peer interaction opportunities for participants.
- Allow identification and pursuit of special interests by participants.
- Provide students an opportunity to moderate and participate in informal online interaction.

Structure of the web-site

The READS web-site is hosted on an open-source platform called Moodle, a Learning Management System (LMS) used normally to develop and deliver courses. The READS Moodle site is only accessible to those currently registered in programs. The site consists of eight sections in which students can access information. The first section contains an introduction and the objectives to the site. This includes a sound file of Dr. Marti Cleveland-Innes formally introducing visitors to the site, a news forum, a general research discussion forum, a suggested additional resources forum and a welcome forum. The second section of the site incorporates the weekly discussion sessions, where students can engage in asynchronous conversations about topics of distance education and/or research. The third area focuses on research grant opportunities, where updated postings and newsletters for research grants are advertised.

The fourth section is the professors' corners, where six faculty members maintain their own forums to share their research interests and assist students with similar research goals. The fifth, sixth and seventh sections act as a reference area, subdivided into categories: library & reference information, research ethics and conduct, research societies and journal and online magazines. Each provides links, documents and/or information to each subject.

The final section of the READS site is an area where terminated discussion sessions are situated. These are left open so students can retrieve pertinent information from past dialogues.

Research design

The research question guiding this phase of our research is: Are online graduate students interested in web-based support for extra-curricular activity and discussion with faculty and students? Our argument in support of this question is that extra-curricular activity, online or face-to-face, plays a role in the development of research and scholarly identity and expertise for graduate students.

A mixed methods approach was employed to collect data (Creswell & Plano-Clark, 2007). This mixed methods approach, also known as multi-method design, allows for rigorous, methodologically sophisticated investigations. In this investigation, a mix of methods provides the opportunity to measure student activity via numerical counting; this provides a report of what the students actually do through quantitative measures. In addition, mixed methods allow one to ask the students questions that illuminate the numerical count of activity; what benefit does this activity provide and how can we continue and/or improve the activity options to provide further benefit.

The open-source LMS Moodle provides tracking opportunities to measure student activity. Student activity data comes from the reporting functions embedded in Moodle infrastructure. Reports were accessed regularly, and combined for reporting to administrators and the wider academic audience.

Text-based responses to open-ended survey questions represent the qualitative data; the voice of students participating on the site. This data were collected at two points of time over the two year trial; the first occurred four months after the site was opened and the second at the end of year one. Students were asked to reflect and respond regarding three general concepts related to participation on the site: perceived **benefits** in the activity, **interest-level** in discussion topics and further **requests for online extra-curricular activity.**

Findings

READS was first available to graduate students in August 2008. The site was advertised to students on the main department web-page, and email invitations were sent to all program students. To access the site, a participant has to hold an identification code and password registered with the institution. While program students are the target for the support site, non-program students taking courses in the program also have access to the site.

In the two years since the site was opened, **18,192** viewings of the site were made. Over this time a total of 447 student contributions were made to the site in the form of discussion forum postings or other information items. Figure 1 represents the main page of the site.
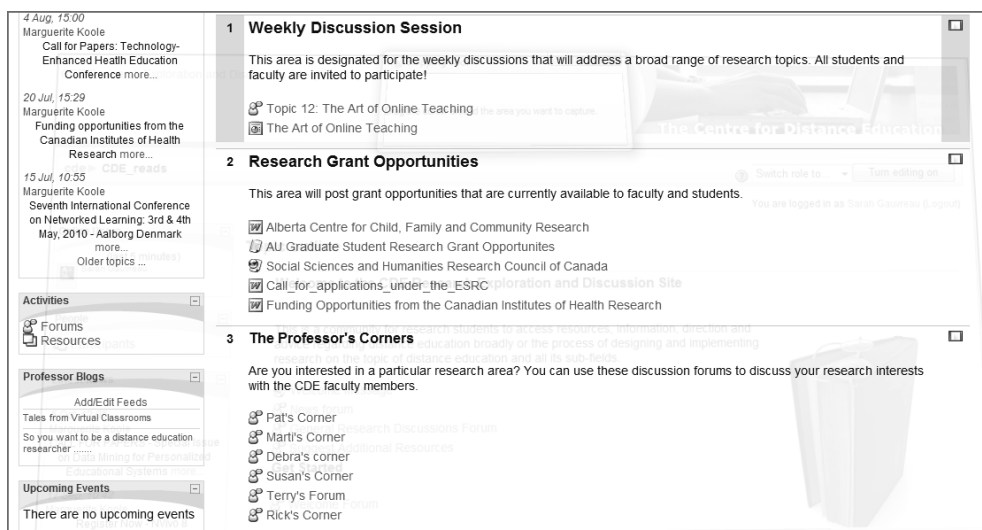
Figure 1

The most popular features, as indicated by student traffic, are the Welcome Forum and the Professors' Corners.

Weekly discussion forums offer graduate students a place to discuss current topics of research. An article, resource and/or introductory post from the site administrator is provided to initiate debate and dialogue. Forum topics are open for one week and then replaced with a new topic, encouraging students to participate in asynchronous communications. Here students could post their thoughts/opinions and reflect/respond to others at their convenience. A variety of topics were discussed with varying amounts of reading and posting. Figure 2 provides a list of topics discussed in the first year of operation, and visually

represents the relationship between the number of viewings and number of postings.
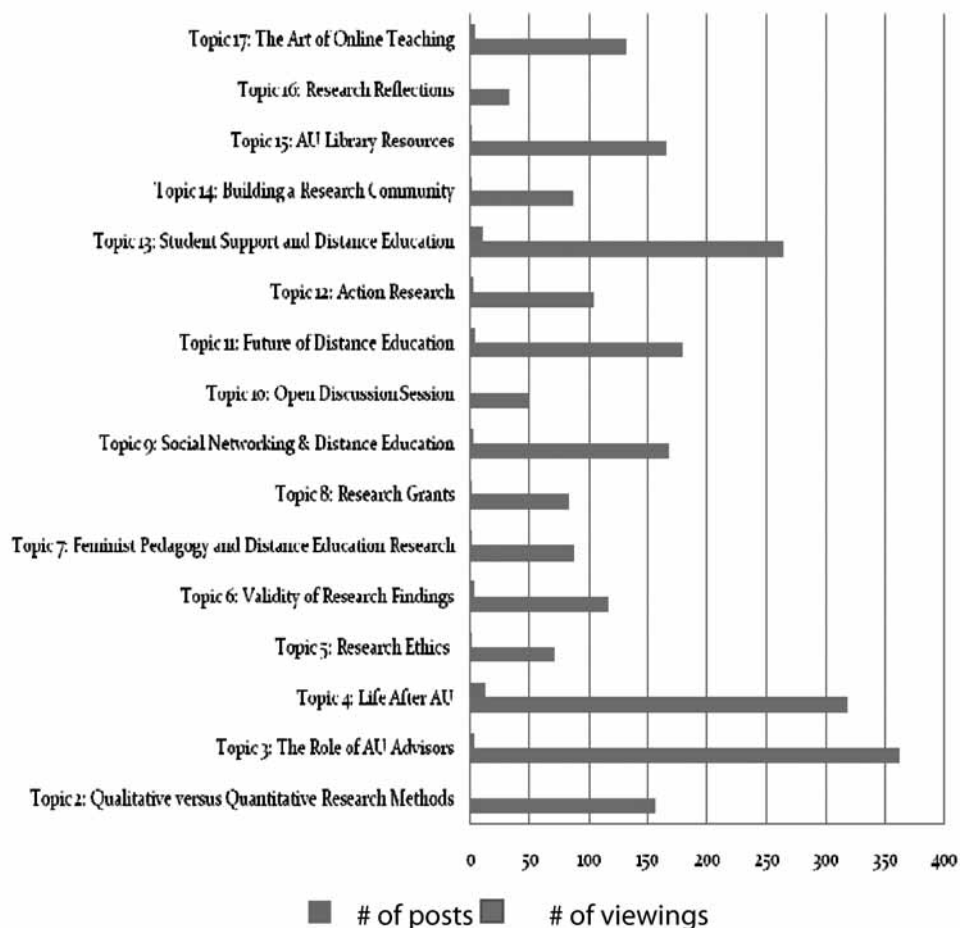
Figure 2

Discussion forum activity is made up of more viewing than posting. There is no systematic relationship between viewing and posting but, in general, topics that received highest viewings had more postings. Table 1 provides activity numbers of discussion topics over two years during Fall and Winter semesters.

Table 1

Topic	Viewings			Number of Postings (excluding those made by admin)
	As of Oct. 10, 2009	As of Feb. 20, 2010	As of April 11, 2010	
Topic 2: Qualitative versus Quantitative Research Methods	156	173	179	0
Topic 3: The Role of AU Advisors	362	386	398	3
Topic 4: Life After AU	318	345	358	12
Topic 5: Research Ethics	71	78	79	1
Topic 6: Validity of Research Findings	116	116	116	3
Topic 7: Feminist Pedagogy and Distance Education Research	87	90	92	1
Topic 8: Research Grants	82	89	94	1
Topic 9: Social Networking & Distance Education	168	170	174	2
Topic 10: Open Discussion Session	50	51	51	0
Topic 11: Future of Distance Education	179	181	185	4
Topic 12: Action Research	104	106	113	2
Topic 13: Student Support and Distance Education	264	266	268	10
Topic 14: Building a Research Community	86	86	86	1
Topic 15: AU Library Resources	165	166	168	1
Topic 16: Research Reflections	32	39	39	0
Topic 17: The Art of Online Teaching	71	71	73	5
Topic 18: Virtual Show & Tell	131	200	206	4
Topic 19: CDE READS Goes to Florida!		52	58	0
Topic 20: Historic Research in Distance Education		75	86	2
Topic 21: DE Research Topics to Avoid?		60	73	2
Topic 22: The Current State of Research in DE		66	69	1
Topic 23: A New Path to DE Research?		30	34	0
Topic 24: Review of Distance Education Research		150	155	3
Topic 25: Research Interests		91	99	5
Topic 26: Are you Ready for Research?		93	104	4
Topic 27: Becoming Part of the Research Community		86	91	6
Topic 28: Taking the Next Step Towards Research		84	92	6
Topic 29: Organising Yourself as a Researcher Part 1			60	0
Topic 30: Organising Yourself as a Researcher Part 2			50	0
Topic 31: Organising Yourself as a Researcher Part 3			89	1
Topic 32: Creating a Research Question Part1			93	2

Topic 33: Creating a Research Question Part2			54	0
Topic 34: Creating Research Methodology			58	1
Topic 35: Creating a Dissemination Plan			26	0
Grand Total:	2442	3400	3970	78

Findings from the collection of qualitative data were analyzed by two researchers. The text data was outlined as 50 complete concepts or ideas. Selective coding centered on the concepts of benefits, or lack of, realized from the site, interest in various aspects of the site and requests for new structures or activities. Coding yielded an inter-rater reliability score of 62%. Table 2 is a summary of the topics distilled from text-based responses, within each conceptual category:

Table 2

Benefits (23)	**Interaction opportunities** Students identified the value of discussing issues with peers, and the creation of documents and resources specific to their needs. The value of peer exchange was emphasized multiple times; "networking and connecting with others" was mentioned often. Interaction benefits span social support and professional development, with references to sharing research ideas with other students and getting advice from experienced researchers. **Awareness of and access to valuable scholarship activity** Students use the site to identify conferences and publishing opportunities of value. Students share articles and books of perceived value as well. The available information on any subject can be overwhelming. Students use READS to help them determine what valuable and credible information is. **Clarification of expectations, responsibilities** Questions were raised about expectations and what is acceptable and what is not; knowing the rules of "academic etiquette" was the phrase used. Another said the site makes him/her "feel more comfortable …. returning to school and doing research." **General support** The need for, and benefit from, support during graduate school was noted many times. Students want assistance "balancing work, school and home life" and ways to make graduate school enjoyable.

Interests (16)	**Facilitated discussions**
	Students expressed interest in continued weekly discussions, in relation to research and other issues.
	Information resources
	Access to information about funding sources and research design evaluation is of great interest. There is interest in any network, journal, blog, presentation, etc. that relates to the field. Desired information on the following were noted: SecondLife, data analysis software, video, learning motivation, design-based research, teaching presence, publication peer review processes, adult learning, neurobiology and instructional design.
Requests (11)	**Community boundaries**
	Online interaction is readily available to students on a course by course basis. Thesis students who have finished courses are without this valuable, albeit temporary, community. Students report that READS provides the opportunity to continue this dialogue and ask for increased facilitation to create and sustain community for thesis students.
	Multiple questions were raised about who can participate and for how long. Looking ahead, students asked if they could continue to participate after the thesis project was complete, and after graduation.
	It was suggested that discussion formats that are longer than one week would garner more activity and generate more4 in-depth discussion.
	Description of site activities
	Students requested clear explanations of the purpose/reason for certain areas of the site. Some referred to the "professors' corners" and asked for more activity and an understanding of how these areas would operate.

A few comments noted that some READS discussion replicates course-based discussion.

Discussion and recommendations

Student interest to the web-based research exploration and discussion site has been notable; high numbers of students are accessing the information and discussions available on the site. However, a small proportion of those visiting the site were motivated to interact with others. The population of students who are posting is uncharacteristic and dynamic; a few of the same students are posting but otherwise the group who posts is unique. In other words, a cohort of students within an integral community is not forming around the site.

This might give one the sense that this is not of interest to the students, and the idea of connecting to such an informal community if of little importance. However, the Welcome Forum on the site has the greatest number of viewings (n=1460) and the greatest number of posts (n=113). Students are willing to come to the site and make themselves known to others. This keen interest then dissipates; the next highest number of postings is 12, to the Life after University discussion forum, with 318 views.

None of the discussion topics generated a rousing discussion. Of 35 discussion topics over two years, nine topics had no postings and views from mid-30s to 60. There was one exception to this pattern. The topic "Qualitative versus Quantitative Research Methods" had 179 views but no posts. It is likely that, in this case, a failure to post had to do with confidence issues rather than lack of interest. In cases where there were relatively few views and no posts we assume limited interest, but acknowledge that these topics at times landed in weeks where academic activity may have taken precedence.

In the survey, some students pointed out that some of the topics READS covers are also discussed in their courses, therefore it is redundant and they don't participate. Furthermore, with many courses having a participation mark of 10%, many students concentrate in participating in their course forums, where they receive marks, rather than an external site.

Student feedback from survey data identified numerous benefits and keen interest. A more active site with discussion on student experiences as well as research topics was requested by participants. Many topics of interest were suggested on both personal and professional issues. Multiple students spoke of the value of the site and many listed multiple benefits.

Conclusions

The web-based support site for online graduate students has offered online students increased opportunity to develop as a student and a researcher. Findings suggest that there is great interest in the information provided but less in participating in discussions. This lack of student postings was noticed by respondents. This issue may have a recursive effect; increased student activity will feed on itself and postings may increase exponentially.

There is a relationship between number of viewings and number of postings. As a general rule, topics that generated the greatest number of viewings also produced more postings. This is true of all topics with a few exceptions. For example, the topic regarding student faculty advisors garnered more viewings than most others but generated only 3 postings. A key finding is the interest among students to

discuss topics of general interest – outside of the issue of research activity. Issues that are problem-based and of general interest to all students generated far more activity than those focused on questions about research.

Most remarkable is the number of viewings to the site. In a program with approximately 300 program students at any one point in time, **18,192** viewings of the site demonstrates significant interest in such web-based support. Students provided some postings and some of the resource material available on the site. This is a demonstrable case of peer construction. Timing and topic interest, as indicated by number of viewings, had an effect on student participation. While still in its pilot phase, the site is generating enough participation to warrant continuing the site, with minor changes.

The most notable evidence is the interest in non-research related topics regarding the graduate student experience. This does not refute our concept of role-identity formation in graduate school, but supports it. A need for support in multiple areas can be attributed to adjustments made during graduate school; adjustments that may provide for new ways of acting, coping and knowing about oneself and one's place or role in a field of study.

Role-identity formation evidence can be extrapolated from many comments and the types of interests identified. While students did not refer specifically to an evolving sense of identity, this is reflected in comments made, particularly regarding the benefits offered on the site and requests for further information and interaction. This preliminary assessment provides enough evidence to move to a second phase of the research, and evaluate role identity formation in longitudinal studies of READS participants.

This site was designed to support research skill and knowledge development, and thus role identity formation as a scholar and researcher, for graduate students in an online distance education Master's degree. The relative lack of interest in topics regarding research may well be an indicator of developing identity; students do not have the confidence to discuss research with peers. Participation patterns and interviews with students posting to the site suggest that, while interests vary widely, students are looking for general support around usual student issues: relationships with faculty, career choices, access to financial and other student supports, academic resources and library information.

References

1. ALLEN, E. & SEAMAN, J. (2007) *Online nation*. *Five years of growth in online learning*. New York: The Sloan Consortium.

2. ANDERSON, M.S. & SWAZEY, J.P. (1998). Reflections on the graduate student experience: An overview. In M.S. Anderson (editor), *The experience of being in graduate school: An exploration*. San Francisco: Jossey–Bass, pp. 3–14.

3. BLAU, J. & GOODMAN, N., eds. (1995). *Social roles & social institutions*. New Brunswick: Transaction Publishers.

4. CALLERO, P. L. (2003). The sociology of the self. *Annual Review of Sociology*, *(29)*, 115-133.

5. Canadian Association for Graduate Studies, November 5, 2008. *Professional Skills Development for Graduate Students*. Retrieved from http://www.cags.ca/media/docs/cags-publication/Prof Skills Dev for Grad Stud Final 08 11 05.pdf

6. CLEVELAND-INNES, M.; GARRISON, R. & KINSEL, E. (2007). Role adjustment for learners in an online community of inquiry: Identifying the needs of novice online learners. *International Journal of Web-based Learning and Teaching Technologies, 2*(1), 1-16.

7. COLEMAN, S. (2005). *Compelling arguments for attending a cyber classroom: Why do students like online learning?* Retrieved from http://www.worldwidelearn.com

8. COLLIER, P. (2001). A differentiated model of role identity acquisition. *Symbolic Interactionist, 24*(2), 217-235.

9. CRESWELL, J. & PLANO-CLARK, V. (2007). *Designing and conducting mixed methods research*. Thousand oaks, Calif.: Sage Publications.

10. EDMOND, K. (2010). *Discovering the needs of online graduate students: A doctoral research study.* Paper presented at the Canadian Society for the Study of Higher Education conference, Ottawa, Ontario.

11. GARDNER, S. (2007). "I heard it through the grapevine": Doctoral student socialization in chemistry and history. *Higher Education, 54*(5), 723-740, DOI: 10.1007/s10734-006-9020-x

12. GULLAHORN, J. (2003). Graduate study. In: A. DiStefano, K.E. Rudestam, & R.J. Silverman (editors). *Encyclopedia of distributed learning*. Thousand Oaks, Calif.: Sage, pp. 203–207.

13. Jones, T. & Cleveland-Innes, M. (2004). Considerations for the instruction of research methodologies in graduate level distance education degree programs. *Turkish Online Journal of Distance Education, 5*(2). Retrieved from http://tojde.anadolu.edu.tr/.

14. Kanwar, M. & Swenson, D. (2000). *Canadian Sociology.* Iowa: Kendall/Hunt Publishing Company.

15. Mullen, G. & Tallent-Runnels, M. (2006). Student outcomes and perceptions of instructors' demands and support in online and traditional classrooms. *The Internet and Higher Education, (*(4), 257-266

16. Pascarella, E. & Terenzini, P. (1991). *How college effects students*. San Francisco: Jossey-Bass.

17. Song, L.; Singleton, E. S.; Hill, J. R. & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *Internet and Higher Education, 7*, 59-70.

18. Van Maanen, J. & Schein, E.H. (1979). Toward of theory of organizational socialization. *Research in Organizational Behavior, 1,* 209-264.

ASSESSING THE ADDED VALUE OF WEB 2.0 TOOLS IN E-LEARNING: THE MDE EXPERIENCE

Lisa Marie Blaschke, Carl von Ossietzky University of Oldenburg, Germany,
Gila Kurtz, Stella Porto, University of Maryland University College,
United States of America

Introduction

The Master of Distance Education and E-learning (MDE), a masters program offered jointly by the University of Maryland University College (UMUC) and Oldenburg University, is in a unique position to fully experiment with and measure the value of web 2.0 tools when these are used within the online classroom. The program focuses on preparing students to be managers and leaders in distance education and e-learning within a variety of settings, including higher education, government, not-for-profits, and private corporations. During their studies, adult students work toward their master's degree completely at a distance. Web 2.0 tools have become an essential learning-teaching means for the MDE and are used in diverse ways to accomplish both instructional and learning activities.

Web 2.0 technologies place great emphasis on user-generated content, content sharing, and collaborative work, all of which add significant value to deeper learning processes. Whether interacting in a virtual world like Second Life (www.secondlife.com), facilitating knowledge via Wikipedia (www.wikipedia.com), networking via Facebook (www.facebook.com), sharing video delivered via YouTube (www.youtube.com), or developing an e-portfolio using a blog, instructors and students use these innovative web 2.0 technologies to interact, share and to build a learning community (Harris & Rea, 2009). Web 2.0 tools can play an important role in building online communities and is useful for motivating and supporting online collaboration. In these online communities, learners work together to share information, construct knowledge, and establish social networks (Harasim, Hiltz, Teles, &Turoff, 1998).

As in any research concerning learning techniques, the authors' ultimate interest is in the effectiveness of such tools. Given the e-learning focus of the subject matter in the MDE program – distance education and e-learning – the use of these tools become more than just the means to achieve learning outcomes. The tools are in fact part of the mission of the learning process itself, given that the program has as one of its overall goals to form professionals with a sound understanding of and experience in the effective use of a diverse set of online learning technologies. This paper discusses the use of web 2.0 tools within the MDE virtual classroom, and the

different uses of wikis, blogs, podcasts, vodcasts, live web meetings, and collaborative environments as part of learning activities in different courses. The paper also presents research findings on MDE student perceptions of the value that social media has added to the student learning process.

Use of web 2.0 in the MDE

Generally, web 2.0 refers to a perceived second generation of web development and design that facilitates communications and secures information sharing, interoperability, and collaboration on the web (http://en.wikipedia.org/wiki/Web_2.0, para 1.). Web 2.0 technologies place great emphasis on user generated content, content sharing, and collaborative work, all of which add significant value to deeper learning processes. Whether interacting in a virtual world like Second Life (www.secondlife.com), facilitating knowledge via Wikipedia (www.wikipedia.com), networking via Facebook (www.facebook.com), sharing video delivered via YouTube (www.youtube.com), or developing an e-portfolio using a blog, instructors and students use these innovative web 2.0 technologies to interact, share and to build a learning community (Harris & Rea, 2009).

By incorporating web 2.0 into MDE courses[1], instructors not only introduce students to currently available technology, but also give them an opportunity to experience firsthand how social media tools can be used pedagogically and innovatively. With this modelling approach, MDE instructors teach students how to teach and lead by example, promoting and sustaining the motto of the MDE means as its mission and the MDE mission as its means.

Incorporating the web 2.0 concept into online teaching helps elicit learner participation beyond standard textual responses and enables instructors to engage students as interactive learners in a way that has been nearly impossible up to now. In fact, using social media can help students create for themselves new contexts for learning and communication. As Harris & Rea (2009) stated: "Students become part of the lesson!" (p.141). To maximize these interaction levels, web 2.0 tools are utilized for a variety of purposes within the MDE classroom (Table 1).

---

[1] Information about the MDE curriculum can be found at http://mdeprogram.weebly.com/mde-curriculum.html. Descriptions of all MDE courses can be found in the following links: http://umuc.edu/programs/grad/courses/omdecat.shtml; http://umuc.edu/programs/grad/courses/dettcat.shtml; http://umuc.edu/programs/grad/courses/detccat.shtml; and http://umuc.edu/programs/grad/courses/depmcat.shtml.

Table 1   Examples of web 2.0 within the MDE Classroom

Type of tool	Uses
Textual, audio and video	Project management, document sharing and discussion, information distribution and visual presentation, student feedback
Live and recorded sessions	Information distribution and visual presentation, discussion
Wikis	Project management, document sharing, discussion, information gathering, student interaction
Blogs	Information distribution and sharing, student feedback, student interaction
Document sharing	Student feedback ("coaching"), information gathering and sharing

The following sections discuss how MDE instructors use these web 2.0 tools within the MDE classroom.

Textual, audio and video, live and recorded sessions

Instant Messaging

In an online, asynchronous environment, students may feel lost out in cyberspace. Within the MDE classroom, synchronous instant messaging (IM) functionality is built into the WebTycho platform, UMUC's proprietary LMS (www.tychousa.umuc.edu). Students use the IM function to maintain contact with each other and the instructor, to discuss course content, establish frameworks for course projects (e.g., project schedule, responsibilities, action items, and due dates), and to discuss feedback on course assignments. Instructors use the IM function to provide feedback on assignments and student performance, as well as to keep lines of communication open with students. The IM function, together with the classroom awareness function, allows instructors to easily strike up a conversation at any time with any student who is online – and vice versa. This immediate feedback supports the individual learning process.

Audio

MDE instructors use audio in the form of podcasts and voice boards (e.g., www.wimba.com). Within OMDE 601[2], audio files are used to introduce students to the classroom environment, as well as to course content. Audio has also been used as a form of advance organizer, providing students with an overview of module and/or course content (Holmberg, 2005). These audio introductions make

---

[2]Foundations of Distance Education and E-learning

instructors and visiting experts more familiar to students and help students "put a voice" to the instructor/expert with whom they are interacting.

Video

As a standard feature of OMDE 603[3], instructors purposefully guide students' use of social media applications to facilitate their multimedia skill development. Podcasts, either generated by students or by instructors, have been used to help share multimedia knowledge and information (Bonk, 2008). To support this effort, instructors have created audio tutorials and use sites such as YouTube and Teacher Tube (www.teachertube.com) to post lessons for easy student access.

Live and Recorded Classroom Sessions

The inclusion of synchronous instruction helps in creating a greatly enhanced teaching and learning experience through active engagement and spontaneous exchanges (Agosti et al, 2006). Within OMDE 601, instructors use Wimba Live Classroom (www.wimba.com/products/wimba_classroom/), for example, to present course content and to introduce and discuss class-related topics, activities, and assignments. The Wimba Live Classroom session is synchronous and incorporates graphics, application sharing, audio, video, and chat. The sessions can also be recorded so that students have the choice of visiting the sessions synchronously or asynchronously.

Within OMDE 603 and DETC 630[4], instructors also use live audio and video meetings to discuss topics relevant to courses. For example, we conduct live discussions on the digital divide using Wimba.

Wikis

Social media plays an important role in building online community and is useful for motivating and supporting online collaboration. In these online communities, learners work together to share information, construct knowledge, and establish social networks (Harasim, Hiltz, Teles, &Turoff, 1998). Wikis can be used in the online setting to facilitate building shared knowledge among and by students (Meishar-Tal, Tal-Elhasid, &Yair, 2008). Students perceive wikis as positively supporting collaboration efforts and effectively supporting learning and engagement (Hughes & Narayan 2009; Kurtz & Bar-Ilan, 2010).

In OMDE 603, students are asked to work in a wiki as a group to create an annotated class glossary of DE terms relevant to the course. Each group of students

---

[3]Technology in Distance Education and E-learning
[4]Synchronous and Asynchronous Learning Systems in Distance Education

chooses one term to contribute to the glossary. This is an ongoing activity as students can choose any term that they like as long as it is relevant to the course and has not been contributed in earlier classes. This way past and present collaborative knowledge is combined.

In addition to using wikis for collaborating on coursework, students provide feedback to each other on the student wiki content, including the navigation and structure of wiki. This only occurs, however, when a student is invited to the wiki by the wiki's creator. Instructors also post feedback to students directly into the wiki, for example, as a response to an entry in the wiki and/or within the discussion area of the wiki page.

A cornerstone of the MDE program is the e-portfolio. Although this activity is only fully assessed at the end of the program during the capstone course (OMDE 670), many students create a wiki at the start of the program, and these wikis become the home of their e-portfolios. The e-portfolio is an evolving student creation, and as the MDE student progresses through the MDE program, the student uses the e-portfolio to capture and store experiences, reflections, and artifacts (Porto and Walti, 2008).

In OMDE 601, the first course for newly registered MDE graduate students, instructors initially introduce students to the wiki and the e-portfolio. Students identify their personal requirements (or desired features) for the wiki, and each student maintains an individual, reflective learning journal within the wiki. By incorporating online learning journals as wikis, students are introduced to web 2.0 technology while being encouraged to think critically and reflectively about what they have learned within the course. Completion of a personal learning journal is done by each student, and students are encouraged to expand upon their learning journal wikis with each course of their graduate program – continuously reflecting on their learning experiences and the knowledge they have gained through their experiences.

In OMDE 670[5] and DETC 630[6], the instructors use a class wiki for all the information concerning the course syllabus and details on how to submit assignments. The wiki facilitates the access and organizing the information, in a way that the LMS does not. In the case of DETC 630, the course also has students using several of the technologies discussed in this paper as sandboxes for the development of their own learning module prototype. In the case of OMDE 670, the course wiki serves the purpose of providing information about e-portfolio and the research project to all MDE students, which supports these activities for students that are not yet in the

---

[5]Portfolio and Project in Distance Education
[6]Synchronous and Asynchronous Learning Systems in Distance Education and E-learning

capstone course, but are working on their e-portfolios throughout the program. This course wiki is also used during program orientations that take place during the second week of every term.

Each course is a building block within the learner experience. Together, the MDE courses create a continuum of each student's personal and professional development while in the MDE program. The student's continuous work on the e-portfolio ultimately serves as the basis for the student's final MDE capstone project. During the capstone project, the student is required to submit both a research project and the final version of his or her e-portfolio. It is this e-portfolio that the students take with them into the professional work environment as evidence of student accomplishments

Blogs

Blogs, as online journals, serve the purpose of allowing students to process and personalize information. Ideally, long-term blog assignments allow students to take charge of their own learning, and they eventually develop into independent lifelong learners (Pang, 2009). Blogging has also been found to reduce students' sense of isolation and increase their feelings of connectedness (Wolf, 2008). In addition, blogging can support student reflection, as well as writing style development (Pulman, 2007).

Within OMDE 603, students are asked to create a blog (textual or video) as their second course assignment. The purpose of this ongoing six-week activity is for students to reflect on their personal viewpoints regarding the course readings and their ideas related to the class. They are also asked to write or record blog posts about topics not covered in class discussions or other activities. Each student is assigned a critical friend (a fellow classmate) to give feedback on the student's posts. The last blog posting is a reflection on the critical friend activity.

Document sharing

Document sharing allows students to collaborate in the development and construction of knowledge. Students use free web applications, such as Google Docs (www.docs.google.com) and Adobe Buzzword (https://www.adobe.com/acom/buzzword/), to share documents and to simultaneously edit and discuss (using chat and/or audio) document content. The ability to share and discuss course assignments synchronously and asynchronously supports students not only in information sharing, but also in constructing new knowledge.

Within the OMDE 670 (Capstone course), instructors also use document sharing applications to collaborate with students on their final research projects. Using document sharing allows instructors to track student progress without invading their privacy and helps instructors ensure that important project milestones are met along the way. Document sharing also supports in synchronous assessment of work, specifically in providing the student guidance in improving his or her research project. The student invites an instructor to his or her document, and the instructor works together with the student online in reviewing the research project content and progress. Document sharing is also used asynchronously, with instructors providing context-specific feedback to the student work using document commenting functionality.

Within OMDE 603, document sharing is mainly used for administrative purposes. For example, students share their blog URLs in Google Docs and register for synchronous activities.

Measuring student perceptions

Clearly, the MDE program has implemented a wide array of social media within its courses. As with the implementation of any technology in the classroom, an important consideration is the pedagogical effect that these tools have on students. Do social media tools add value to the learning experience? And if so, in what way do these tools add value?

Design and procedure

When conducting this research project, the authors used an online survey to ask students about the perceived pedagogical value of five different forms of media: blogs, wikis, audio/podcasts, video, and live classroom. In addition, the survey also asked students to rate the difficulty of using the media, in order to establish tool aptitude and perceived competency in using the tool (Hazari, North, & Moreland, 2009). Survey items were structured and closed-ended, represented by 5-point Likert scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*) and included a '*did not use*' option.

The authors' research was meant to measure students' perceptions of the pedagogical value added by the social media tool by asking students to rate statements such as those in the following table for each web 2.0 tool (Table 2).

Table 2   Measuring Pedagogical Value

Pedagogical Dimensions	Statement (strongly agree, agree, neutral, disagree, strongly disagree)
Connectivity (student-instructor, student-student, student-content)	Made me feel more connected to the instructor Made me feel more connected to other students Made me feel more connected to the course content Promoted collaboration between me and my classmates (wikis, blogs only)
Comprehension	Helped me better understand course material
Meta-cognition	Made me further reflect on what I had read and/or experienced in class Gave me a better understanding my personal learning process Made me think about how I think Enabled me to create new content

According to Lee & McLoughlin (2010) key affordances of web 2.0 tools help to create an environment that supports participation and communication, while supporting distance education students develop "essential core skills needed for lifelong learning, such as self-directed learning, knowledge creation, and digital literacy" (p. 73). They identify key affordances of social software tools as:

- Connectivity and social rapport: supports the creation of people networks

- Collaborative information discovery/sharing: enables data sharing among learners (e.g., social bookmarking)

- Content creation: supports learners in creating new content as opposed to consuming content

- Knowledge and information aggregation and content modification: supports learners in collection and customization of available information for personal use (p. 667).

The measures applied through the surveys do not explicitly reflect these key affordances, but the pedagogical dimensions surveyed are closely related (for example, connectivity and content creation). Another consideration was the analysis of both the use of social media for content creation (active) and/or for student consumption (passive use). According to Weisberger (as cited in the Educational-portal blog, 2010), only 10-12% of professors using social media use it for active purposes, such as learner-generated content creation. Therefore, it was of interest to learn about and understand students' perceptions concerning their

learning when the tools are used actively (blogs and wikis) or passively (audio/podcasts, video and live-classrooms[7]).

Participants

Students from two distinct MDE courses were selected to be surveyed as the basis for the research, primarily due to their established and consistent use of social media (over one year – 3 terms per year):

- Within OMDE601, the survey was conducted for four sessions of the course running from 2009 to 2010. The survey was distributed to fifty-four (N=54) students, with 18 students completing the survey (33.3% percent). Social media use surveyed included wikis, audio/podcasts, video, and live meeting.
- Within OMDE603, the survey was conducted for two sessions of the course running from 2009 to 2010. The survey was distributed to thirty-seven (N=37) students with 14 students completing the survey (37.8%) Social media use surveyed included wikis, blogs, audio/podcasts, video, and live meeting.

Results/findings

In general, students found that use of social media supported them in their learning processes and helped them acquiring skills in using new tools, skills that they did not have prior to the class and that will be helpful to them in practical application in the work environment.

Connectivity (or interaction), comprehension, and meta-cognition are the three dimensions that were measured in order to estimate the perceived pedagogical value of web 2.0 (Table 2). In addition to being surveyed regarding their perceptions on the pedagogical value of web 2.0 social media, students were also asked to rate the difficulty of using social media tools. Blogs and wikis were considered very easy to use for most students. In the case of videos, students were not required to create videos, so viewing the videos was not considered a difficult task. The development of wikis and participation in live sessions were the activities that posed the most difficulty.

---

[7] Although live-classrooms are identified here as 'passive' tools, students were required to be able to login and use the whiteboard during a few of the live sessions. Nonetheless, the authors did not consider this to be significant, and have therefore classified the use of the tool as passive within this context.

Interaction and connectivity

Figure 1 presents the percentage of students who *agreed or strongly agreed* with the usefulness of each web 2.0 tool to promote interaction with instructor, other students and course content. Wimba (www.wimba.com) refers to the live classroom software used for delivering and recording live and recorded classroom sessions at UMUC.

In terms of connectivity, students generally found that social media supported them in connecting with the instructor, students, and course material. The level of connection varied, however, depending on the type of media and type of connection. For example, students felt strongly that Video/YouTube connected them to content (100%), but did not feel that it strongly connected them to the instructor (68%). Audio/podcasts helped students feel more connected to the instructor (93%) and to the content (100%), but not strongly to other students (53%). Wimba (Live Classroom) was the only media that students felt strongly connected them to instructors, students, and course content. One student said in the survey: "I really enjoyed talking to the faculty and fellow students through the use of Wimba. It was nice to get to know people in the class, especially, in the online setting since you really don't know who is who." These observations should be considered carefully, however, since for distance students the effect of having the opportunity of synchronous contact is a significant break from the common pattern of asynchronous text-based communication. The survey captures students' perceived sense of closeness, but these cannot be realistically considered a measure of improved learning. Nonetheless, students' psychological perceptions of increased connectivity could positively influence students' motivation and the potential for enhanced learning.
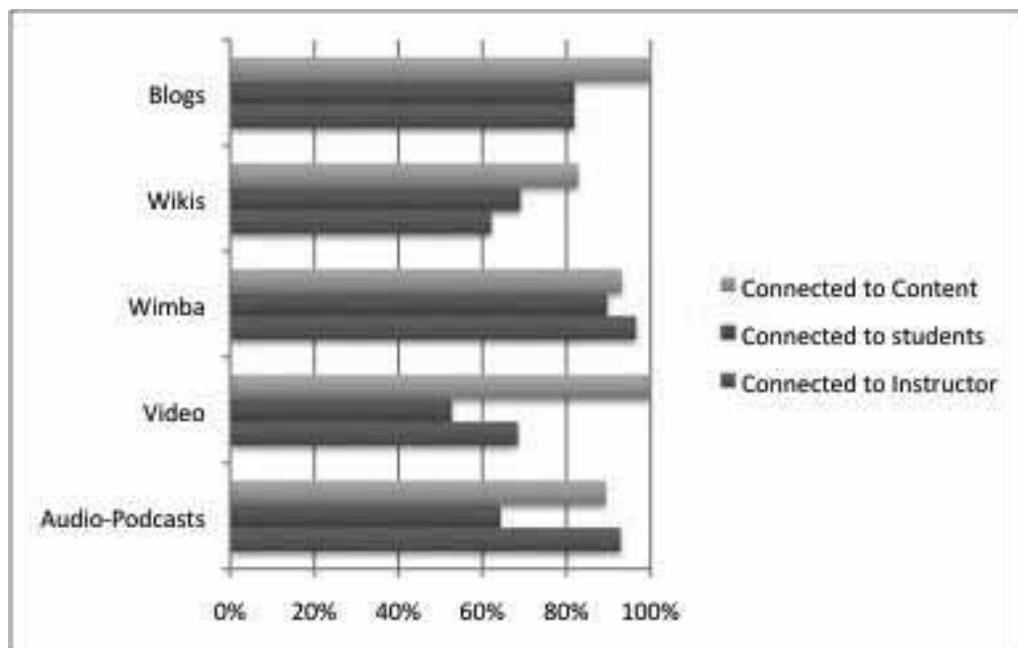
Figure 1 – Connectivity: Student-instructor, student-student, student-content

Comprehension

Student comprehension was the next area in which data was gathered on students' perceptions. The statement posed was: "The use of [media] helped me better understand course material." As Figure 2 shows, blogs and videos strongly supported student comprehension of course content (over 90% of students agreeing with the statement). Audio/podcasts and wikis were not perceived as strongly promoting student understanding of content, but still had a high portion of 75% with students agreeing with the statement. The live classroom generally supported student understanding of content (86% of students in agreement).
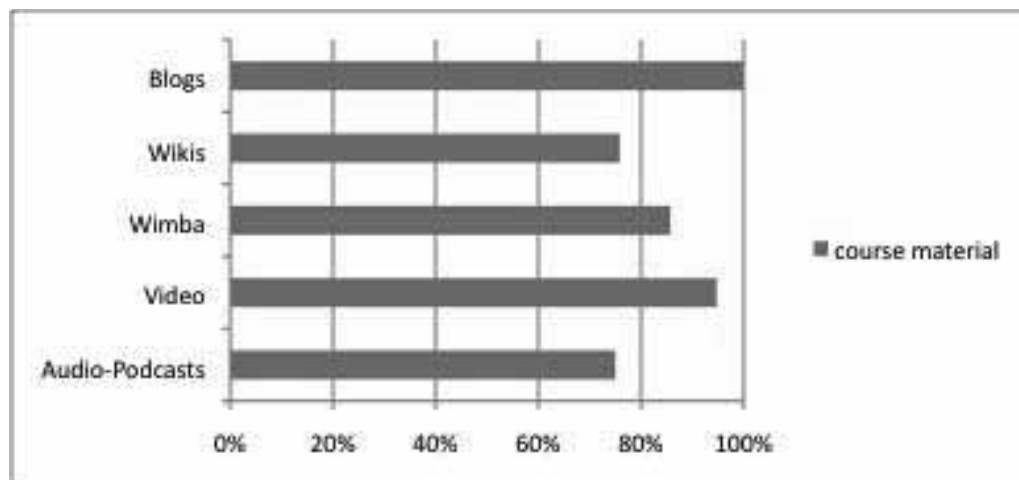
Figure 2 – Comprehension: Understanding of course content

Meta-cognition

Figure 3 presents the percentage of students who *agreed or strongly agreed* with usefulness of each web 2.0 tool to increase meta-cognition, e.g., helping to understand how one thinks and to prompt further reflection.
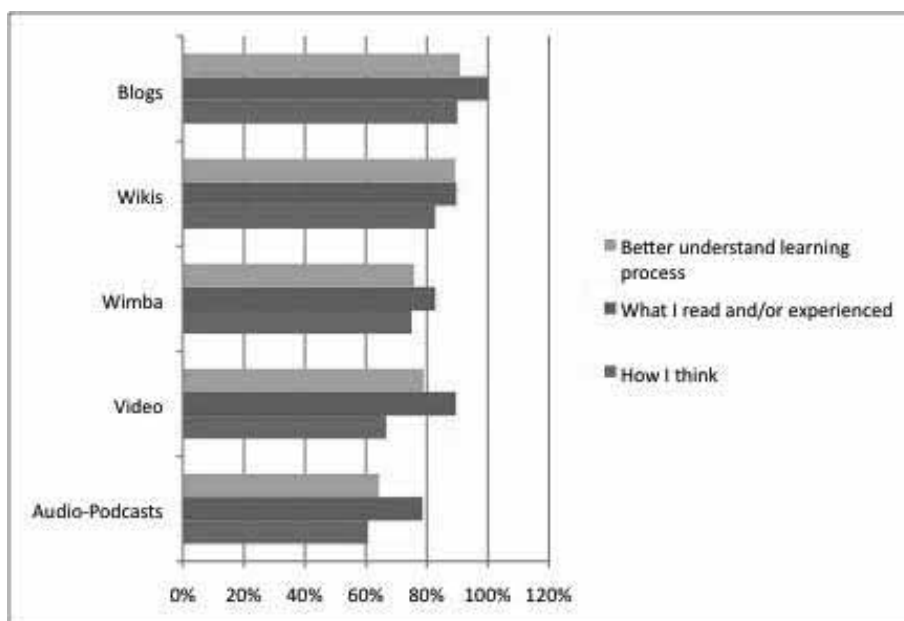
Figure 3 – Meta-cognition: Reflection on content/experiences, personal learning and thinking processes

In terms of collaborative information discovery and sharing, students' perceptions were that both blogs and wikis promoted collaboration. Students also perceived that blogs and wikis better enabled them to create content, with one student commenting that wikis "helped me organize my thoughts, make connections and gave me the opportunity to share my work with both the instructors and other students of choice" (MDE student). Another student responded that s/he was not impressed with social media tools in relation to classroom learning and his/her learning process, preferring instead the face-to-face classroom setting – which illustrates how using the tool influenced the student in thinking about and understanding his/her preferred learning process.

A key influential factor seems to be how the social media are actually used within the classroom. For example, within OMDE603, wikis are used by groups of students to collaborate together in creating learner-generated content (definitions). Within OMDE601, however, wikis are used by individual students to create e-portfolios and to store reflective learning journals – and not for collaboration purposes. This difference in how wikis were used could also influence why students perceived that wikis did not strongly promote collaboration or connectivity with other students (in OMDE601).

Active versus passive use of social media

Another consideration when evaluating the research results was student perceptions of the social media depending on whether the media was used for content creation (active) or for student consumption (passive use). In the classrooms studied, social media were used as shown in Table 3.

Table 3   Active/passive use of media in studied classrooms

Use	Social media
Passive (consumption only)	Audio/podcast, video/YouTube, Live Classroom (Wimba)
Active (learner-generated content)	Wikis, blogs

Figure 4 shows student agreement (strongly agree and agree) with the survey statements, according to whether the media was used passively or actively in the classroom. In assigning a value for passive use of the media, the mean of audio/podcast, video/YouTube, and Wimba (Live Classroom) was used. In assigning a value for active use, the mean of wikis and blogs was used.
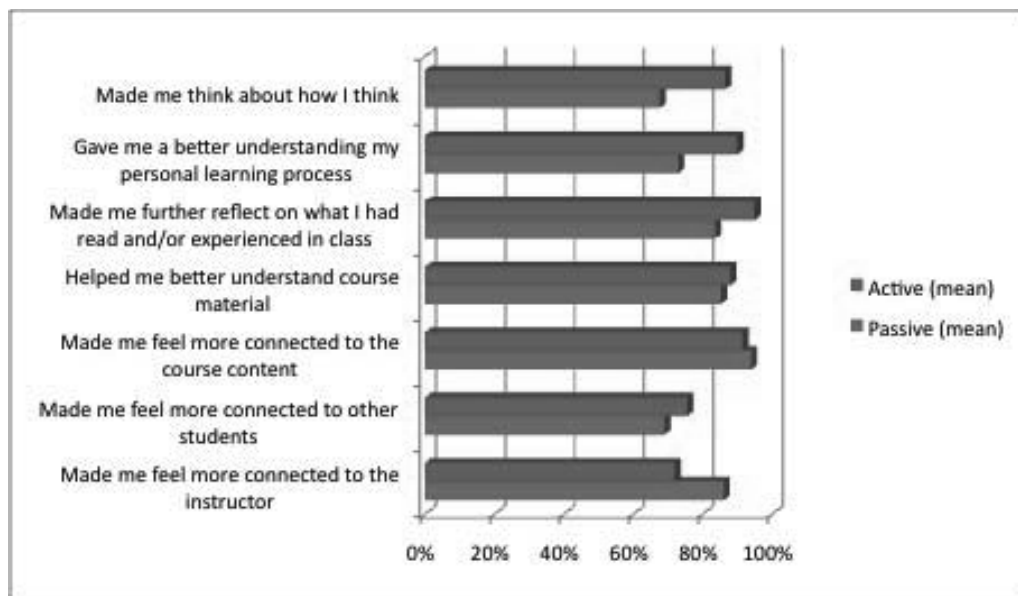
Figure 4 – Student perceptions: Active vs. passive use of social media

Substantial differences were found in terms of metacognitive activities. For example, active social media was more effective (from a student's perspective) in terms of helping students better understanding their individual learning process (active: 90%, passive 73%) and helping students think about how they think (active: 87%, passive: 68%). There was also a difference in whether the media helped the student better reflect on course content (active: 95%, passive, 84%).

In terms of helping students understand course content or feeling more connected to the course content, both uses of the media – active and passive – were similarly effective. Passive use of media made students feel more connected to instructors: 86% agreement (passive) as compared to 72% agreement (active). Active use of media, on the other hand, gave students a somewhat stronger perception of connectivity with other students (active: 76%; passive: 69%).

Based on these findings, active use of social media, that is, students generating own content, creates a stronger student perception that metacognition is occurring. Passive use of social media also supports metacognition, but not to the same degree. Active use of social media also supports more connectivity amongst students, while passive use seemed to give students a stronger sense of connection to the instructor. Student comments further supported these findings, such as the ones sampled below:

> *Web 2.0 applications make learning more relevant. I'm not just learning stuff to regurgitate - communal creativity helps to push my knowledge forward. Sharing and improving my material with feedback from others helps me to learn. I enjoyed the ability to interact with other students who I normally would have not "met" in a DE course.*

> *I really enjoyed using the social media format for classroom learning, instruction, and discussion. Considering we are students who learn at a distance, almost any form of social media that connects us to our instructors and fellow classmates in a learning environment is an absolute plus.*

In terms of ease of use, 86% of students found that media used passively was very easy/easy to use, 14% found ease of use to be average, and 0% found the media difficut to use. When using social media actively, 78% of students found that active use of social media was very easy/easy to use, 14% found ease of use to be average, and 8% found use of the media to be difficult.

However, when viewing the responses based on media type (Figure 5), active use of blogs was perceived as easiest for students, with 100% of students finding the media to be easy/very easy. Active use of wikis and Wimba live classroom was deemed the most difficult for students. From this data, one could conclude that ease of tool use does not correlate directly with how the media is used (actively or passively), but rather that ease of use is directly related to the type of tool and technology design.
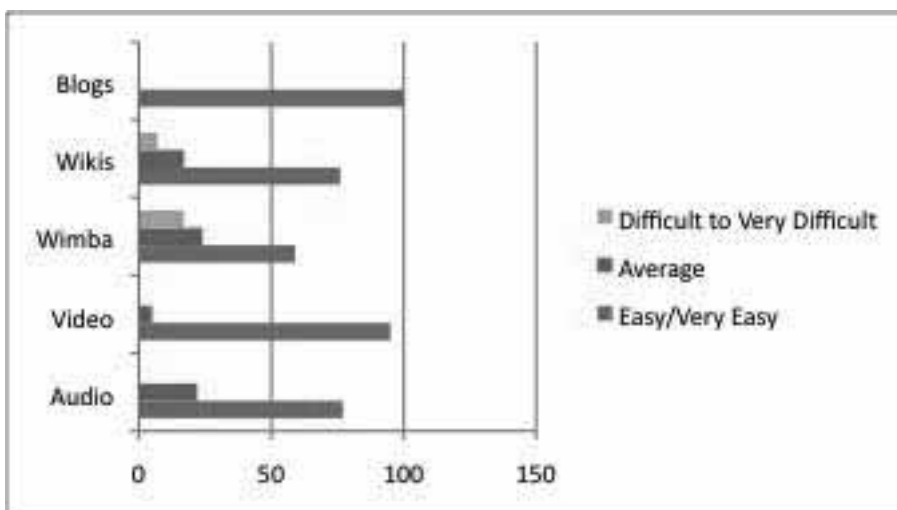
Figure 5 – Ease of media use: Passive vs. Active Use

Conclusions and Final Remarks

Understanding how social media supports student learning can provide guidance to instructors as they evaluate and select the most appropriate media for achieving course objectives and pedagogical purposes. From the research results presented here, we suggest some final observations:

- The social media that was perceived as adding the most pedagogical value across all values measured was also the easiest to use. This could lead to the hypothesis that the easier the media is to use, the more likely the student perception is positive in terms of the media's influence on the student's cognitive and metacognitive processes. However, the opposite does not seem to be true, that is, the more difficult the media is to use, the more negative the student perception of how the media influences the student's cognitive and metacognitive processes. It is important to consider such observations as plausible, and not yet conclusive, since the study has not considered the various options for using of each of the tools.

- Active use of social media (learner-generated content) can more effectively promote the development of cognitive and metacognitive skills than the passive use of social media (consumption). When considering that social media is currently and primarily being used in a passive way in the classroom (Weisberger, as cited in the Educational-portal blog, 2010), these findings would indicate that a shift in instructor approach is necessary in order to maximize the learning potential of the tools used.

- Synchronous use of technologies (whether social media or otherwise) continues to make students feel more connected to the instructor, other students, and content, thus reducing psychological distance.

- Through qualitative inspection of student input, it was clear that students' level of preparedness in dealing with technology (technology fluency), or students' internal barriers in dealing with technology (such as generational gap or professional background) directly influenced students' perceptions of the media.

The paper has discussed the use of social media tools within the MDE virtual classroom at UMUC. The use of such tools in a variety of settings, including teaching aids, class assignments and learning activities, has been described and analyzed. Research on student perceptions of the added value of social media within the online classroom has also been presented.

Experience in the design, development, and use of these social media tools within the teaching and learning environment has enabled MDE faculty to become not only more comfortable with trends in Internet technology, but also to become enablers and motivators for MDE students in their own pursuit and journey in the learning of and through technology.

This paper demonstrates the need to carefully consider instructional design and adult learning when planning and managing any projects and activities using web 2.0 applications. Overall, it is apparent that the road ahead is not clear of obstacles and is full of intriguing challenges. Technologies like web 2.0 are here to stay – and are evolving rapidly. A first step toward understanding the most appropriate pedagogical use of these emerging technologies is to evaluate them according to their added value to students' perception of their learning experience. It is time to embrace them within a controlled experimentation process and acknowledge and absorb the invaluable potential they bring to all stakeholders in higher education, in particular to this specific program. It is without doubt that we recognize that this program has changed in nature and form due to the influences of web 2.0 tools. Thanks to web 2.0 technologies a rich learning environment for lifelong learning has been unleashed, and its evolution will be a ride full of surprises, but is definitely not one to be missed.

References

1. AGOSTI, G.; CAVALLI, E.; GNUDI, A.; LORENZI, A.;& MALVISI, L. (2006). *The virtual classroom within blended learning: Using synchronous conferencing as a support tool.* In a paper presented at the Annual European Distance Education Network (EDEN), Vienna.

2. BONK, C. J. (2008) *YouTube anchors and enders: The use of shared online video content as a macrocontext for learning.* In a paper presented at the American Educational Research Association (AERA) 2008 Annual Meeting, New York, NY. Learning Retrieved from http://www.publicationshare.com/SFX7EED.pdf

3. EDUCATIONAL-PORTAL BLOG.(2010).Social media in the college classroom: Professor Corinne Weisgerber talks about the educational value of new media. Retrieved from:
    http://education-portal.com/articles/Social_Media_in_the_College_Classroom_Professor_Corinne_Weisgerber_Talks_About_the_Educational_Value_of_New_Media.html

4. HARASIM, L.; HILTZ, S.R.; TELES, L.;& TUROFF, M.(1998). *Learning networks: A field guide to teaching and learning online.* Cambridge, Massachusetts: The MIT Press.

5. HARRIS A. & REA, A. (2009).*Web 2.0 and virtual world technologies: A growing impact on ISeEducation.* In Journal of Information Systems Education, 20(2), 137-144. Retrieved from ABI/INFORM Global. (Document ID: 1755224731).

6. HAZARI, S.; NORTH, A.;& MORELAND, D. (2009). *Investigating pedagogical value of wiki technology*. In Journal of Information Systems Education. Retrieved from: http://www.allbusiness.com/technology/software-services-applications-internet/12384615-1.html

7. HOLMBERG, B. (2005). *The evolution, principles and practices of distance education.*Oldenburg, Germany: BIS-Verlag der Carl von Ossietzky Universität. Retrieved from http://www.mde.uni-oldenburg.de/download/asfvolume11_eBook.pdf

8. HUGHES, J. E. & NARAYAN, R.(2009). *Collaboration and learning with wikis in post-secondary classrooms.*In Journal of Interactive Online Learning, 8(1). Retrieved from http://www.ncolr.org/jiol/issues/PDF/8.1.4.pdf

9. KURTZ G.;& BAR-ILAN, J. (2010).*Usage of Wiki technologies as a collaborative studying environment.*A paper presented at the Second Wiki Academy Conference, Israel

10. LEE, M.J.W., & MCLOUGHLIN, C. (*2010). Beyond distance and time constraints: Applying social networking tools and web 2.0 approaches in distance education.* In G Veletsianos (Ed.), Emerging technologies in distance education. Retrieved from: http://www.aupress.ca/books/120177/ebook/04_Veletsianos_2010-Emerging_Technologies_in_Distance_Education.pdf

11. MCLOUGHLIN, C. & LEE, M.J.W. (2007). *Social software and participatory learning: Pedagogical choices with technology affordances in the Web 2.0 era*. In proceedings from ascilite, Melbourne, 2007. Retrieved from: http://www.ascilite.org.au/conferences/singapore07/procs/mcloughlin.pdf

12. MEISHAR-TAL H.; TAL-ELHASID E.;& YAIR Y.(2008*). Wikis in academic courses: An institutional perspective.* In Eshet, Y., Caspi, A., and Geri, N. (Eds.) Learning in the technological era (pp. 79-83), Chaise Conference on Instructional Technologies Research, Ra'anana: Open University of Israel.

13. PANG, L. (2009*). Application of blogs to support reflective learning journals.* Retrieved from http://deoracle.org/online-pedagogy/teaching-strategies/application-of-blogs.html

14. PORTO, S. & WALTI, C.(2008). "Expanding possibilities of student e-portfolios: The MDE experience". Proceedings of the 5th EDEN Workshop, Paris, October 20

15. PULMAN, A. (2007). *Blogging @ BU: IHCS case studies*. Centre for Excellence in Media Practice. CEMP Work in Progress.

16. VELETSIANOS, G. (2010). *A definition of emerging technologies for education*. In G Veletsianos (Ed.), Emerging technologies in distance education. Retrieved from: http://www.aupress.ca/books/120177/ebook/01_Veletsianos_2010-Emerging_Technologies_in_Distance_Education.pdf

17. WOLF, K.(2008). *A blogging good time: The use of blogs as a reflective learning and feedback tool for final year public relations students.* In Proceedings of World Association for Cooperative Education - Australian Collaborative Education Network Asia Pacific, edited by Australian Collaborative Education Network, 649-656, Australia: Australian Collaborative Education Network, 2008.

THE COST OF MARKING TIME:
ADJUNCT FACULTY AND ALTERNATIVE ASSESSMENT PRACTICES IN ONLINE LEARNING

Anne Forster, Forster & Gibson Pty Ltd, Australia

Introduction

Central to much of the research supporting successful outcomes and learner engagement in immersive online learning environments has been the importance of teacher presence. Emerging learning theory has also emphasised the importance of learners in online learning environments taking more control and responsibility for their learning (Shea & Bidgerano, 2008). Alternative assessment practices that encourage learners to be more actively involved are formative and include approaches that are open to peer collaboration, recognise social presence and encourage peer assessment (Garrison, D.R., Anderson, T., & Archer, W. 2001). The teacher remains important, as a critical actor, who co-ordinates and designs these activities, manages the discussions supporting them and evaluates the outcomes. The workload in online classes is increasing in response to the additional time demanded in the creative design and management of alternative assessment practices.

What is not increasing is the funding needed to support an expanding workload in immersive online environments. Institutions are forced to control costs by standardising systems and by using more adjunct faculty in online classes (Tipple, 2010). Adjunct faculty bring a diversity of interests and skills to their teaching and many are committed to designing the creative and adaptive responses that increase learning outcomes in their classes (Tait, 2004. O'Rourke, 2005). They simply absorb this increased workload and accept a diminishing rate of return for their services. The only other option is to limit the time expended and the effort required to build productive communities of learners. This paper addresses the challenges facing adjunct faculty who bear the costs associated with supporting alternative assessment practices in online and distance education.

The importance of teacher presence

Digital tools and online learning environments have liberated learners and teachers from the shackles of established orthodoxy about assessment and student evaluation. They have enabled the development of new ways of dealing with epistemology, presentation and interaction, the "three lenses" that are used to

align and compare classroom and online environments (Larreamendy-Joerns & Leinhardt, 2006). Central to much of the research supporting successful outcomes and learner engagement in immersive online environments has been the importance of teacher presence. Early distance education theory identified the significance of dialogue, empathy and conversation in sustaining motivation and supporting positive learning outcomes (Holmberg, 1974; Moore, 1973). More recent research (Garrison et al, 2001, Shea & Bidgerano, 2008) examining the effectiveness of communities of inquiry, finds that by creating a sense of belonging and learner comfort through managing social and teaching presence, faculty can set the stage to increase cognitive presence.

> *The study of the CoI (community of inquiry) model indicated that...70% of the variation in students' levels of cognitive presence can be modelled based on their reports of their instructors' skills in fostering teaching and social presence.*
> *(Shea & Bidgerano, ibid, p. 551)*

The capacity of teachers to understand learners and online learning, to take an active role in discussions, to provide relevant illustration and to connect with the learners' motivations and contexts, is of critical importance. Unfortunately, this critical capacity is under threat. Increasingly institutions are forced to rely on a part-time workforce enabled by technologies and business processes that support disintermediation, dividing the functions and roles of the teaching process to distribute and limit costs. How can social presence be preserved when it is contingent on a teaching presence that is distributed, discontinuous and part time?

Economic threats to teacher presence

Institutions must strive to keep costs down, and hourly paid staff must strive to optimise their hourly rate. Academic work is by its very nature, elastic, and academic freedom is not just about scholarship, it is also about autonomy and freedom from the perceived compulsive regimes of corporate style management. Tenure track positions are prized and full time continuing employment is hard to come by in Universities and colleges. A recent report noted that between 40% and 50% of teaching in Australian higher education is currently done by sessional or part time staff. (Percy, 2008). The 2010 Almanac of Higher Education, paints a similar picture in the USA where 49% of faculty members are part-time. (CHE, 2010)

Costs and revenue define what can be done in any organisation and economics is driving the increase in hiring of adjunct faculty. Public education revenue sources are no longer a stable supply, they fluctuate and are unpredictable, tied as they are to student demand, student ability to pay tuition, local and global economic conditions, and an increasingly competitive research and foreign student market.

Professor Fred Hilmer, Vice-Chancellor of the University of New South Wales, in a recent public address to staff (July 2010), noted that the university faced three major pressures:

1. an increasing percentage of costs go to cover the established continuing pay-roll;

2. there has been a decrease in the percentage of costs covered by stable sources of revenue and

3. there has been a steady growth in the percentage of costs covered by volatile sources of revenue such as tuition fees, research grants and philanthropy.

Thus, in order to manage the mix of staff relative to the kinds of revenue available, the University has to have the ability to limit the growth of fixed, continuing positions and increase their flexible workforce. Nowhere is this more obvious than in fully online courses "the fastest growing instructional modality in higher education" (Allen & Seaman, 2007).

Adjunct faculty form the core work force of the online learning industry. Institutions can control their staff mix, by not needing to give any guarantee of continuity to adjunct faculty. Costs are limited by not needing to contribute to employer liabilities such as health, life, or disability insurances or to retirement contributions. Savings on capital expenses come by not needing to provide direct infrastructure such as office space, consumables, communications and technology support.

Adjunct faculty gain certain freedoms. They are not limited to the amount of work they take on, they are free to work for more than one institution, are employed on a course by course basis and can teach one or more courses per semester. Adjunct faculty are a heterogeneous workforce with a multitude of reasons for taking on part-time academic work, including those that see it as a career pathway to gaining full time academic positions. A high proportion of adjunct faculty are research and post doc students, others are independent professionals who might manage a portfolio of income sources. Generally, part-time faculty take work depending on opportunity and need to make an income to cover costs of living and times of unemployment, to pay for insurances and or to secure a retirement fund. A certain percentage of adjunct faculty might not depend on the money for their livelihood, and are willing to contribute their time from a deep commitment and desire to give back to their profession. In return teaching has its own satisfactions. There are social and intellectual rewards in the process of engaging with learners. Teaching is a means of keeping abreast of developments and remaining actively involved with colleagues and a professional community.

The quality, availability and motivations of this adjunct workforce, while valued at the program level, are not necessarily critical to their employment at the institutional level. Adjunct faculty are by definition, not essential, to the organisations that hire them, and can be let go without disturbing the viability of the parent institution.

> **Adjunct**: *Something added to another thing but not essentially a part of it; as, water absorbed by a sponge is its adjunct (Webster, 1983). Something incidental or not essential that is added to something else, a person who is subordinate to another (Collins, 2003)*

Disintermediation and assessment processes

Institutions seek different ways of minimising staffing costs. Disintermediation of the teaching role and functions provides for a division of labour and the fragmentation of tasks and responsibilities. Academic teaching and learning covers a range of tasks and responsibilities including, design and development of the curriculum, production of learning resources in a range of media, facilitating online discussions, grading assignments, commenting on student work, nurturing social engagement in online classes, coordinating student activities and many more. Wherever possible, the lowest cost staff members are employed to do work that can be isolated, to minimise the engagement of higher cost faculty. Thus, it is not unusual to have technical staff take over the loading of instructional materials to a learning management system. Marilyn Whaymand (2004) argues that academic expertise is devalued with the introduction of e-learning management and methodologies and likens it to 1890s Taylorism and the advent of the production line and the demise of the skilled artisan. Academics, says Whaymand will, like those early factory workers, soon become detached from their work, if they are no longer responsible for quality or required for their expertise.

Grading, providing written feedback and commenting meaningfully on student work is regarded as one of the core skills required of teachers. It is also considered by many faculties in conventional modes of delivery, as the most demanding task and one of the least rewarding aspects of teaching. Teaching assistants have long been part of the on-campus support hired to relieve faculty of the more repetitive, mundane and automated aspects of grading. The time allocated for grading varies with the discipline and the type of task, and is immensely influenced by multiple factors. Conventional grading for on campus classes is more likely to be summative, cohort based, and managed as a series of peak workloads. Despite complaints it can be predicted, scheduled and got out of the way expediently.

Distance education theory and practice has made a deep examination of the importance of assessment and commenting on student work. Tutor feedback is central to the development of effective learning outcomes, student retention and the building of relationship between tutors and students. Early distance education practice was characterised by the exchange of papers for evaluation and were the sole channel of interaction before the introduction of telecommunications. Interactive technologies, new pedagogical understanding and social network tools enable radical developments in the immediacy and design of assessment. In contrast to conventional campus based assessment, alternative assessment methods in immersive online learning environments are not predictable, and require continuous vigilance and oversight. The instructor is "always on call" in the collaborative classroom. It is this elasticity of demand that makes part time teaching a full time pre-occupation.

Out-sourcing services

Institutions realise administrative and cost benefits in handing over some components of the teaching function to a single large business in a region with low local labour costs and large scale systems guaranteeing standard service delivery. It is far easier to manage a single contract for discrete tasks than multiple ones at the local level. Third party businesses have thrived from the development of the global e-Learning industry in their capacity to offer virtual services to education 24x7 in areas such as technical help desks, student advising and support, registration, and document handling. The move to manage grading services for online programs is a logical extension of the disintermediation of the teaching and learning process. For many decision makers at the institutional level it is consistent with the established on campus practice of hiring teaching assistants to assist with grading tasks. Institutional cost-saving measures are adopted without regard for the integral role played by assessment and the importance of commenting on student work. Responsibility for the development of social, teaching and cognitive presence in a growing number of institutions is now in the hands of accountants and purchasing departments.

The following quotation (Table 1) was supplied to the author from an online grading service based in South Asia with a number of US based institutions listed as clients. The company was asked for a rough estimate based on a graduate level online program in education, with classes of 20-30 people per semester. Current time allocated was given as one hour for the 2000 word case study and two hours for the 4,500 word project. To extrapolate from this quotation a class of 25 students having their two assignments graded at the high end of the scale would cost USD $2,625, or about 2000 Euros (September 2010 exchange rates).

It is difficult to draw direct comparisons because contract fees for sessional or adjunct employment vary by country, state, institution and level of appointment. The roles and responsibilities of adjunct faculty in immersive learning environments include many more hours devoted to course preparation, designing and managing activities, facilitating online discussions, mentoring and advising students, managing resources and administrative support, integrating student produced content, designing creative and alternative assessment processes and monitoring collaborative assessment projects. It would be very conservative to estimate that a part-time adjunct faculty would allocate at least 15 hours a week to a class of 25 students over a semester of twelve weeks duration to fulfil a role good enough to establish effective teacher and social presence. Pre and post class preparation and peak grading commitments could add a further five days (or 40 hours) to this workload. The number of hours per cohort per session on this estimate is 220 hours.

If we use a very rough estimate that in the USA adjunct faculty might receive about USD$3000 per session, the hourly rate for 220 hours of work is $13.60. In Europe, if we assume a sessional fee of 4,500 Euros, the hourly rate for adjunct faculty is 20 Euros.

Table 1.   Prices for off-shore grading services

	Same case	Same case	Unique case	Unique case
	Assessment on the rubric only	Assessment on the rubric plus feedback	Assessment on the rubric only	Assessment on the rubric plus feedback
2000 word case study (one hour)	USD 22	USD 35	USD 27	USD 40 (32 Euros)
4,500 word project report (two hours)	USD 44	USD 55	USD 55	USD 65 (51 Euros)
Total grading fee class of 25	USD 1650	USD 2250	USD 2050	USD 2625 (2000 Euros)

These costings are provided to shine a light on the diminishing rate of return that highly qualified faculty receive for their involvement in immersive learning environments. The scenario presented here includes an option to pay a disembodied "tutor" to provide comments on student work with no reference to the activities or discourse that might surround the assignment in the online discussions.

Context and institutional organisation

There are distinct differences in the regard and support systems extended to adjunct faculty by different kinds of institutions. Dedicated distance education institutions understand and have invested in complex systems to support and help retain their adjunct faculty (Tipple, 2010). The need to support part-time tutors and adjunct faculty with training, networks and resources is well accepted by distance education institutions with research on tutor support more often situated within the literature of support for online learners (Tait, 2004,). There is a growing recognition of the need to better understand the needs of adjunct faculty who often share the same sense of isolation and technical disadvantages of the learners they teach (O'Rourke, 2005, Brindley, Zawacki, & Roberts, 2003, Zawacki-Richter, 2004).

O'Rourke (ibid) in a paper describing program specific tutor support recognises that tutor support systems are needed to sustain the effort required of tutors and facilitators to create a positive learning context where "connectedness and competence" and "meaningful learning relationships" i.e., teacher presence, can exist. While there is a tacit understanding reflected in practice in these dedicated distance education institutions and programs this is not the case elsewhere. Dual mode and campus based institutions often do not have the scale to implement and sustain meaningful and effective systems supporting distance education learners nor the associated part-time workforce, and default to sharing campus wide services designed for learners attending classes on campus.

In describing the diversity of people who choose to work as adjunct faculty, it was clear that non financial benefits compensate some for the deficit in the pocket, and for others, the financial reward is not the main incentive. Tipple (2009) describes the approaches that can be taken by institutional and program leaders who want to leverage the positive attributes of adjunct faculty.

> *Ultimately, transformational leadership creates an environment in which online adjunct faculty feel inspired and motivated to fulfil the institutional vision, while situational leadership helps to tailor the individual member's development to provide the skills necessary to achieve these goals.*
> *(http://www.westga.edu/~distance/ojdla/spring131/tipple131.html)*

The appeal Tipple makes to leadership at the enterprise level is to harness the adjunct workforce by tapping their intrinsic motivation and dealing with their support needs. The paper identifies the critical part played by adjunct faculty in the success of a distance education university but does not deal with the elephant in the room. Namely, that perhaps the perception of being devalued is not from a lack of tailored support systems and inspiring leaders, but from knowing that their low hourly rate subsidises the parent University's survival.

The Australian study, the RED Report (Percy, ibid), identified that the need to better manage the contribution of sessional teaching staff was driven by quality concerns. Sessional staff contribute almost half of the teaching in the sixteen universities studied. There is increasing pressure on Australian Universities to comply with external audits of their teaching and learning quality in a competitive bid for bonus performance funds. Universities must managing the professionalization of teaching and plan the capability of the workforce in a dynamic environment. The immense changes that have impacted education over the last ten years have generated levels of innovation and engagement that have at times, appeared relentless. The Australian study found that policy and practices supporting sessional teachers was ad hoc and that academic management of sessional teachers was not well understood. An interesting point was that the sheer numbers of people employed in some programs places high supervisory and leadership responsibilities on program directors. Concurring with studies in the USA, as reported in Tipple (ibid), sessional, (adjunct) staff in Australia also feel that their contribution is undervalued.

Marking time. How long can this situation last?

How long can adjunct faculty deal with feelings of being undervalued and subordinate to their tenured colleagues when their own services are business critical? What impact does a workforce with feelings of growing resentment have on the quality of student learning in immersive learning environments? Marshall (2004) writing on managing the e-learning environment noted that local individualised efforts were not enough...

Nor is it sufficient to:

- Provide wide ranging cash incentives
- Mandate the use of ICTs in teaching and learning processes
- Establish expert centres to provide advice and technical support to individuals or organisational units,
- Develop and install complex technological infrastructure...

There appears to be no end in sight to the difficulties of obtaining enough public finance to support public education institutions. The Australian RED report (Percy, ibid) offered recommendations, case studies and resources in the following five domains:

1. Systemic and sustainable policy and practice
2. Employment and administrative support
3. Induction and academic management
4. Career and professional development and
5. Reward and recognition.

Quality practices in the processes of assessment expect some kind of moderation in the grading process to enable norms to be established and agreement reached on the standards expected in written feedback and other means of communicating constructive comments to learners. Current initiatives from around the world to devise better ways of supporting online adjunct faculty seem to fall far short. What is needed is a way of conceptualising this new way of working, one that is as profound as the new world of learning. In the meantime, will online adjunct faculty continue to mark time, as they pay the price for their dedication and passion for teaching, or will they, like new world learners, have to take responsibility for their own futures?

References

1. ALLEN, I. E., & SEAMAN, J. (2007). *Online nation: Five years of growth in online learning.* Needham, MA: Sloan Consortium

2. PERCY, A. (Ed), 2008. *The RED Report: Recognition, Enhancement, Development. The contribution of sessional teachers to higher education. The Australian Learning and Teaching Council an initiative of the Australian Government Department of Education*, Employment and Workplace Relations.

3. BRINDLEY,J.E., ZAWACKI, O., & ROBERTS, J.(2003). *Support services for online faculty: The providers' and the users' perspectives.* In U. Bernath & E. Rubin (Eds.), Reflections on teaching and learning in an online masters program – a case study (pp. 137-165). Oldenburg: Bibliotheks – und Informationssystem der Universitat Oldenburg.

4. CHE (2010) Almanac of Higher Education 2010. Increasingly, faculty members are part-time and nontenured *The Chronicle of Higher Education* August 22.

5. GARRISON, D.R., ANDERSON, T., & ARCHER, W. (2001). Critical thinking, cognitive presence, and computer conferencing in distance education. *American Journal of Distance Education*, 15 (1), 7-23

6. HARPER COLLINS (1991) *Collins English Dictionary*, Complete and Unabridged

7. HOLMBERG, B., & BAATH, J. (1974) *Distance education: A short handbook*, LiberHermods

8. LARREAMENDY-JOERNS, J., & LEINHARDT, G. (2006). Going the distance with online education. *Review of Educational Research*, 76 (4), 567-605

9. MARSHALL, S., J. (2004) *Leading and managing the development of e-learning environments: An issue of comfort or discomfort?* In R. Atkinson, C. McBeath, D. Jonas-Dwyer & R. Phillips (Eds), Beyond the comfort zone: proceedings of the 21st ASCILITE Conference (pp.1-19). Perth, 5-8 December. http://www.ascilite.org.au/conferences/perth04/procs/marshall-keynote.html

10. MOORE, M. G. (1973). Towards a theory of independent learning and teaching. *Journal of Higher Education*, (44), 661-679.

11. O'ROURKE, J. (2005). *The care and feeding of online facilitators and distance tutors.* Gaskell, A & Tait A. (eds) Reflective Practice in Open and distance Learning: how do we improve? Collected Conference Papers. The 11th Cambridge International Conference on Open and Distance Learning. pp 140-149. Shea & Bidgerano, 2008

12. TAIT, A. (2004). *On institutional models and concepts of student support services: the case of the Open University, UK.* Proceedings o f the Third EDEN Research Workshop, Oldenburg.

13. TIPPLE, R. (2010) Effective Leadership of Online Adjunct Faculty. *Online Journal of Distance Learning Administration*, Spring 2010.
http://www.westga.edu/~distance/ojdla

14. WEBSTER (1983). *Webster's New Universal Unabridged Dictionary*, Second Edition.

15. WHAYMAND, M. (2004) Is open and distance learning the Taylorism of the twenty-first century? The changing role of academics in open and distance learning environments. Proceedings EDEN Research Workshop, Oldenburg: Bibliotheks-und Informationssystem der Universitat Oldenburg.

16. ZAWACKI-RICHTER, O. (2004), *The growing importance of support for leaders and faculty in online education.* In J.E. Brindley, C. Walti, & O. Zawacki-Richter (eds.), learner support in open, distance and online learning environments (pp.51-62). Oldenburg: Bibliotheks-und Informationssystem der Universitat Oldenburg.

TEACHING WITH YOUTUBE: QUALITY ASSESSMENT OF ENGLISH AND HUNGARIAN VIDEOS ON PHYSICAL EDUCATION

Sára Tímár, Corvinus University of Budapest, Ágnes Kokovay, Semmelweis University, Andrea Kárpáti, Eötvös Loránd University – ELTE, Hungary

Introduction

Current e-learning paradigms focus on the digital empowerment of the individual. *Connectivism,* often called the learning theory for the digital age, invites teachers to utilise collective knowledge rather than developing the capacities of single individuals and *distributed cognition* that designs learning experiences based on knowledge existing within systems which are accessed through learners participating in activities using social computing tools as catalysts for collective creation and sharing. Within these new, virtual learning situations, the value of individual creations – be it expressive utterances or learning objects – are rarely questioned. "For working for nothing and beating the pros at their own game, TIME's person of the year for 2006 is you!" (Grossman, 2006, 2) The famous Time Magazine cover article for the person of the Year 2008 suggests that all "WeTube" (Jenkins, 2008) is highly valuable and important to recognise.

New Web 2.0 technologies and websites, such as a blog, wiki or YouTube, make new demands on learning, while they provide new and extremely motivating supports to it. Educators, however, are still reluctant to make use of the wide repository of social computing sites and use them as flexibly customisable educational resources. Doubts about quality and relevance are among the most important reasons for this reluctance – a feeling not shared by their students. Described as "Gen-X, Millennials, the Nintendo and Net Generation" (Tapscott, 1997; Tapscott and Williams, 2006, Oblinger, 2003; Olsen, 2005), these students have grown up within a world of pervasive technology including mobile phones, digital cameras and the internet. While students regularly utilise Delicio links, Podcasts, Blogosperes, Wikis, RSS feeds, Flickr images or YouTube videos for their school work, educators seem to need orientation and assessment tools as facilitators for making regular and satisfying use of products of the Social Web. The moving image is especially important in areas like Physical education where an integrated cognitive and psychomotor development is needed for successful learning. This paper summarises the initial phase of a research project aimed at producing a system for quality assurance, content identification and evaluation for YouTube video entries to be used as resources in Physical Education (PE). For this

discipline, a shift from classic vehicles used for learning today (lecture notes, printed material, PowerPoint, websites, animation) towards ubiquitous user-centric, user-content generated content seems to be inevitable.

The video clip is probably the most popular multimedia product that may also serve as a powerful motivational tool if used as not an end in itself but a means toward achieving learning objectives. An effective instructional video is far more than a television program; it is a teacher-to student instruction with the video film as a vehicle for discovery. YouTube is used as a resource mainly by language teachers who retrieve "slice-of-life" videos to create the context for acquiring communication patterns of a foreign culture. YouTube, however, is also a "student medium", that assures a two way delivery of content. Thus, a new "Learning Ecology" is created where Web 2.0 technologies can be explored in collaborative and (co)creative teaching and learning situations. Collaborative content creation coupled with peer assessment may result in deeper learning both in the discipline targeted and in innovative media use. For PE, YouTube offers authentic documentation of sports events as well as detailed instructions in techniques presented by sportsmen of a variety of ages and cultures. It contextualises and thus enhances the learning experience. However in order for a new learning tool to be adopted, educators must be aware of the possibilities of its use within a concrete framework. John Seely Brown (2002) uses *ecology* as a metaphor to describe an environment for learning: "An ecology is basically an open, complex adaptive system comprising elements that are dynamic and interdependent. One of the things that make an ecology so powerful and adaptable to new contexts is its diversity." Brown further describes a learning ecology as, "a collection of overlapping communities of interest (virtual), cross-pollinating with each other, constantly evolving, and largely self-organizing." (Brown, 2002)

This paper outlines some possible strategies for educators to search for relevant content, create meaning (tag), and incorporate them into the student learning experience.

Educationally relevant characteristics of YouTube

YouTube is a website for user-generated content (UGC), just like Flickr, FaceBook and Wikipedia. It was officially launched in December 2005 and from 2006, it is part of the "Google empire". It attracts far more users than any other online video sharing service (e.g., *vimeo*, *eyespot*, *jumpcut* or *ourmedia*, cf. Brouwers et al., 2008) but it offers a far better user experience (Online Video Site Survey, 2009). Each month, 200 million unique visitors browse the site worldwide, a third of them come from the United States (YouTube Survey, 2008). YouTube's best educational feature is its interface which enables users to have quick access to videos and to switch from one clip to a new one. Educators may embed YouTube videos in their

websites, weblogs, or social network pages as the professional media does (e.g., BBC News and CNN constantly encourage and regularly utilise such content).

Teachers can start their new multimedia educational resource by creating a "*channel*" – a user account page – and organise relevant, self-created or downloaded content into learning units. They may customize these private "educational channels" by providing personal information, presenting their own videos, linking to other websites and showing lists of favourites and subscribers. Students, in turn, may be encouraged to also develop thematic channels and / or comment on teacher-selected content. They may (or must) subscribe to the teacher's channel and receive a message when a new video is posted. Furthermore, the channel owner may invite users – fellow teachers of the same discipline, for example – to contribute or comment.

Thus, *a learning community* evolves and (inter)national networks are created. According to the company's data (YouTube 2008) for the United States, 47 % of the users are registered users who in principle interact. Lange (2007) however, observes a "participating gap" resulting from the lack of skills, insufficient hardware or bad first experiences. Also, inefficient tagging of videos will result in negative user attitudes and decide whether participation will take place, and what the quality of that participation will be. Halvey and Keane (2007) examined the use of community building tools that have been designed for interacting and sharing on YouTube and found that only a minority of the registered users employs these tools often. Users do not exploit the community facilities available on the website: they do not invite friends, do not comment on videos watched and do not tag uploaded entries. These data clearly indicate that a training program is needed if we intend to make YouTube an accessible tool for PE teachers.

But is it worth the effort? Do we find valuable educational input on this site? Clark and Mayer (2002) considering the appropriate use of any media to improve learning suggest that media must be aligned with expected learning or performance outcome; reduce cognitive load; exclude superficial text or graphics; be appropriate for target learner's learning literacy. Further rules apply for video learning (Xu Cheng et al., 2000): it shouldn't be passive, it should promote active viewing and maximize learning. YouTube seems to be an appropriate learning platform as it allows your students to watch the video in short segments – and teachers to target content towards learning goals; they allow ample opportunities for online and offline note taking and tagging, and thus develop observation and summarizing skills; they can be paused and restarted for a prediction of the evolution of the action sequence; the separate shutdown of audio and video features supports the reading of vocal and iconic clues; through the integration of the video in a learning material, the visualisation level of the content is enhanced far beyond ordinary, static illustrations. During the PE lesson, the video can serve as

an introduction or motivator for the hands-on activity to come. Video segments help focus on relevant details of a game or a movement. "By charging students with specific viewing responsibilities, teachers can keep students "on task" and direct the learning experience to the lesson's objectives. Be sure and follow-up during and after viewing the tape. When students have viewed the video consider: what interested them? What didn't they understand? How can they relate the program to their experiences and feelings?" (Duffy, 2008, 23)

Students can use several other social media platforms to enrich their YouTube experience. They may add comments / blog on the video, evaluate content on site (using the scoring device provided) or on a separate blogging environment the teacher develops. Therefore, video is an effective catalyst and facilitator for in- and off-classroom discourse and analysis. YouTube allows the learner to experiment in new media to convey information and knowledge. "Coupled with hands-on learning, a new media, video-enhanced curriculum can be invaluable for expanding the learning experience and by incorporating a medium that is as popular, forceful and familiar educators can tap into the existing enthusiasm towards this form of new media. Allow your students to create a short video as part of an assessment item instead of the traditional essay. Becoming involved in the creation of a video heightens a student's visual literacy, an important skill in today's electronic culture. The act of creating content, in virtually any form, is a valuable learning exercise" (Educause Learning Initiative, 2006, 37). Within higher education, Jenkins, (2007) introduces the 'YouNiversity' metaphor and suggests an intellectual network where students interact not only with professors, but with industry and community representatives. YouTube can also be used as a virtual library to support classroom lectures by providing students with access to video clips. (Conway, 2006)

Encouraged by case studies of successful educational use of YouTube and our own successful efforts with the introduction of Web 2.0 technologies in higher education, (Kárpáti, 2009), we decided to set up a community of practice for PE teachers and engage in the use of YouTube for the improvement of the quality of Physical Education. As a first step, we performed an assessment of relevant YouTube videos.

Case study: YouTube videos for Physical Education – evaluation of content and quality

Constructing the sample

When selecting our sample, we used a random sampling method employed by a recent large scale study on usage patterns of YouTube. (Xu Xheng et al., 2008) A search word structure was developed and discussed with an expert panel, and

relevant for PE search words were used to retrieve 9,754 YouTube video items. These were in turn analysed by genre, topic and student population to establish the setup of the sample. Out of this large collection, a sub-sample of 50 films was constructed. This sub-sample reflected the structure of the big collection as it included different film genres, production types and student protagonists in the same proportion.

If a teacher decides to look for some content related to Physical Education, the most obvious thing to do is using 'physical education' or 'sports' as key words to activate the search engine. In this case, we can easily get several million hits. With such an open search, we find that sports events dominate, PE content is scarce. However, this first impression may be misleading, because inappropriate tagging makes educationally relevant content hard to find. The research literature on YouTube has observed this lack of sharing intent with uploaders (Brouwers et al., 2008) and indicates that users have to be educated in making their content recognisable if YouTube was going to be employed for a specific purpose, for example, community building or teaching. If we use a combination of key words, the number of hits is reduced drastically, see Table 1.

Table 1. Search phrases and hits about Physical Education

Search phrase	Number of English language videos	Number of Hungarian language videos
Physical education	more than 5 million	64
Physical education + lessons	877	23 (+299 hits for the student slang version of the term)
Physical education + teacher	1270	18 (+25 hits for the student slang version of the term)
Physical education + games	678	0
Physical education + activities	1180	7
Physical education + in school	3210	
Physical education + class	1040	
Physical education + dance	622	
Physical education + teaching	877	

The Hungarian sample included all types of contents from advertisements to highly sophisticated methodological sequences and student experiences. In the Hungarian search, we found that a considerable number of student videos about PE activities can be found if we use the student version of the name of the discipline. These videos may equally be used for teacher training as they document interesting and pedagogically relevant classroom events. Also, student interest in making and uploading films about PE classes shows the motivational value of this resource for teaching adolescents – and being taught by them, while watching their keen observations about our methods and style.

After several filtering turns, we found the following content types that may be relevant for pre- and in-service education in PE:

- Notable moments of a game (e.g. a tennis match or the most beautiful goals at a football match, the demonstration of the playing style of a well-known sportsmen etc.)
- Games recorded in full (uploaded mostly in several parts)
- 'Funny moments' of sports activities
- Interviews with professional sportsmen or coaches
- 'Fan videos' about a team or a player
- Educational videos, e. g. 'How to play soccer?'
- Demonstrations of PE lessons; e.g. teaching different skills, how to teach different types of fitness movements

A peculiar thematic difference was observed at the first glance among the English and Hungarian language samples: the latter did not include items about sports activities for people with physical handicaps. A search with combined key words (PE and handicaps), however, resulted in an equal proportion of such films for the Hungarian sample.

Developing the assessment framework

We used expert rating as an evaluation method to assess a set of the video content relevant for educators' qualities: the *technical quality* of the film that is decisive for its usability in an educational setting, *professional content* that makes it a valuable learning resource, *methodological aspects*, that influence the way the film can be introduced before, during or after a PE lesson, and *aesthetic qualities* that contribute to the motivational effects and general appeal of the film. Scoring was conducted by three jurors with different professional backgrounds: a PE specialist, a teacher trainer and an educational researcher with no teaching experience. Scores given ranked from 1: low quality, to 5: excellent quality.

The selection of assessment criteria was influenced by our final objective of constructing a learning resource repository. The content of videos most useful for us always includes movement, so our first evaluation criterion was *technical quality:* Good PE resources have to capture the characteristics of movement in a sharp and clearly visible way. Our second criterion was *professional quality*. Images and narration have to convey a clear explanation of the sports event filmed, including both technical and tactical elements of the sports or games documented. To qualify as professionally relevant, methodology had to match the age group and a relation to the PE curriculum in the country where the video will be used (in our case, Hungary) was also an important point. Therefore, we introduced a third criterion, *educational usability*. As with digital learning resources, intercultural relevance (potentials for understanding the film in another country or culture, Blamire and Karpati, 2008) was an important factor in deciding over the use of the film strip for education. Finally, every communication act has to include an element of aesthetics to be appealing and motivating, so we also assessed the *aesthetic quality* of the films.

For each criterion, we defined levels of excellence from 1 to 5 and assigned points accordingly. For example, 1 score was given for *technical quality* of the film if both sound and image were barely intelligible, 2 if either sound or image were useful, 3 if both could be comprehended and the action followed with only some disturbances in between, 4 if the image was good and the sound mediocre or vice versa, and 5 if both were excellent. When judging *professional content*, we identified genres and content types that we found relevant for pre- and in-service PE education:

I: Simple tasks developing basic skills
II: Complex tasks developing special skills
III: Tasks to develop basic techniques of a sport
IV: Complex technical tasks
V: Tasks involving tactics
VI: Irrelevant content

Educational usability was defined according to the dominant methodological models characterising Physical Education today. One model focuses on working with small groups and devoting attention to individual skills development while presenting a sport or game in full, with all its rules and moves ("*global" methods*), and another that works both with small and large groups and teaches the sport or game in segments first and in full only if all elements have been sufficiently acquired ("*partial methods*"). Use of these methodological models depends on the phase in the learning process and the ability and previous experiences of students. We developed an evaluation system that integrates both approaches and makes it possible to reveal positive and negative aspects of films for both models. We gave 5 scores for the best documentation, 1 for an insufficient or misleading

representation and 0 if we did not find the methods represented in the film appropriate for educational use.

Aesthetic quality was also considered in our assessment. Here, we evaluated the communicative power and the appealing, expressive execution of the films. 1 or 2 scores were given for random, amateur shots with no or very little postproduction, 3 for partially edited and 5 for fully edited, narrated short films or accompanied by music. To our surprise, YouTube has a wide selection of even the highest level!

Assessing YouTube videos

Our reduced sample that reflected the content types of the large selection included 50 English and Hungarian films. Table 2 shows the assessment of English films.

Table 2: Assessment of English language videos

	Film title	Technical quality	Professional content (PE)	Educational usability	Aesthetic quality
1	Volleyball Serves	2	III.	2	3
2	Teaching Balls Skills, and Fitness	5	III.	5	5
3	Baseball: Crow Hop Technique	5	III.	5	4
4	School Events - Physical Education: Swimming Lessons	1	VI.	3	4
5	Physical Education Weights Training Lesson	3	IV.	3	4
6	Math+PE=Fun	5	I.; II.	3	4
7	SAQ® SCHOOLS Physical Education Solutions	3	I.; II.	4	3
8	PE O Level 100m Sprint Lesson	1	I.	0	3
9	Quality Physical Education Lesson - Effective Teaching Strategies	3	III.	3	4
10	Ultimate Instructional Video - Backhand	5	III.	3	3

Most films in the selection are about basic techniques (cf. film No. 1; 2; 3; 9; 10, see details of access in the Appendix). This shows the efforts of uploaders to provide content that most PE teachers need. In the English language sample, we found several examples for interdisciplinary films that featured the relevance of physical education for other disciplines. An example: film No. 6 shows how mathematics education can be supported by PE activities. The English sample shows excellent examples of work with an integrated class where children with physical handicaps work together with healthy children, often using the same tools (cf. Film No. 7). In Hungary, – and perhaps in many other countries in the world – integration is a difficult issue in PE, so YouTube videos may serve as a unique learning resource for this area. Several films are clearly student uploads that document funny or exciting moments of a PE class. These films may also be employed in the training of PE

teachers in other countries as they offer cross-cultural comparisons in the organisation of lessons, discipline, motivation and student assessment. (Cf. Film 4 and 6).

Table 3 shows the evaluation results of the Hungarian language sample. (Not all films originate from Hungary as this language is spoken in the Diaspora of the neighbouring countries as well.)

Table 3: Assessment of English language videos

	Film title	Technical quality	Professional content (PE)	Educational usability	Aesthetic quality
1	PE lesson in Lajosmizse town	5	I; III; IV	4	5
2	An irregular PE lesson	5	I	5	5
3	Lab school PE lesson for 2. graders (ages 7-8 years)	3	I; II	4	3
4	P.E. Hungary	3	I.	3	3
5	„have a look at our PE class!"	4	I; III	5	4
6	Adventure Park – an advertisement	5	I	3	5
7	Picking carrots at the Waldorf School of Szolnok town	3	I	3	3
8	Judo	1	IV	0	1
9	Matt jumps the bench	1	III	0	1
10	Physical education	5	-	3	5

As we compare the two samples, we may realise that there are no big differences either in technical or in professional quality, or in aesthetic appeal among the video uploads in the two languages and two (three, four, – with English language videos, it is hard to tell!) different educational cultures. In terms of content, more information about how to work efficiently and in an enjoyable manner with students suffering from handicaps may be found in the English collection. Otherwise, videos in both languages may be used in any country to improve the teaching of PE through the introduction of this openly accessible and immensely rich visualisation tool.

Further research: tagging the collection, facilitating the use of YouTube videos in education

With considerable effort, we found enough valuable content on YouTube to start our learning resource collection for Physical education. However, this effort could be considerably reduced if social knowledge construction on YouTube would include a *more sophisticated tagging operation*. Most films we encountered needed re-tagging to clearly indicate its content and scope. The importance of appropriate tags for YouTube has been emphasized in research efforts that try to identify ways of further development of this exemplary Web 2.0 site. YouTube's popularity lies in

its creative opportunities to share, respond to and author content. When compared with another genre of social knowledge creation, we find YouTube more flexible and playful. Wikis emphasise task-oriented collaborative editing of content and development of "collective" interlinked knowledge. Blogs, in turn, are language based and may not readily be understood by non-native speakers. The power of the image overcomes linguistic difficulties as most YouTube videos we assessed could be easily interpreted even if the sound was only partly comprehensible. Blogs, YouTube and wikis provide a means for the social construction of knowledge – but only if their use is easy enough for teachers and learners to use them regularly.

The introduction of the Hungarian Core Curriculum in 1995 that replaced a detailed syllabus, the character of Physical education has also been altered. Before, techniques of different sports were taught one after the other, now it is the development of skills and competences and not the acquisition of a set of rules in the centre of attention. During the last 15 years, however, very few learning materials have been developed to assist this shift of focus. Existing resources still focus on teaching traditional sports, and offer little guidance for skills development for new fitness sports and free time activities that parents demand. YouTube resources and an (inter)national community to collect, select and evaluate them would be extremely helpful for the modernisation of the discipline.

YouTube seems to have great potentials as a social site – in many respects, it belongs to web 3.0, the fully social web. "We have found that YouTube videos have noticeably different statistics compared to traditional streaming videos, ranging from length and access pattern, to their growth trend and active life span. We investigate the social networking in YouTube videos, as this is a key driving force toward its success. In particular, we find that the links to related videos generated by uploaders' choices have clear small-world characteristics. This indicates that the videos have strong correlations with each other, and create opportunities for developing novel techniques to enhance the service quality. (Xu Cheng et al., 2000, 1)" Research reported here intends to monitor and use this potential. Not just for teaching and learning, but also for motivating people to do sports "in the real world". An interesting research question is, if YouTube videos are used to present sports techniques, the mood of a game and a sporting lifestyle, will students be more willing to go out to the fields and courts and actually engage in sports? Does watching peer-produced videos develop a desire to be part of the action? Can YouTube content be an active protagonist of sportsmanship? These questions will be answered when the YouTube PE community is formed and video learning resources find their way into many Hungarian classrooms.

The problem of retrieval: inappropriate tagging

The variety of videos found in YouTube is really impressing, though the uploaders of films do not pay enough attention for tagging their content correctly. *Tagging is crucially important* for making any kind of content retrievable on the World Wide Web. If it is not done the right way, the 'audience' may never find the video even if they seek for the exact content type. There are several possible solutions for this problem. The first is that YouTube should provide a description or a help function for those who would like to upload something on YouTube. The description should contain guidelines about how to tag the videos effectively and should also motivate the uploaders to think for a moment with the users' mind when they are to seek for some content. Some examples should be found also such as videos that the uploaders can watch and after it some recommendations or guidelines with some extra discussion forum about tagging. This would provide the basis for creating the YouTube community the same way as the well-functioning Wikipedia community.

If the videos are tagged in the right way, users can find the related contents more easily and they can even detect connecting videos as well. At tagging the contents, we should use the name of the sport documented, the character of the video (e.g. PE lesson, match, notable moments etc.) and the main topic. Further tagging words are up to the uploaders' professional experiences. It would be also a good way to build educational repositories using YouTube videos if different channels were created dedicated to the different type of sports, the aim of the content and the target audience. Tagging and commenting on thematic collections shared as a YouTube "channel" may be an authentic way to consult colleagues who may have more experience in a given sport type or activity. Thus, young PE teachers, novices to the profession but not to internet use, might collaborate in a Social Web environment similar to those they frequent in their free time. Legal issues, however, also should be considered. In Hungary, copyright law regulates the use of internet based content, and similar international regulations should also be considered when developing a thematic channel and sharing it with trainee teachers and in-service colleagues.

A solution for making tagging more functional is the use of *professional 'You Tube taggers'*. Their job is to provide the already uploaded contents with the proper or recommendable tags in order to give more chance for the users to find the desired video in reality as well. The taggers could be hired by YouTube or they could be voluntaries who invest work in making the film collection a more accessible resource. Such a tagging enterprise may be the first step in the creation of a knowledge building community of teachers intending to make use of this free, vast and expanding learning content repository.

References

1. BLAMIRE, R. AND KÁRPÁTI, A. (2008): *CALIBRATE Project – Final Validation Report.* Bruxelles: European Schoolnet.

2. BROUWERS, J., CORNIPS, L., KALTENBRUNNER, W., NICOLLE LAMERICHS, S. (2008): Introduction. A Special issue on YouTube. *Cultures of Arts, Science and Technology,* Vol. 1, No. 1, 5-16

3. BROWN, J.S. (2002) Growing up digital: How the web changes work, education, and the ways people learn. *Journal of the United States Distance Learning Association*, Vol 16, No 2. [online] http://www.usdla.org/html/journal/FEB02_Issue/article01.html

4. CONWAY, C. (2006) *YouTube and the Cultural Studies Classroom*. http://www.insidehighered.com/views/2006/11/13/conway

5. DUFFY, PETER (2008). Engaging the YouTube Google-Eyed Generation: Strategies for Using Web 2.0 in Teaching and Learning. *Electronic Journal e-Learning* Volume 6 Issue 2 2008 (119 - 130) www.ejel.org/issue/download.html?idArticle=64

6. Educause Learning Initiative. (2006). *7 things you should know about YouTube*. [online], http://www.educause.edu/content.asp?page_id=7495&bhcp=1

7. GROSSMAN, L. (2006, December 13). *Time's Person of the Year: You*. Retrieved May 14, 2008 http://www.time.com/time/magazine/article/0,9171,1569514,00.html

8. JENKINS, H. (2007). From YouTube to YouNiversity. *Chronicle of Higher Education: Chronicle Review*, 53(24), B9–B10. 2008/02/from_youtube_to_wetube.html

9. JENKINS, H. (2008). From YouTube to WeTube... *Confessions of an ACA-Fan.*

10. KÁRPÁTI, A. (2009). Web 2 Technologies for Net Native Language Learners: a „Social CALL". *RECALL – Journal for Computer Assisted Language Learning*, 21. sz. 139–156.

11. M.J. HALVEY and M.T. KEANE (2007). *An assessment of tag presentation techniques.* Proceedings of the 16th International Conference on World Wide Web (WWW'07), 1313–1314

12. OBLINGER, D. (2003). Boomers, Gen-Xers, and Millennials: Understanding the "New Students". *EDUCAUSE Review*, Vol. 38, No. 4, pp36-40

13. OLSEN, S. (2005). *The 'millennials' usher in a new era*. [online] http://news.com.com/2009-1025_3-5944666.html

14. Online Video Site Survey (2009). *Ten video sharing services compared.* http://www.dvguru.com/2006/04/07/ten-video-sharing-services-compared/

15. SCHEPERS, B. & WOLTERS, A. (2008). Introduction. Special issue on YouTube. *Cultures of Arts, Science and Technology.* Vol. 1, No. 1, May 30, 2008

16. TAPSCOTT, D. (1997). *Growing Up Digital: The Rise of the Net Generation*. McGraw-Hill, New York.

17. TAPSCOTT, D. and WILLIAMS, A. D. (2006). *Wikinomics: How Mass Collaboration Changes Everything*. New York, USA: Penguin Group Publishers.

18. XU, C., DALE, C., and LIU, Y. (2000). *Understanding the Characteristics of Internet Short Video Sharing: YouTube as a Case Study.* http://scholar.google.hu/scholar?start=20&q=%22Xu+Cheng%22&hl=hu&as_sdt=2000

19. YouTube Survey (2008): *User survey of YouTube.* www.youtube.com/watch?v=LTpgSJuPPF4

Appendix

List of YouTube videos in the sample analysis

English language films

1. Teaching Physical Education UL, Lafayette KNES 350 Volleyball Serves 7:32 video.wm
   http://www.youtube.com/watch?v=R2DNFZKTpR0

2. Physical Education, Teaching Balls Skills, and Fitness 3:42
   http://www.youtube.com/watch?v=We2p5sdrV9M

3. Teaching Physical Education UL, Lafayette KNES 215 Baseball: Crow Hop Technique
   http://www.youtube.com/watch?v=6Ejp2dim_ng

4. School Events - Physical Education: Swimming Lessons 9:02
   http://www.youtube.com/watch?v=in-EF_tdXdM

5. Physical Education Weights Training Lesson 3 Mar 09
   http://www.youtube.com/watch?v=W68l8fQnxDE

6. Math+PE=Fun
   http://www.youtube.com/watch?v=pZ1lWQMaS1Q

7. SAQ® SCHOOLS Physical Education Solutions
   http://www.youtube.com/watch?v=h_r2ZglCNB0

8. PE O Level 100m Sprint Lesson
   http://www.youtube.com/watch?v=rs6gxX6hbps

9. Quality Physical Education Lesson - Effective Teaching Strategies
   http://www.youtube.com/watch?v=kO2E9Fm9rVc

10. Ultimate Instructional Video – Backhand
    http://www.youtube.com/watch?v=lBRQyBHGWLs

Hungarian language films

1. A testnevelés.
   http://www.youtube.com/watch?v=Pwpio_W0sXU

2. Máté szekrényt ugrik (tesi óra)
   http://www.youtube.com/watch?v=15y2zh4h6D8

3. P.E. Hungary tesi óra
   http://www.youtube.com/watch?v=ifbZ3Z-Noz4

4. Nézz be hozzánk 2.
    http://www.youtube.com/watch?v=BFh5RFJPjDo

5. Osztály testnevelés óra
    http://www.youtube.com/watch?v=S6hFuDhEx3I

6. Testnevelés óra, Lajosmizse
    http://www.youtube.com/watch?v=pzMaKhGW_7A

7. Rendhagyó testnevelés óra, Dienes Valéria Ált. Iskola.
    http://www.youtube.com/watch?v=YIqwIQAyjY8

8. Hirdetés: Bemutató: Kalandpálya
    http://www.youtube.com/watch?v=lT9RtUuqRpU

9. TF III/1 csoport judo óra
    http://www.youtube.com/watch?v=he3geSR1P_M

10. Répaszedés. Szolnoki Waldorf Iskola.
    http://www.youtube.com/watch?v=-Mor7c9LUL4

ONLINE SUPPORT FOR ONLINE GRADUATE STUDENTS: FOSTERING PROFESSIONAL IDENTITY DEVELOPMENT THROUGH WEB-BASED DISCUSSION AND SUPPORT

Martha Cleveland-Innes, Sarah Gauvreau, Athabasca University, Canada

While participation in online graduate study is on the rise, questions remain about the outcomes of online graduate school (Rourke & Kanuka, 2007). This research documents student reaction to a web-based support site for online graduate research students, entitled the Research Exploration and Discussion Site (READS). This site was designed to support research skill and knowledge development, and thus role identity formation as a scholar and researcher, for graduate students in an online distance education Master's degree program. Student interest in, and visitation to, the site was very high, but participation in site activities quite limited. Participation patterns and interviews with students posting to the site suggest that, while interests vary widely, students are looking for general support around usual student issues: relationships with faculty, career choices, access to financial and other student supports, academic resources and library information.

STUDENT ASSESSMENT OF AFFECTIVE VARIABLES IN AN INTERNET-BASED "INTRODUCTION TO QUANTITATIVE RESEARCH METHODS" COURSE

Yaacov J Katz, Yaacov B Yablon, School of Education, Bar-Ilan University, Israel

Internet-based learning is rapidly developing as an efficient ICT learning strategy. Latest internet-based methodologies include asynchronous technologies that provide access to learning materials without being limited by space or time. Sophisticated technological advances in the domain of pedagogical delivery have led to flexible, user-friendly, controlled and adaptive learning using internet-based platforms.

In the present study two groups of first year university students who studied in a compulsory "Introduction to Quantitative Research Methods" course were exposed to two different modes of instruction. The first group of students was exposed to internet-based learning and the second group received traditional classroom based instruction. The content studied by internet-based learning as well as classroom-based learning was identical and the students received the learning material weekly during one academic year. At the end of this period the students in the two groups underwent a standardized achievement test which examined their knowledge of the content matter studied in the course and they also responded to a questionnaire designed to assess their attitudes toward learner motivation, learner autonomy and learner control of the learning process

Results of the study indicate that there were no significant differences between students exposed to the two learning strategies regarding achievement, with students from the two groups achieving similar grades on the standardized achievement test. However, there were significant differences measured on the other research variables, namely learner motivation, learner autonomy and learner control of the learning process. The students who received internet-based instruction were significantly more positive on the three affective variables, than their counterparts who studied via traditional classroom-based instruction

It appears that internet-based learning is perceived by students to be more learner-motivating, to lead to a higher level of learner autonomy and provides for increased learner control of the learning process. The results of the study indicate the great potential evident in sophisticated internet-based learning technology from the motivation, autonomy and control of learning points of view. According to student assessment of the affective variables related to their learning it appears Internet-based learning can in fact become central in the learning process and serve as a routine platform for the delivery of learning materials at the university level.

FACTORS INFLUENCING LECTURER UPTAKE OF E-LEARNING

Jill W. Fresen, University of Oxford, United Kingdom

This paper reports on two research projects, one completed and a partial follow-up study in the early stages of investigation. The first study investigated a range of factors that directly affect the quality of web-supported learning opportunities. The outcome of that study is a taxonomy of critical success factors for quality web-supported learning based on six categories: institutional factors, technical factors, pedagogical factors, instructional design factors, lecturer factors and student factors.

The new study takes as starting point one of the categories of the taxonomy, namely lecturer factors. Using appropriate media effectively should be seen as part of the development of personal and teaching proficiencies. However the literature reveals that there remain various barriers to academics adopting learning technologies as a matter of course in their practice and that the uptake of institutional e-learning systems remains in the hands of enthusiasts. Academics need to be supported in investigating the use of appropriate technology to enhance and expand their teaching practices. A research study is underway at Oxford University (UK) to determine the level of uptake of the virtual learning environment, as well as the barriers and limitations that academic staff encounter in moving forward along the technology adoption curve (Moore, 1999).

CAMPUS ASSESSMENT

Markus Schmees, E-Learning Academic Network E.V. – ELAN, Germany

The Bologna Process and the related change-over to bachelor and master degree programs increase the amount of examinations at universities. In addition to this, the number of university-entrance diplomas is doubled in Germany in 2011, because most schools reduced education length from 13 to 12 years. Already now there are lots of students in highly requested courses so that the number of written examinations can delay the reviewing process. In the worst case, results are not even determined when the examination is repeated so that students do not know if they have to participate – not to mention the necessary preparation.

In the past, subsidies have been given to universities to build up an e-learning infrastructure or to introduce and establish learning management systems. Since then, technologies are available campus-wide and their use in blended learning is commonly accepted. It seems obvious to involve these technologies also to support and facilitate assessments and examinations. E-assessments support assigning, accomplishing and evaluating tasks, therefore they are related to preparation, execution and analysis of performance measurement. A (partially) automated analysis of submissions provides efficient feedback. Students can use this feedback for a better self-estimation and teachers to identify weaknesses, which are both considerable starting-points for further improvement. This paper describes the different characteristics of e-assessments. Depending on the chosen configuration, they can support different application areas campus-wide.

Even before university education starts, e-assessments can be used to give orientation and to counsel pupils. With help of online self assessments, pupils can test typical questions in an area of interest before committing themselves to the related course of study. Student advisory services use electronic tests to identify strengths and weaknesses of their candidates in order to recommend a proper field of study. Moreover, e-assessments can supplement university teaching in terms of blended learning to improve its quality. Admission examinations e.g. can assure skills that are necessary to visit an advanced lecture. Entry-level tests on the other hand help choosing appropriate courses by identifying a candidate's previous knowledge. Formative assessments accompany the learning resp. teaching process and help bringing it to a desired direction, whereas summative assessments try to measure a resulting learning success, e.g. as a final graded exam. In order to assure quality, e-assessments can be used to evaluate teaching or to build up closed pools of examination questions, which are e.g. used by students for further preparation. The addressed scenarios are presented more detailed in this paper.

Considering experiences from successfully finished e-learning projects, a method furthermore is presented to introduce and consolidate e-examinations and e-assessments at universities. Different elements are necessary to establish them sustainably and to strengthen already made efforts. These are e.g. a local contact worker, cooperation with other universities, cross-university assistance and a supporting network of experienced experts. These particular elements as well as related activities to introduce and consolidate e-assessments are also addressed in this paper.

MOODLE-BASED E-PORTFOLIO USED IN TEACHER TRAINING

András Benedek, György Molnár, János Horváth Cz.,
BME APPI, Department of Technical Education, Hungary

The activity forms (learning, work, entertainment) transforming due to the unexpected development of ICT show a radical change. In this process the transformation of traditional learning environments teaches some lessons that can be generalized through non-typical dimensions.

The paper analyses the recent introduction of a non-typical learning environment in an organization of higher education with significant traditions, as well as its typical influences on the users with a special regard to the formation of a new learning style. The electronic learning environment is the open source Moodle system.

When developing the system (http://moodle.org), the creators were driven by the basics of constructive pedagogy. Their goal was to create an ideal education/learning environment by means of the system shell. The creators of Moodle put a great emphasis on creating the possibility of a wide range of instructional activities. Therefore, there are several modules supporting cooperative activities and ensuring flexible possibilities for assessment while involving the students themselves in the process.

Using the SPSS Clementine data mining software the content of the log files produced during the use of course sheets can be processed. By doing so, it is possible to obtain more information concerning student behaviour, learning habits and the usability of the interface. By means of data mining it is possible to obtain information that could not be gained through other usability tests or queries. By means of the results of data mining and the analysis of the course sheets and curricula it is possible to identify effective education and learning processes and use the outcomes in the course of developing electronic curricula as well.

Many questions may arise regarding the usage of an electronic learning environment: 'Who uses it and for what?' 'When and how do they use?' 'How effectively can it be used?' By answering these questions it is possible to focus on usability indeed. The measurement of usability is time consuming. The quality of user interface and user satisfaction can be identified by methods of software-ergonomics (e.g. by expert methods – guideline review, GOMS, cognitive surveys, heuristic analyses, rule-of-thumb methods – or by interviewing users: e.g. questionnaires, personal interviews, observation, focus group discussions etc.). The analysis of system usage data can be suitable for this purpose. The 'by-product' of

operating e-courses can be used for assessment. Coping with system shell login problems of students first made us get accustomed to the usage of stored databases and log files. Then the identification and solution of particular problems implied the identification possibilities of general problems as well. Along with problem analysis it is also possible to reveal further correlations and identify additional factors of usability. By data mining this potential can be exploited.

The tracking of ongoing work is supported by the log files of the Subject sheets. The tracking tools are ready-made and partly built into the learning environment; users' activities, completed tasks and performance can be monitored by using statistics and graphs. Moreover, additional data analysis was carried out to obtain information on the progress of reaching the pedagogical goals connected to the course sheet usage.

All uses of the learning environment are recorded and stored in an appropriate database. By using this data mass, it is possible to prepare simple statistics without any special knowledge. For obtaining reports based on more complex data-correlations additional data filtering and data combinations need to be done. Therefore, data mining techniques were used for deeper data analyses.

The Clementine software package was used for answering the following questions:

- The detailed analysis of activities belonging to individual users (differentiated according to their roles) – quantities and distribution of all activities performed on the course sheet ,

- The figures of usage related to offered subject items – number of downloads, identification of habits and tendencies,

- The figures of the use of additional communication possibilities and other means,

- The detailed analysis of the course phases (individual learning, examining/testing, practice), and

- The identification of students' learning practices and strategies, its comparison with the results achieved.

Future plans

A further research field of interest is the classification of different learner or teacher activities. This way, user profiles can be determined and by means of examining the users' mid-course activities it is possible to predict the end-of-semester performance and learning support can be provided in time.

A further function is the enlargement of the capabilities of our Moodle portal, e.g. by means of the Mahara e-portfolio system, that can be interpreted as a sort of e-portfolio, homepage and social networking system.

DEVELOPING LEARNERS' INVESTIGATIVE SKILLS USING VALUES-BASED E-LEARNING PROGRAMMES FACILITATED VIA REGIONAL CAPACITY ENHANCEMENT HUB

Khar Thoe Ng, SEAMEO Regional Centre for Education in Science and Mathematics, Malaysia

Technology plays an important role in the recent years to facilitate science learning and cognitive-based information retrieval. Literature revealed that technology-enhanced learning initiatives provide useful guide for effective global learning initiatives involving problem-solving in contexts and participatory inquiry learning processes. This paper illustrates three cases of secondary science students' involvement in scientific investigation supported through four web-based learning portals with e-research/e-learning and exchange activities facilitated via a platform entitled '**S**outh **E**ast **A**sia **R**egional **C**apacity enhancement **H**ub' (SEARCH). Case study A and B are part of a bigger scale of an ongoing research study, whereas illustration on Case study C was extracted from the findings of a completed study. Case A, B and C students were guided via support tool [extracted from SP³ACEMAN (an abbreviation of '**S**cience **P**roject / problem / programme-based **A**ctivities in**C**orporating **E**xperiment **MAN**agement' programme)] with acquisition of key skills for Problem-based Learning (PBL) and development of investigative project using e-learning resources or interactive communication tools that promote learning via web personalization techniques and knowledge organization.

Students also participated in numerous scaffold instruction (SI) activities using off-line support tool guided by an evaluation rubric that enhance '**P**lanning, **O**bjectives / organization, **S**kills, **I**nformation procurement, **T**raining/transfer, **I**nvolvement / incorporating pedagogical content knowledge, **V**alues, **E**valuation / exchange / enrichment' (POSITIVE). Some of them were given prior exposure in Project-based Activities (PBA) facilitated via '**S**cience **A**cross the **W**orld' (SAW) web-based learning programme. Whereas many of the motivated and more successful students had also taken the opportunity to participate in the e-forum of MAAYS (an abbreviation of '**MA**gnificent **A**dvancement of **Y**oung **S**cientists') e-research portal that promote values-based education with a few of them submitted project proposals in *i2discovery* competition organized by MAAYS.

A few selected students from Case A and Case C also participated in the 5th and 7th 'Search for SEAMEO Young Scientists' (SSYS) congresses with the events were also archived in SSYS and MAAYS portals. Pedagogical issues for technology enhanced learning to support investigative activities were discussed, including elaboration on constraints faced mainly due to accessibility to Internet facility. Aspects such as values-based e-learning and motivation with evidence of students' enhanced higher order thinking were also deliberated.

TEACHERS' TRAINING IN THE ERA OF ACCESS – CONTENT, METADATA, AND RECOGNITION OF SELF-LEARNING ACTIVITIES TO SHAPE AN OPEN TRAINING OF TRAINERS MODEL

Juliana Raffaghelli, Paolo Tosato,
Centro Interateneo per la Ricerca Didattica e la Formazione Avanzata, Italy

Information Society dynamisms represent a challenge to traditional pedagogical practices: complex forces impact on teaching and learning conditions, as much as on institutional relationships, completely reshaping the basis of conventional teacher status and function. Even when teachers' have been recognized as main players in renewing education systems, they are frequently accused of lack of competencies to face the above depicted complexity (OCDE, 2009; Margiotta, 1997)[1]. Therefore, strong efforts are being made about the role of teachers in managing new organizational contexts, improving ICT and linguistic/intercultural competences, to become reflective/research practitioners with an active participation in instructional innovations and increase educational quality. This requires in time, rethinking teachers' training models, where more emphasis is needed in self-learning strategies and use of Web resources (Hargreaves, 2003)[2].

Our work illustrates a teachers' training approach (learning hypothesis and design, educational technologies adopted and specifications) that is based on the efficacy of Open Educational Resources (UNESCO, 2004)[3], interweaving them with flexible learning environments – from low to high levels of interaction with content and with communities of users – regarding learners' interest in the use and re-use of resources. The model is supported by an initial, participatory process of metadata, where several trainers work in a classification of educational resources, considering pedagogical practices and knowledge the resources promote. It hence allows trainers to use resources in several levels of interaction, attempting to generate a progressive development of contents from the initial resource. The learning processes enacted by this activity take to recognition translated into several levels of University certification.

---

[1] OCDE (2009). Education at a Glance, OCDE, Paris; MARGIOTTA, U. (1997), L'insegnante di qualità, Armando, Roma

[2] HARGREAVES, A. (2003). Teaching in the Knowledge Era, New York: Teachers' College Press

[3] UNESCO (1997). ISCED – International Standard Classification of Education

The leading hypothesis is that this approach promotes an active engagement in processes of knowledge building with impact on a) teachers' understandings about open education; b) teachers' specific competences in recognizing useful contents, and in use, re-shape and share them. This would in time lead to a perception of participation and creation of new educational environments, where Open Education is the kernel.

THE CHANGING ROLE OF THE INSTRUCTOR IN THE DIGITAL AGE

Michael Beaudoin, University of New England, United States of America

In this era of student-directed, collaborative, constructivist learning, augmented by social networks and other virtual environments that tout learner autonomy, the role of instructors in online education is undergoing further evolution. This presentation is a sequel to my prior work on the 'invisible' learner, intended to examine what, and indeed if, there remains a useful and meaningful role for the increasingly 'invisible' instructor in online settings. It may well be, in this current climate, that the cliché "Guide on the Side" may soon be replaced by an arguably more appropriate phrase: "Guide on the Outside". Factors that contribute to this phenomenon, such as the proliferation of new technologies, the increase of adjunct faculty, the cachet of self-directed learning, a changing clientele, attitudes regarding assessment, etc. are reviewed. Findings from a major international study of student perceptions of what is critical for success in online courses are noted, including the opinion of many respondents that the role of instructors is a relatively minor factor for achieving success in online learning experiences. The implications of these trends for the future of the teaching-learning relationship, and more specifically, the role of the professoriate is also considered.

EMBEDDED QUALITY:
A CULTURAL APPROACH TO QUALITY IN E-LEARNING

Davoud Masoumi, Göteborg University, Sweden,
Abasalt Khorasani, Shahid Beheshti University, Iran

In light of the growing number of e-learning settings and virtual institutions across the world, there is an urgent need to understand what the quality in e-learning is and how quality of e-learning could/should be articulated in different cultural contexts. This contribution traces quality of e-learning as a cultural and cultural-pedagogical issue. Taking quality in e-learning as cultural artifact in which embedded in a specific cultural setting, I will argue that how culture and cultural-pedagogical issues are shaping and influencing on developing and implementing quality in e-learning. Drawing on the literature a conceptual model, cultural-sensitive e-quality model, is presented to exemplify how the cultural and cultural-pedagogical issues can be built in and integrated when developing and implementing an e-quality framework in higher education in general and e-learning in particular.

DEVELOPMENT OF A
SELF-ADAPTIVE ENVIRONMENT FOR LEARNING

Francesco Agrusti, University Roma III, Italy

A critical issue in every distance learning project is the type of teaching and evaluation model we are referring to. The research project Orbis Dictus, implemented by the Department of Educational Design (DIPED) of Roma Tre University, has as its main reference the general interpretative model described by Johann Clauberg in his *Logica vetus et nova* (1654). The German philosopher indicates three main directions to follow, each one identified by a question. This work shows a first attempt to answer the last one: *Quomodo quid tradere conveniat* (What are the operative solutions usable in teaching) and it focuses on the resources that the technological development has made available for teaching to date. It will also illustrate the new resources specifically designed in our research project.

Nowadays, the broad label e-learning, acronym for electronic learning, generally identifies the use of technology to deliver learning and training programs. Although the existing technological solutions provide a good implementation of this new technological approach, they also lead to a frozen interpretation of the learning process. A true learning interaction between instructors and learners through a technological system can be obtained allowing users to take choices in order to regulate the learning processes. At the same time, in this scenario the choices are influenced by the evolution of the processes themselves, and so on.

At present, common educational platforms do not allow this kind of learning interaction. Software applications currently in use can perfectly manage the process of creating, editing, storing, reusing and delivering e-learning content but they lack of the specific interaction described above.

One of the main aims of the Orbis Dictus project is to define and develop a new technological model for learning interaction applied to new technologies. This model will have a modular structure. At least two different levels compose the conceptual design. At the lower level, the core operations and their extensions are implemented. These are used to implement functionalities like: platform set up, creation and management of users, classes and courses and so on. These functionalities are totally transparent to the user. At the top level, the tool requires a user interface to obtain and parse input from the user. He or she will have to describe his/her technological environment to create and manage the courses. The user will also have to define learners' technological environment to attend the

courses (e.g. a laboratory). The other modules provide the functionality to interact with databases and to generate an output standard object that can be exported to other programs through the user interface.

The main aim of the Orbis Dictus project is to design a tool useful for every need and focused on the learning approach at the same time. In other words, a complete but functional and user-friendly technological model for learning interaction (both teacher-friendly and student-friendly) will be created.

This tool presents all the essential characteristics to allow teachers to be totally free when choosing the contents they want to deliver and the kind of interaction they want to have with their students. Usually users are overwhelmed by platform functionalities and it could be very difficult and time-consuming for a not experienced user to create his/her course without losing efforts into understanding what functionality he/she really needs to achieve his/her goal.

We designed a tool that meets the requirements of learning interaction between instructors, learners and the technological system described above: as for the former, the features available in the platform depend on what user chooses in the wizard; as for the latter, the platform will configure itself to assure the best course experience based on what is available.

TOWARDS FEEDBACK PERSONALISATION IN ADAPTIVE ASSESSMENT

Christian Saul, Fraunhofer Institute for Digital Media Technology, Germany
Mari Runardotter, Luleå University of Technology, Sweden
Heinz-Dietrich Wuttke, Ilmenau University of Technology, Germany

Nowadays, personalisation is increasingly becoming a crucial factor at many areas of our life including education, health care and television, because almost everything is designed to accommodate differences between individuals. Personalised support for learners becomes even more important, when learning takes place in open and dynamic learning and information networks. It is believed that personalisation in education raises the motivation and interests of the learners, which are critical success factors in the learning as well as in the assessment process.

Feedback plays a central role in the assessment process, because it provides information about the current areas of strength and weakness of the learners. It can be regarded as the so called speaking tube of the question and test evaluation and thus able to communicate the result of the assessment to the learners as well as other information, which can contain reasons for incorrect answers, hints or advices for continuing the assessment.

Although only a few studies were carried out, the results of the experiments seem to suggest that the perspectives of feedback adaptation for web-based systems are promising, in particular for online-assessment systems. The analysis of adaptive assessment systems in this paper was caused by understanding the need of assessment adapted to the learners' individual context, prior knowledge and preferences. Taking into account such criteria in order to personalise the assessment may result in more objective assessment findings. Although these systems adapt the assessment process of each learner resulting in presenting different questions, they still enable a better comparability between different individuals. Moreover, they reveal the current areas of strength and weakness of the learners more precisely.

This paper presents a comprehensive analysis of feedback personalisation in five established adaptive assessment systems (SIETTE, COMPASS, PASS, CosyQTI and iAdaptTest). Each of the regarded adaptive systems estimates the knowledge level of each learner and based upon selects appropriate questions using different approaches and techniques. There are systems using the number of questions answered correctly and the difficulty level of answered questions, such as SIETTE,

COMPASS and PASS. By contrast, other systems such as CosyQTI and iAdaptTest define rules, which allow selecting questions dynamically. The results show that they provide possibilities to incorporate feedback in the assessment process. However, the results also show that these systems are far from being able to adapt the feedback to the learners' individual context, prior knowledge and preferences, because personalisation is still insufficiently implemented or even not addressed.

Due to the fact that it is a tremendous effort to subsequently integrate the personalisation aspects of feedback into the different systems under consideration, future work will address this issue right from the beginning by implementing a new adaptive assessment system providing personalised feedback. The new system combining the functions of existing legacy systems and overcoming their current weaknesses by taking into account more sophisticated feedback techniques and methods. Moreover, the proposed 3-dimensional feedback classification helps identifying and addressing the potential of personalisation that feedback actually has.

DIGITAL ASSESSMENT IN MATHEMATICS, WIRIS QUIZZES

Carles Aguilo, Ramon Eixarch, Maths for More, Spain

Digital assessment encompasses many of the technological challenges which are currently being solved and improved by many content providers, platforms and technology partners around the globe. And digital assessment in a scientific field has some particularities that add new challenges to the already existing for the general approach. To make this clear, let us start by a simple example: an open question whose correct answer is x+2 would already create such a situation. What if the student replies 2+x? The assessment system must take the answer as a correct one, even though it is not the expected answer. And this is only a very simple example: A real-case will imply evaluating complex expressions and identifying equivalencies... A mathematics tool is then a must.

Working with mathematics comes with challenges, but also with prizes, since the assessment system can do a lot more than evaluate the answer for mathematical equivalence. We propose the combination of Moodle Quizzes with Wiris as a solution that offers this mathematical approach and that comes with some helpful features that make learning more effective and content production more powerful. Wiris doesn't create new question types, as this would be an aggressive approach to Moodle, but modifies the existing ones that are relevant to the scientific fields, which are *True/False*, *Multiple choice*, *Short answer*, *Matching*, *Essay* and *Cloze* (or *Embedded answers*).

The teacher can add random variables and random graphics in the questions, answers and feedback of the questions in a very simple manner, simply by calling either of them (a variable or a graphical representation) with the syntax *#name*. All the computations are then carried out in a single place and its results can be called at any part of the question. This means, in particular, that the answer to a random exercise is know by the system, so the verification of the answer and the marking of the student are automatic.

What regards the construction of the mathematics inside the questions, Wiris has a powerful and extremely natural programming language, where almost everything is written as you would do it on paper. Besides, you can use mathematical elements in your function definitions and in your control flow statement, for example, which adds power to already known structures.

From the side of the student, the most appreciated features are a WYSIWYG environment, the naturalness of the mathematics in the solution and, for the open answers, the syntax check feature. The first two avoid adding complexity to their maths and don't require any specific training, as maths is the same on the blackboard and on the screen. The mathematical syntax check controls in real-time the coherence and mathematical soundness of the expressions introduced as an answer, so the student has at any time the reassurance that syntax mistakes are not going to affect his results.

ASSESSMENT AS A STRATEGY TO PROMOTE E-LEARNING QUALITY: LESSONS LEARNED FROM HIGHER EDUCATION POSTGRADUATE MODULES

Maria Joao Loureiro, Lucia Pombo, Antonio Moreira, Universidade de Aveiro, Portugal

The literature indicates that online discussion and interaction is a key issue in e-learning contexts. E-learning, unlike paper-based distance education, allows the interaction of learners with peers, teachers and content through the use of computer mediated communication tools, that entails the learner interaction with the technology in use. Since e-learning is a relatively recent, for many students, teachers, and researchers, interaction using online tools, is an innovation, with only short developmental history, upon which e-learning quality can be based. However, the interaction between students and teachers does not always imply e-learning quality. E-learning quality requires, among others, the engagement of students and teachers in online collaborative activities and giving the students the opportunity to share and discuss issues aligned with their needs, to take responsibility for their own learning, to generate content and to develop a variety of competences, such as retrieving and information sharing, questioning, academic writing and problem-solving. Accordingly, active learning strategies are an example of how to promote enhanced understanding, retention and critical thinking. Although the identification of the benefits of online interaction tot promote e-learning quality, and the availability of guidelines) to engage students in online discussions, several studies report that students often lurk rather than contribute to the discussions and interaction is sometimes superficial not involving critical and creative thinking strategies. Given that, as suggested by some authors, passive lurking in online discussion may have no implications in student learning outcomes, one can ask – what can be done to facilitate more efficient interaction? To answer to that question, one possibility is the use of teachers and peer formative assessment strategies. While a great deal has been written on the advantage and benefits of online teaching, little is known on how assessment is implemented in online classroom to monitor and inform performance and progress. The literature indicates that performance-based assessment, writing skills, interactive assessment and learner autonomy are major assessment aspects to inform teaching and enhance learning. If one of the major roles of online instruction is to increase self-directed and active learning, web-based classroom assessment should be designed and practiced to impact learner autonomy. Portfolio assessment, self assessment and peer-review are some forms of assessment which encourage students to engage continuously in their and their peers learning, fostering a deep approach to learning. Key elements of these approaches are reflection, feedback, and

integration of learning and assessment. Although that, the potentialities of teachers and peer assessment in online contexts seems to not yet been fully tapped.

This paper focuses on the authors' experiences and is a contribution to the problem – How to promote interaction and quality e-learning that involves high order competencies, in online contexts exploring assessment strategies? Three b-learning modules in which assessment strategies were explored are presented. For each module, we describe their contexts, the ICT tools in use, how assessment strategies were used and present random thought/reflections related to the results of the used of assessment strategies as a tool to foster learning. In the final session, we present the assessment principles underlying the experiences and put forward the lessons learned from them.

COMPARISON OF SELF-EVALUATION TESTS AND EXAM RESULTS IN TECHNOLOGY OF PROGRAMMING

Sándor Kaczur, Éva Pamuláné-Borbély,
Dennis Gabor Applied University – DGAU, Hungary

In this paper the authors analyze the influence of self-evaluation tests on exam results in programming. Behind our investigation there is a fundamental pedagogical question: is practicing independently using the self evaluation tests available from a Learning Content Management System (called ILIAS) enough for a successful exam or from the complex structure of the programming we can derive that practicing is just a required condition but it is not sufficient for a successful exam?

To answer this question we evaluated the results of the programming exams at Dennis Gabor College (DGC) with statistical methods following 512 students who previously had been practicing using the electronic curriculum of programming.

Our analysis is based on the following data: 371 students who tried to take the exam 617 times answering 3702 questions in all. During the test evaluation process our focus was on the results of the self-evaluation tests grouped by topics and we compared the self-evaluation tests with the results of the exam.

As the whole curriculum is covered by different types of questions, by practicing the self-evaluation test students are able to prepare effectively from the following topics:

- Exception handling;
- Object-oriented paradigm;
- File handling;
- Swing components and event handling.

From our result, we can also conclude that in the frame of programming there are some special topics that beyond the practice demand some special abilities like abstraction, creative thinking, problem solving or analytical ability.

Our programming curriculum contains two such topics:

- Unified Modelling Language;
- Collections.

Beside the currently applied evaluation matrix, we are going to present four other alternative methods which can be applied for test-evaluation. In each case we are going to analyze the effect of the matrix on the output of the exam.

THE PRACTICE OF E-ASSESSMENT AT SZÉCHENYI ISTVÁN UNIVERSITY

Lajos Nyéki, Széchenyi István University, Hungary

The paper introduces the practice of e-assessment at Széchenyi István University. Our university uses the COEDU e-learning system for distance education. We have now about 3000 students using the COEDU system.

The paper presents the definition of e-assessment, and describes the meaning of the acronyms connected to e-assessment.

It analyses the different types of e-assessment. The author introduces the characteristics of formative and summative assessment; diagnostic and qualifying assessment; norm-referenced and criterion-referenced assessment, and self-assessment.

The study compares assessment versus evaluation. It describes the similarities and the differences too. It presents the hierarchy of assessment process components, and figure indicates a number of methods to evaluate the quality of learning, teaching and curriculum.

The author presents the Smith and Ragan instructional design process model for distance education. He describes the phases of the model, and its usability in e-learning based distance education. The author characterizes the problem of instructional alignment, and indicates that assessment is an important tool to solve this problem. The paper emphasizes an important aspect of instructional design, the analysis of learner characteristics.

The study analyses course design in e-learning based distance education. The author describes the process of course design. The paper presents the use of Mager type behavioural objectives, and Bloom's revised taxonomy in preparing measurable objectives. The author describes the modular structure of e-learning courses in the COEDU system, and analyzes the possibilities of formative assessment and self-assessment.

The paper presents Goodyear's model for the theoretical framework of educational design and describes its relations to the course design practice used by the author.

The study presents the test item types used in e-assessment in the COEDU system: Multiple Choice Question – Single Correct Response, Multiple Choice Question – Multiple Correct Response, True-False Question – Multiple Statement, Fill- in-the - blanks – Text Entry, Fill- in-the-blanks – Number Entry, Relation Analysis, Sequencing and Fill-in-the-table – Number Entry. The paper describes the practice using these test item types.

Finally the author describes the future plans to develop the e-learning system. There is a current project to develop an item bank function and a new exam system. Another project will be the development of a new course editor application with a built in equation editor. There is a need to the automatic correction of open-ended questions. Hungarian language uses accentuated letters, and uses declension, so the solution will be probably more complex than in the English spoken world.

DUCKING AND DIVING: A RESEARCH TO PRACTICE APPROACH

Gilly Salmon, University of Leicester, United Kingdom

The role of the Media Zoo is as a forum both for excellent practice in the use of learning technologies and the dissemination of the research findings of the Beyond Distance Research Alliance at the University of Leicester. It directly addresses the University's aspiration to lead on innovation for learning and teaching. Essentially the idea is that new and revised learning and teaching of all kinds use the latest, future-proofed thinking to sustainability and student experience

Within the context of the United Kingdom Higher Education sector in 2010 and beyond, the paper explains the metaphor of the Media Zoo before showing how it is central in continuing to drive institutional change through its advocacy of learning innovation in what is likely to be a very competitive period in the sector.

This paper links with my presentation during the EDEN Budapest research conference, where examples of the impact of research to practice on the student experience will be shown.

THE COST OF MARKING TIME:
ADJUNCT FACULTY AND ALTERNATIVE ASSESSMENT PRACTICES IN ONLINE LEARNING

Anne Forster, Forster & Gibson Pty Ltd, Australia

Central to much of the research supporting successful outcomes and learner engagement in immersive online learning environments has been the importance of teacher presence. Emerging learning theory has also emphasised the importance of learners in online learning environments taking more control and responsibility for their learning (Shea & Bidgerano, 2008). Alternative assessment practices that encourage learners to be more actively involved are formative and include approaches that are open to peer collaboration, recognise social presence and encourage peer assessment (Garrison, D.R., Anderson, T., & Archer, W. 2001). The teacher remains important, as a critical actor, who co-ordinates and designs these activities, manages the discussions supporting them and evaluates the outcomes. The workload in online classes is increasing in response to the additional time demanded in the creative design and management of alternative assessment practices.

What is not increasing is the funding needed to support an expanding workload in immersive online environments. Institutions are forced to control costs by standardising systems and by using more adjunct faculty in online classes (Tipple, 2010). Adjunct faculty bring a diversity of interests and skills to their teaching and many are committed to designing the creative and adaptive responses that increase learning outcomes in their classes (Tait, 2004. O'Rourke, 2005). They simply absorb this increased workload and accept a diminishing rate of return for their services. The only other option is to limit the time expended and the effort required to build productive communities of learners. This paper addresses the challenges facing adjunct faculty who bear the costs associated with supporting alternative assessment practices in online and distance education.

UNDERSTANDING THE VALUE OF E-LEARNING IN BUSINESS ADMINISTRATION IN HIGHER EDUCATION

Thierry Garrot, Catherine Papetti, University of Nice Sophia Antipolis, France

In the field of higher education in Business and Economy, this paper constructs a framework of e-learning valuation for students and users and its typology of product and service benefits compared with traditional education. Then, the paper presents a comprehensive model of customer value for the consumer market integrating consumer values, product benefits, financial and non financial costs of consumption. Finally, we analyze relations between satisfaction and holistic value. The implications of our model tests for marketing and communication strategy for e-learning programs are discussed.

THROW AWAY YOUR TELEVISION! – INTERACTIVE MOVIE EDUCATIONAL CONTENT AND 3 SCREEN CONVERGENCE

Asen V. Asenov, ASECO Consulting Ltd., Bulgaria

Historical overview

In the mid-80's the first computer-based educational products, the so called CBT or Computer Based Training programs appeared together with the initial penetration of the Personal Computers. In the nineties the starting Internet "avalanche" enabled the development of new network based educational products. The e-learning was born. Over the past 15 years the e-learning has become a separate business branch in the educational market, which is constantly evolving. At the beginning of the decade the e-learning approach was primarily technology oriented and the Learning Management, Learning Content Management Systems and different Authoring Tools were in focus.

Today's e-learning solutions

The key aspect for today's e-learning solutions is the Content. The e-learning content becomes more exciting, the products become similar to the computer games with advanced graphics and simulate processes and situation from the real life.

The next generation of e-learning content

In the very near future the media convergence will determine the evolution of e-learning. That means more and more thrilling educational content will be distributed to the learner/consumer over different channels, like Television, Computer and Mobile devices.

The future e-learning content will run on Digital Television, Personal Computers, Tablets and Smart Phones in the form of interactive simulations utilising the Web 2.0 features'.

Available technologies

Today all the technologies enabling the development and distribution of the next generation's e-learning content are available as follows:

- Web, Web 2.0
- Wi-Fi, Wi-Max, 3G, 4G
- DVB- (T, S, C, H)
- IPTV
- VoD
- Bluray Disk

Interactive Movie Educational Content

Script

The script elaborates more alternative scenarios and the movie's further actions are based on learner's / active viewer's decisions.

Direction

The interactive educational movie is an edutainment product, thus it's development is based on movie making standards.

Actors

Professional actors crew ensures the learner's / active viewer's real life experience.

Shooting

The shooting is on-site or in blue-box / green-box studio with HD cameras.

Post production

The blue-box / green-box technique enables full customisation of the movie and also makes possible the creating of different fantasy or realistic worlds, improving the learner's / active viewer's experience.

Distributing channels

- On-line web: Internet, Appstore, Android store etc.
- On-line VoD: DTH platforms
- Off-line: Bluray Disk

Users (learners / active viewers)

- Corporate Trainings
- Public and Higher Education
- Informal / Home Learning

SOME EXPERIENCES OF USING VIDEOS TO PROMOTE LEARNING IN THE CONTEXT OF UNIVERSITY LEVEL COURSES

Sonia Seixas, Universidade Aberta, Portugal,
John Bostock, University of Stirling, United Kingdom,
Bernd Ueberschaer, Leibniz-Institute of Marine Sciences at the University of Kiel,
Germany

The rapid development of video-sharing sites is providing a huge opportunity for improving student engagement and understanding of scientific topics both in the classroom and within e-learning contexts. This paper recounts the experience of participants in the European Commission Higher Education Thematic Network for Aquaculture, Fisheries and Aquatic Resources Management (Aqua-tnet) working group on "Innovation in Teaching Methods" in using freely available Internet-based video in their teaching, or using low-cost hardware and software to record lecture presentations which can be used and shared through the same channels.

The usefulness of video in teaching is well recognised, providing it is highly correlated with and integrated into the curriculum and overall instructional sequence. However, the cost and complexity of video has previously limited its use in many areas of higher education. The major change over the last five years has been the dramatic lowering of cost and effort barriers to making, but more importantly sharing video via the Internet. This is making a massive new resource available to teachers. The quality of the available material varies considerably, both technically and with respect to content and therefore considerable screening and selection is required to ensure recommended materials do positively contribute to the educational process. However, especially in an applied science, the more direct link between farm (or industry) and classroom is a positive bonus – particularly where the context can be discussed and the content evaluated with the students. The generation of video material by teachers (e.g. of lectures) further integrates traditional approaches with emerging styles of blended learning (combinations of face-to-face and e-learning).

The paper provides three case studies of how video has been used in (1) classroom-based/blended learning (2) e-learning and (3) for "watch again" recording of lectures:

1. Videos sourced from YouTube and other sources have been incorporated into lecture presentations on aquaculture systems design and engineering at the University of Stirling (United Kingdom) and Universidade do Algarve (Portugal) since 2007 (Masters Courses in Sustainable Aquaculture). This takes advantage of fish and shellfish farmers who are posting video of their sites and systems, and also video from specialist equipment manufacturers keen to promote their products. Such videos can be placed into context and discussed in the forum of a lecture, but have been found to engender greater interest and attention from students (personal observation) than static photographs or text-based slides. The students have also been encouraged to use video material in collaborative assignments using wiki software to construct presentations.

2. For the case study in e-learning video was used in the context of a course of Biological Classification and Evolution. This is a course (within the second year of the degree) that integrates within a 3-year Environmental Sciences degree (Bachelor). This degree is given by the Open University of Portugal (Universidade Aberta). The objectives of this course are essentially to study the biological classification of plants and animals as well as their evolution in temporal scale. Videos were used to explain evolution, illustrate the scheme of animals and their behaviour in the context of evolutionary development. To achieve this objective 69 links were used to free videos on the internet. Descriptions of certain behaviour are much easier to understand when viewing animals doing it.

3. The third case illustrates how teachers can preserve their individual lectures in order to provide opportunities to the students to re-visit these at any time and place. The best approach to meet this demand is video-taping the lecture in a digital format, editing, annotating and providing the result online either at the Universities e-learning platform or at one of the popular video portals in the Internet, e.g. YouTube. The Leibniz-Institute of Marine Sciences at the University of Kiel have videotaped several series of lectures (e.g. a lecture "About Biodiversity of Fish") and present the results inside of the Universities e-learning system "Nickels". The students who have attended the lectures and those who where were missing lectures appreciate the option to re-visit the lecture and to discuss it with their companions in a relaxed environment.

TEACHING WITH YOUTUBE: QUALITY ASSESSMENT OF ENGLISH AND HUNGARIAN VIDEOS ON PHYSICAL EDUCATION

Sára Tímár, Corvinus University of Budapest, Ágnes Kokovay, Semmelweis University, Andrea Kárpáti, Eötvös Loránd University – ELTE, Hungary

YouTube, a Web 2.0 site for user-generated content, makes new demands on learning, while it also provides a flexible and motivating learning environment. Educators, however, are still reluctant to make use of the wide repository of social computing sites and use them as flexibly customisable educational resources. Doubts about quality and relevance are among the most important reasons for this reluctance – a feeling not shared by their students, who make regular and satisfying use of products of the Social Web. The moving image is especially important in areas like Physical Education where an integrated cognitive and psychomotor development is needed for successful learning. This paper summarises the initial phase of a research project aimed at producing a system for quality assurance, content identification and evaluation for YouTube video entries to be used as resources in Physical Eduation (PE). For this discipline, a shift from classic vehicles used for learning today (lecture notes, printed material, PowerPoint, websites, animation) towards ubiquitous user-centric, user-content generated content seems to be inevitable.

But is it worth the effort? Do we find valuable educational input on this site? A review of literature yields a considerable number of case studies (cf. Conway, 2006, Jenkins, 2007, Dufy, 2008, Xu Cheng et al, 2008). Encouraged by their results, we decided to set up a community of practice for PE teachers and engage in the use of YouTube for the improvement of the quality of Physical Education. As a first step, we performed an assessment of relevant YouTube videos.

When selecting our sample, we used a random sampling method employed by a recent large scale study on usage patterns of YouTube. (Xu Xheng et al., 2000) A search word structure was developed and discussed with an expert panel, and words relevant for PE search were used to retrieve 9754 YouTube video items. These were in turn analysed by genre, topic and student population to establish the setup of the sample. Out of this large collection, a sub-sample of 50 films in English and Hungarian language was constructed. (see full paper for URLs of films). We used expert rating as an evaluation method and evaluated the *technical quality* of the film that is decisive for its usability in an educational setting, *professional content* that makes it a valuable learning resource, *methodological aspects*, that influence

the way the film can be introduced before, during or after a PE lesson, and *aesthetic qualities* that contribute to the motivational effects and general appeal of the film.

As we compare the two samples, we may realise that there are no big differences either in technical or professional quality, or in aesthetic appeal among the video uploads in the two languages and two (three, four, – with English language videos, it is hard to tell!) different educational cultures. In terms of content, more information about how to work efficiently and in an enjoyable manner with students suffering from handicaps may be found in the English collection. Otherwise, videos in both languages may be used in any country to improve the teaching of PE through the introduction of this openly accessible and immensely rich visualisation tool. The power of the image overcomes linguistic difficulties as most YouTube videos we assessed could be easily interpreted even if the sound was only partly comprehensible.

An interesting research question is, if YouTube videos are used to present sports techniques, the mood of a game and a sporting lifestyle, will students be more willing to go out to the fields and courts and actually engage in sports? Does watching peer-produced videos develop a desire to be part of the action? Can YouTube content be an active protagonist of sportsmanship? These questions will be answered when the YouTube PE community is formed and video learning resources find their way into many Hungarian classrooms. The variety of videos found in YouTube is really impressing, though the uploaders of films do not pay enough attention for tagging their content correctly. Tagging may be done by volunteers, – such a group will soon be organised in Hungary – and evaluative comments should also be attached to films with educational value to facilitate their efficient and regular use.

FROM PEN AND PAPER TO IT BASED BUSINESS – TRACING EMPLOYEES LEARNING PROGRESS IN AN E-LEARNING PROGRAM

Bent Soelberg, Copenhagen Business School, Denmark

This paper is part of a larger empirical research project "Flexible e-learning environments and learning style" which is carried out together with a large Danish company. The company involved is named Large Danish Company (LDC). LDC has bought "Company 1" and "Company 2" in another European country. These two companies have had to move from traditional pen and paper business to IT based business and an e-learning program has been implemented by LDC. This paper is based on 2753 employees. They had all participated in the obligatory e-learning program including 131 courses. They should not follow every course only the ones that match their job role. The objective of the program is to teach the employees their new job functions and task in an IT based office environment.

The courses in the program are focused on the employee's future job function and the course materials are development to be flexible. Initially the LDC considered applying a FlexLearn (flexible learning with learning styles) approach developed at Odense Technical College (OTS).

The employees were categorized in three groups according to the time they spend to pass a course in general business and e-learning: Low User Group, Middle User Group and High User Group. The objective of the paper is to describe and to investigate the learning progress of the three groups. And to look whether the course participants stay in the same group for every course or they move up (or down) in the time they spend on the course. There are very few empirical studies, but there are one from FlexLearn at Odense Technical School, which suggests that in learning environments which are designed with a background in learning style concept is an enhanced for learning for the Low and High User Group. So the interesting issue here is whether the indication also can be transferred to the large group of employees in LDCs. The LDC e-learning program was based on learning styles.

The results show an interesting migration patterns between the three groups, but also revealed surprising results in relation to time spent by the different groups on the courses. I will discuss this in relation to the FlexLearn approach and draw up perspectives for further work. Furthermore, I will look at the description of the staff and their behaviour in learning the system, half are doing their courses during working hours, has few number of login and implements very fast rates. However, a

quarter which is very fast to pass the courses and a quarter are very slow to pass the courses. The explanation could be that some job functions provide particularly good or bad conditions to complete the course quickly in the working hours. Moreover, several studies of job function, high customer contact, part-time, specific job categories, etc. is necessary. I will also in my last paper try to see if there are a clear pattern between the peoples acting in the e-learning system and there learning style.

In this workshop you will see some interesting result in the presentation. And we will have time to discuss the paper.

DISTANCE LEARNING METHODOLOGIES AND TOOLS FOR LOWERING THE ADMINISTRATIVE BURDEN OF RURAL ENTREPRENEURS
THE CASE OF RURAL INCLUSION PROJECT

Fotis Kouris, Ellinogermaniki Agogi, Greece

It is a well documented fact that although ICT penetration in rural regions is at 87% and broadband access at 57% take up of e-government applications in rural regions is very low, in fact is less than 35% across Europe. This gap is not attributed to any lack of e-government services addressing the needs of people in rural areas; on the contrary there have been significant efforts by the European Union and the national governments towards the realization of an inclusive information society, where entrepreneurs from rural areas will use the developed e-government services at the same rate as their counterparts in urban areas. The Rural Inclusion consortium has identified this disparity and attributes it to different behavioural characteristics of the citizens in rural areas.

In such a context, a major European Project, Rural Inclusion, supported by the Information and Communication Technologies Policy Support Programme of the European Commission, aims at adopting a state-of-art infrastructure (i.e. modelling approach and software environment) that will facilitate the suggestion on improving these instructions, offering of innovative services by public administration in rural areas.

To achieve this, Rural Inclusion adopts, adapts, and deploys a Web infrastructure combining semantic services with a collaborative training and networking approach, in the rural setting of five European regions. It focuses on selected case studies of e-Government services that regional public authorities already offer, supports them by a rigorous and reusable service process analysis and modelling, and then deploys a semantic service that facilitates the disambiguation of the small businesses needs and requirements when trying to use the particular services. Additionally the consortium proposes tools and methodologies with the aim of assisting the entrepreneurs of rural areas to take advantage of the e-government services already at their disposal by training them using a blend of formal and informal training delivered by collaborative distance learning tools with the purpose of changing their conceptions beliefs and actions, improving their digital competences and effectively bridging the broadband and accessibility gap existing with their urban counterparts.

ADULT DISTANCE LEARNING IN ENTREPRENEURSHIP: DESIGNING EDUCATIONAL MATERIAL FOR THE DEVELOPMENT OF LOCAL PRODUCTS

Mary Kampouropoulou, Costas Tsolakidis, Persa Fokiali, Angeliki Nikolaou,
University of the Aegean, Greece

This work is a presentation of the educational material designed for the needs of a distance learning programme for Entrepreneurship Education (EE) addressed to groups of adult learners living in small islands in the Aegean. The educational material is produced taking into account the areas' comparative advantages – mainly their cultural wealth – as well as the difficult conditions related to local production and the need for sustainable strategic planning in these islands. The idea of the project is to encourage small-scale production of a niche character, expected to help indigenous people to increase their income, fostering at the same time local and possibly national development. As a consequence the proposal favours the combination between traditional and contemporary procedures that reveal the links between human creativity and new technologies.

Following the definitions of the relevant concepts, the main part of this paper includes the development of the educational material, within the frame of a model expressed in four paths – deduction, addition, multiplication and division.

For demonstration purposes, the educational material presented here focuses in the traditional female costume of the island of Kastelorizo (Megisti) as a source of inspiration for the production of objects that satisfy aesthetic criteria and can be of interest for the tourist souvenir trade. The traditional female costume of Kastelorizo is examined from a cultural, artistic, technological and creative perspective.

Art interferes effectively in the process of the new products' design. In the creative interval between the conception of the idea and production, the person acting under artistic inspiration, employs hands and mind to transform the original items of the costume and design new products. Art acts also as a force that establishes quality standards.

For the development of the new products technology plays an important role helping learners to develop their ideas into workable solutions and to evaluate them as they evolve. Simple technological literacy – mainly in image processing and image producing software – helps them to portray deviations from the original items creating transformed designs, motifs, patterns and objects, while forming at the same time a detailed plan of the process to be undertaken in a hypothetical

manufacturing of the prototype product. With the support of technology, on completion the learners are looking at simulations of final products as if these were to be produced commercially and the whole procedure encourages them to proceed to entrepreneurial decisions.

The proposed creative procedure includes the following stages:

- Identification of specific items in the costume of Kastelorizo as worth transforming.
- Simplification through deduction of some of the items' details so as to lead to new designs.
- Addition of colours and/or decorating details
- Multiplication leading to the production of motifs and patterns
- Division in parts and new multiplication.

The whole activity helps the learners to become aware of their ability to produce numbers of new designs, patterns and motifs and final usable products, to realize the importance of art, tradition, technology and sustainability and encourages them to make entrepreneurial decisions, interrelating in a developmental perspective, the past and future of small islands.

ASSESSING THE ADDED VALUE OF WEB 2.0 TOOLS IN E-LEARNING: THE MDE EXPERIENCE

Lisa Marie Blaschke, Carl von Ossietzky University of Oldenburg, Germany,
Gila Kurtz, Stella Porto, University of Maryland University College,
United States of America

The Master of Distance Education and E-learning (MDE), a masters program offered jointly by the University of Maryland University College (UMUC) and Oldenburg University, is in a unique position to fully experiment with and measure the value of web 2.0 tools when these are used within the online classroom. The program focuses on preparing students to be managers and leaders in distance education and e-learning within a variety of settings, including higher education, government, not-for-profits, and private corporations. During their studies, adult students work toward their master's degree completely at a distance. Web 2.0 tools have become an essential learning-teaching means for the MDE and are used in diverse ways to accomplish both instructional and learning activities.

This paper discusses the use of web 2.0 tools within the MDE virtual classroom, and the different uses of wikis, blogs, podcasts, vodcasts, live web meetings, and collaborative environments as part of learning activities in different courses. The paper also presents research findings on MDE student perceptions of the value that social media has added to the student learning process.

Experience in the design, development, and use of these social media tools within the teaching and learning environment has enabled MDE faculty to become not only more comfortable with trends in Internet technology, but also to become enablers and motivators for MDE students in their own pursuit and journey in the learning of and through technology.

This paper demonstrates the need to carefully consider instructional design and adult learning when planning and managing any projects and activities using web 2.0 applications. Overall, it is apparent that the road ahead is not clear of obstacles and is full of intriguing challenges. Technologies like web 2.0 are here to stay – and are evolving rapidly. A first step toward understanding the most appropriate pedagogical use of these emerging technologies is to evaluate them according to their added value to students' perception of their learning experience. It is time to embrace them within a controlled experimentation process and acknowledge and absorb the invaluable potential they bring to all stakeholders in higher education, in particular to this specific program. It is without doubt that we recognize that this program has changed in nature and form due to the influences of web 2.0 tools.

Thanks to web 2.0 technologies a rich learning environment for lifelong learning has been unleashed, and its evolution will be a ride full of surprises, but is definitely not one to be missed.

ESTABLISHING A FOUNDATIONAL FRAMEWORK FOR DEVELOPMENT OF REFLECTIVE THINKING: LEARNING JOURNALS IN THE MDE

Lisa Marie Blaschke, Jane Brindley,
Carl von Ossietzky University of Oldenburg, Germany

One of the measures of effectiveness of higher education is how well graduates can engage in critical and reflective thinking and apply these lifelong learning skills to problem solving in complex real world situations. To support students in developing a practice of reflection, educators must skilfully incorporate techniques for encouraging and developing critical and reflective thinking within the classroom. This case study examines the use of a digital learning journal that was introduced to encourage students to become more reflective and self-directed in their learning. The paper begins with a review of the literature including definitions of reflection, the significance of reflection, strategies for encouraging reflective thinking and practice, and finally, techniques for assessing reflective learning journals. Next, the paper discusses the design of the reflective learning journals and how these journals are used within the Foundations course of the Master of Distance Education E-learning (MDE) program to establish a basis for reflective practice as students begin their graduate studies. The case study also includes student perceptions of the use of the learning journals in terms of the pedagogical value of the reflective learning journal (wiki) in terms of their cognitive and meta-cognitive thinking processes. The case study is itself an example of reflective practice in that findings are considered in the context of planning further investigation and ways in which practice can be improved, in particular guidance to students in using their journals and the assessment rubric.

BABEL WEB ANTHOLOGY GOES WEB 2.0

Zsuzsa Votisky, Typotex Electronical Publisher, Hungary,
Serge Yablonsky, Technical University of St. Petersburg, Russian Federation

The Babel Web Anthology (http://www.babelmatrix.org) builds upon the Babelmatrix idea that changes the traditional bilingual relationships between original literary works and their translations into a special, multilingual form. Thanks to the innovative structure of Babelmatrix, it is possible to handle original literary works and their translations multi-dimensionally, that is, in multiple languages in the same time. BWA is edited with great care and continuously updated with contextual information that can provide the user with adequate insight into the cultures and literatures of other European countries.

Babel Web Anthology Portal (BWAP 1.0) is representing and realizing the European idea of multilinguism, unity in diversity. It is a dynamic database-backed portal with dynamically generated content. The shared database is filled in manually with the help of typists, editors and translators from Typotex Publishing house (http://www.typotex.hu). Babel Web Anthology Portal Web 2.0 (BWAP 2.0) refers primarily to two major paradigm shifts in the way people use the Web: thin client computing and user-generated content. The portal will play a central role in both areas.

Web 2.0 refers primarily to two major paradigm shifts in the way people use the Web: thin client computing and user-generated content. The portal plays a central role in both areas. In thin client computing, data and applications are stored on Web servers, and a user has access from any computer via a Web browser, thus turning the Web into a gigantic application server – a penultimate manifestation of Web 2.0. User-generated content (UGC) involves posting digital video, blogging, podcasting, news, gossip, research, mobile phone photography and wikis on social networking sites like MySpace, Facebook and Flickr. UGC lets everyone have their say on anything and publish it to the world at large.

In the paper a brief summary of the main Web 2.0 technologies that will be used in BWAP 2.0 together with their affordances are described (see fig.1). What they all have in common is the ability to create not only shared content, but also social networks. We have developed BWAP 2.0 strategy for using social networks. All these can be useful for uploading and critiquing student/translators work in Babel Web Anthology. At the same time it can rapidly increase the number of origin and translated texts in the BWA.
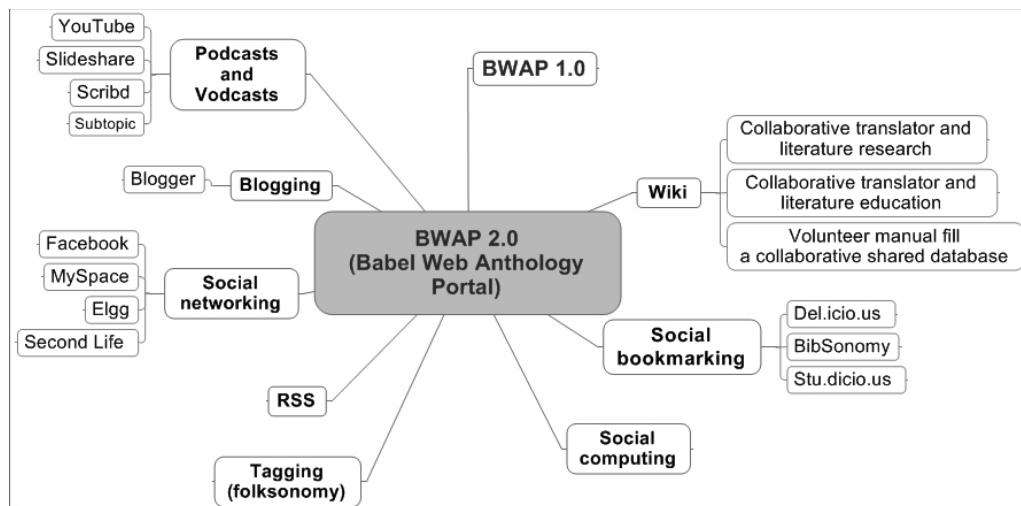
Figure 1 – Web 2.0 technologies that will be used in BWAP 2.0

NAVIGATING PEOPLE IN THE ENTERPRISE PERSONAL ASSESSMENT PROCESS – CASE STUDY

Asen V. Asenov, ASECO Consulting Ltd., Bulgaria

Nowadays the large companies utilise very well organised and sophisticated HR systems in order to ensure the individual development and personal assessment of their staff. In the multinational enterprises hundreds and thousands of learning recourses are available and these are dynamically changing in time. With this the learning and development, and the personal assessment processes become more and more complex. For the employees and their line managers are optimising the learning and development paths and ensuring the quality and effectiveness of personal assessments becoming a real challenge.

This case study will present a sophisticated, yet very intuitive and user friendly solution for helping employees and their line managers towards personal assessment process.

The system presented have been built by integrating the company's existing software products, like HR system, LMS, LCMS and others with newly developed software for cataloguing learning resources and graphically presenting these in accordance with employees learning preferences and their personal profiles.

Functional requirements

- The system should assist/support the career planning of employees in a way that, keeping their HR competences and learning preferences in consideration, it should make it possible for the employee to search, find and select the most appropriate educational contents from the company's resources.

- The software should be able to notify the employee's line manager, about the selected educational content.

- Furthermore, it should allow registration of accomplishment of the selected educational contents and events, thus displaying the learning process in a graphical way, too.

- The software's user interface should be intuitive, easy to understand, user-friendly. The software should display the selection and other functions similarly to a PDA based GPS navigation system, so that – through the visual effect – the user can navigate easier, and can make his selections through the user interface in an interactive fashion.

- An active help (Help Bar) should support the use of the actual function, thus helping to get acquainted with it for the first time user, and a detailed tutorial should also be available, demonstrating the use of the system.

Process analysis
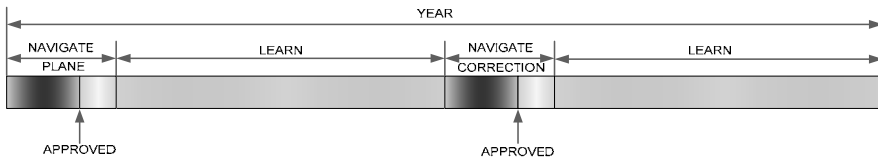
- END-YEAR REVIEW and MID-YEAR REVIEW mode, which are active when the actual date is in the timeframe set up by the administrator, and the user has no approved learning plan yet. In this mode the followings can be done:
  - setting up user settings,
  - compilation of learning plan(s),
  - loading learning plans,
  - saving learning plans,
  - sending the learning plan to the leader,
  - finalizing the learning plan.

- FREE LEARNING mode is active if there is no defined review period (defined by the administrator), or, there is a review period defined, but the user already has an approved and therefore closed learning plan. In this mode the followings can be done:
  - setting up user settings,
  - compilation of learning plan (where there's no approved plan yet),
  - loading learning plans (where there's no approved plan yet),
  - saving learning plans (where there's no approved plan yet).

Users

Employee

Employee of a given company, who, entering the system, plans his own career.

Line Manager

The line manager is responsible for approving the employee's individual development plan and for employee's assessment.

Administrator

Manages the different settings and states of the system. For instance, changes between the "learn" and the "navigate" modes.

Supervisor

Manages the import of base data into the system, and configures the base settings.

SCI-PRO: IMPROVING UNIVERSITIES CORE ACTIVITY WITH ICT SUPPORTING THE SCIENTIFIC THESIS WRITING PROCESS

Henrik Hansson, Jonas Collin, Ken Larsson, Gunnar Wettergren,
Stockholm University, Sweden

The individual supervision of thesis writing requires a lot of time and is difficult to maintain with increasing student numbers. Students rarely finish their theses within stipulated time. The most common reason for not completing a degree is that the thesis is not finished. Students' motivation is poor because of lack of social contact, peer support, collaboration, and the sharp contrast in learning strategy between lectures and thesis writing. Many students find it difficult to choose a topic, apply scientific methods, find relevant scientific articles and write in correct academic style.

The aim of the Sci-Pro project is to develop a flexible, semi self-adaptive system to support large-scale supervision of thesis work. We propose a multifunctional digital workspace shared by the students, their supervisors and invited stakeholders. Via its system and methodologies, it will facilitate, increase, internationalise and efficiently support the knowledge creating process in academic environments and in the business sector. Sci-Pro will create economies of scale in thesis supervision, create a system for access to relevant digital scientific research content, increase European collaboration, and remedy exclusion from education. Sci-Pro is addressing the challenge of maximizing higher education in Europe.

Our focus will be the higher education students 'assimilation and understanding of scientific methods and philosophy and the related completion rate and quality of theses at universities. To achieve this, the project is organised around supervision pathways that enable participating institutions to define supervision workflows to suit either local or pan-European educational needs.

The Sci-Pro project will support students in the process of finding high quality digital content relevant for their research work, working closely with peers, librarians and informatics specialists to improve the access and relevance of e-resources related to knowledge discovery and creation-

RAISING UP ANNOTATIONS IN PEDAGOGICAL RESOURCES BY HUMAN-COMPUTER COLLABORATION

Armelle Brun, Hala Skaf-Molli, LORIA – Nancy Universite,
Anne Boyer, Ministere de l'Enseignement Superieur et de la Recherche, France

Context

Huge repositories of pedagogical resources such as the French initiative of digital thematic libraries are now easily accessible by both students and professors. This high quantity of data makes their access difficult to the students, as they cannot get easily pertinent pedagogical resources that fit their needs.

One way to make this access easier is to add annotations to these resources and to exploit these annotations to find pertinent answers. Of course, these annotations can be semantic. Semantic wikis are a new approach that automatically processes semantic annotations, which can be used to find the adequate resources given the requests of students. However, annotating semantically resources is not an easy task for human. Despite of their high potential, semantic wikis thus suffer from a lack of human provided semantic annotations, resulting in a loss of their efficiency.

Overview of the system

To cope with this lack of user-generated semantic annotations, we propose to semi-automatically fulfill the set of semantic annotations on pedagogical resources. These additional annotations will be discovered in an automatic way and validated by users. At the opposite of classical semantic annotations, these annotations will not be discovered based on the content of the pedagogical resources, but based on the usage the users make on these resources. In this paper users are students and professors.

We thus propose a system (called HCA) that suggests automatically computed annotations to users in semantic wikis. These annotations are called Computer Annotations (CA). CA are discovered by using classical methods from the recommender systems domain that exploit the usage made on resources to deduce information. These methods are:

- The item-based approach, which suggests annotations about one pedagogical resource, which are also annotations in resources similarly consulted by other users.

- The classification-based approach, which recommends annotations about pages, which are also annotations of resources in the same class. A classification of pedagogical resources has to be developed. This classification is not based on the content of the resources, but on the usage the users do on them.

- The data mining-based approach, which exploits data mining techniques to extract information about the usage of the resources. This approach mines the sequences of consultation of resources by using, for example, association rules or Markov models to discover frequent patterns.

These computed annotations are suggested to users, who only have to validate, complete, modify, refuse or ignore these suggested annotations. Therefore, the annotation task becomes easier for them, and we assume that more users will provide annotations, leading to an improvement of the system. It will also result in a facilitated access, for students, to pertinent pedagogical resources. The resulting semantic wiki will contain several kinds of annotations, with different status: human, computer or human-computed provided annotations, depending if the annotation has been initially proposed by a human or by the system.

QUALITY ISSUES FOR OPEN EDUCATIONAL RESOURCES

Rory McGreal, Athabasca University, Canada,
Grainne Conole, The Open University, United Kingdom,
Demetrios G. Sampson, University of Piraeus, Greece,
Morten Flate Paulsen, NKI Distance Education, Norway,
Don Olcott Jr., International Consultant ODL, United States of America

Open Educational Resources (OERs) are becoming increasingly popular in educational institutions. OERs include all educational resources – normally digital in nature such as learning objects, open courseware, etc. that can be freely accessed (with no cost to users) via the Internet with minimal or no restrictions.

They are normally accessed freely using the World Wide Web either on institutional sites or in organizational repositories. Course developers, teachers and instructors are principal users of OERs, but there are a growing number of students who are accessing them directly to augment their learning. OERs include learning objects such as modularized lessons, video and audio lectures (podcasts), references, workbooks and textbooks, multimedia simulations, experiments and demonstrations, as well as syllabi, curricula and lesson plans.

OERs, according to MERLOT, must be clear and concise, demonstrating the concepts and integrating where appropriate with pre-requisites and instructions that are clearly indicated. Other quality measures have been posited. These included the brand or reputation of the OER creator, peer review, user ratings, use indicators, validation, and self-evaluation. Other possible quality indicators include shareability, timeliness, reach (number of users), usability (license restrictions), and accessibility.

A respected institution's prestige, brand name or reputation can be one indicator of quality. Peer review is a time-tested approach to ensuring quality and is used extensively in academia for scholarly publishing. User ratings can also be used as another quality measure. These can be either formal or informal or both. Formal rating systems can be established such as a "five star" system or it can be more informal with comments from users made readily available.

Quality can also be improved through the sharing of OERS when institutions transfer costs from the course development process to student services and support. Students could benefit by paying less for course materials. OERs can be used to provide more student choice at little additional cost. The timely updating of courses can be another benefit of OERs.

A course could be of the highest quality when it is first created, but unless it is updated regularly and consistently the quality can decay. OERs can be one way of accessing and inserting updated content and other relevant course materials as they become available. Is time an aspect of quality?

STELLAR NOE – TELEUROPE: CONTRIBUTING TO SHAPE EUROPEAN RESEARCH AGENDA ON TECHNOLOGY ENHANCED LEARNING

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

STELLAR is a Network of Excellence of leading Institutions and Projects in European Technology-Enhanced Learning (TEL) committed to **set a new agenda for TEL Research**, which overcomes the traditional fragmentation of TEL community and supports the EU to achieve its gaols via the Bologna Agreement and the execution of the Lisbon Agenda. It is a **multidisciplinary consortium** that brings together researchers from psychology, education, cognitive science, computer science, organisational and management science to develop research concerning advances in TEL by building bridges with the wider TEL stakeholder's community outside the academies.

STELLAR's route to a renewed TEL research agenda is grounded on the view that in today's knowledge society, people are not only confronted with classical transitions from school to university, from university to a company and so on. They are also faced with additional transitions, for example, between companies, between formal institutional learning and informal learning, between learning for personal growth and learning for work. These transitions place high demands on people in terms of self-managed lifelong learning. **Three Grand Challenges** have been identified in the way forwards in TEL research.

Connecting learners

Learning is viewed as a continuous process which develops through social interaction; people are at the heart of learning and knowledge construction, and communication between people characterises the social interactions through which learning takes place. Central to these communications are knowledge sharing and collaborative knowledge building. Information and communications technologies (ICTs) can enable communication through connecting learners with other learners and teachers, trainers, experts in a particular field or more knowledgeable others. New digital tools allow new ways of knowledge sharing and building and include web-based applications such as open and closed forums, personal or shared blogs, chat rooms, instant messaging and video conferences, tagging and collaborative text editing systems. Networking portals allow learners to find, contact and keep in touch with like-minded people.

Orchestrating learners

The phrase 'orchestrating learning' is used as a metaphor for understanding and informing the design of technology enhanced learning situations. This involves a consideration of the learners, the role of assessment, the tools to be used and the role of the teacher or trainer. Issues of orchestration are relevant whether considering learning within educational institutions or learning within the workplace. Traditional models of teaching often need re-thinking within technology enhanced learning situations. For example, ICT provides multiple possibilities for learners to access knowledge that traditionally would have been provided by the teacher.

Contextualising virtual learning environments and instrumentalising learning contexts

All activity is performed in context, which can be thought of as "that which surrounds us" or as "that which weaves us together". This mirrors the distinction made in the technical literature on pervasive computing between context as a 'shell' that surrounds the human user of technology and context as arising out of the constructive interaction between people and technology. Learning not only occurs in a context, it also creates context through continual interaction between people and objects. A context can be temporarily solidified, by deploying or modifying objects to create a supportive workspace, or by forming an ad hoc social network of people with shared interests, or by reaching a shared understanding of a problem. This suggests that technologies for learning should be designed to take into account the ways in which the settings where they will be used are mediated by the context. Digital and mobile technologies can provide learners with novel experiences by exposing them to a wider range of contexts than was previously possible and by personalising the complex interplay of the technologies being used. There are technical implications, however, because representing knowledge in an interoperable manner among various TEL systems becomes increasingly important

STELLAR welcomes new individuals and institutions to join its Network and contribute to the definition of a new research agenda for TEL, by joining TELeurope at http://www.teleurope.eu and STELLAR open wiki for the definition of the three Grand Challenges (http://www.stellarnet.eu/d/1/1/Home). In order to promote a 360 degrees TEL research, the Network sponsors TEL researchers through a set of ad hoc instruments (research funding, events' sponsorship, training opportunities and mobility program) with a special eye also on unbeaten investigation tracks and low pay-off research areas (for more information, visit STELLAR at http://www.stellarnet.eu/instruments)

THE SHARE WORKSHOP: 3 TAKES ON QUALITY ASSESSMENT FOR ICT-SUPPORTED TEACHING AND LEARNING

Deborah Arnold, Vidéoscop-Université Nancy 2,France
Ildikó Mázár, EDEN Secretariat, Hungary
Anne-Christin Tannhäuser, Scienter, Italy
Airina Volungevičienė, Vytautas Magnus University, Lithuania
Dénes Zarka, Budapest University of Technology and Economics, Hungary

Introduction

HEXTLEARN, SEVAQ+, REVIVE: three Lifelong Learning Programme projects dealing successfully with quality assessment of ICT-supported learning and teaching. Put the letters of their acronyms in a bag, shake it up, and one of the words which comes out is: SHARE! The respective approaches applied by the projects can be summarised as peer-review, self-evaluation and reflective curriculum designing through quality assessment. But are they fundamentally different or are there points of intersection? What synergies could be developed for the wider benefit of lifelong learning organisations?

The aim of this 90-minute SHARE workshop is to engage participants in exploring these three approaches, apply them concretely to a real-life case-study and design scenarios in which they could be used in synergy.

Target audience

- Policy makers and managers in HEIs interested in approaches to quality assessment.
- Teachers / trainers / learning technologists at educational institutions.
- Researchers working in the field of quality assessment for education.

Workshop structure

The workshop will be divided up into three main 'moments', according to the type of work and interaction.

1. DISCOVERY (20 minutes)

    a. Discovering the three projects.

    b. Discovering the audience (background / prior experience)

    c. Discovering the main features of the case study on which the participants will work.

2. PRACTICE (50 minutes)

    a. Applying the three quality approaches to the case study, in subgroups.

    b. Comparing the quality approaches, looking for potential synergies and preparing a scenario.

3. EXCHANGE (20 minutes)

    a. A rapporteur from each subgroup will present the scenario developed by their group.

    b. The debate will be opened up to the floor for general discussion and conclusions.

Final outcome

The concrete outcome of this workshop will be a scenario or series of scenarios on how the three approaches could work in synergy. The scenario(s) will be published on each of the 3 projects' websites and, with the agreement of their authors, may be adapted for posting in social network groups.

Online interaction and follow-up

Participants interested in attending this workshop are invited to join the LinkedIn group 'Evaluation of Training and Courses' (http://www.linkedin.com/groups?mostPopular=&gid=2702395). Further follow-up will be possible in a number of ways: contributing to the European-wide testing of SEVAQ+; joining the HEXTLEARN community of reviewers or getting one's own ICT practices peer reviewed; benefiting from the REVIVE methodology to breathe new life into existing curricula. See also: www.sevaq.eu, www.hextlearn.eu, www.reviveproject.eu.

CREATING THE FUTURE FOR LEARNING

Gilly Salmon, University of Leicester, United Kingdom

What future(s) for learning? Participants in this workshop will engage in hands-on exercises on imagining possible futures quickly and collaboratively, and how to escape routine thinking patterns. The workshop will discuss emerging visions for the future of learning, technological innovations and their implications for learning and teaching today.

Higher education systems are challenged by powerful forces from three interrelated sources: demography, funding availability, and technological innovation. Higher education is faced with two trends: a decline in the number of traditional learners, due to demographic changes and possibility of increasing tuition fees, and a rise in the number of non-traditional learners, driven by expansion of the knowledge economy, innovation in technology, and increased mobility. These trends present both threats and opportunities for academic institutions dealing with the challenge of providing students with the highest quality learning experiences through appropriate pedagogical and systemic approaches. A critical success factor in this process is avoiding the lock-in of short-term thinking about immediate problems and maintaining established practices. Institutions, academics and managers need to be able to structure and filter information about the long-term, in order to facilitate institutional decision-making in participative and creative ways.

This workshop will focus on creating alternative futures for higher education and discuss possible outcomes for the participants' own institutions and practice. Using Prof. Gilly Salmon's model for creating learning futures, emerging from the Creating Academic Learning Futures project (CALF), participants will be presented with "what-if" snapshots of possible futures for higher education. The workshop will discuss emerging visions for the future of learning, technological innovations and constraints, and their implications for learning and teaching today.

Participants will discover ideas and tools for engaging learners and institutions in a dialogue about the future, as well as practical ways of helping learners and institutions to shape the future, rather than predict it. The structure of the workshop will enable every participant to share their ideas about the future of learning and discuss in a supportive environment the ways in which academic practice may change. The emphasis of the workshop will be on increasing participants' awareness of possible, probable and desirable futures for learning in higher education and appreciation of the key forces influencing change.

Workshops

Participants will be invited to consider a series of "what-if" statements about the future of learning, discuss them in small groups and present the outcomes. In order to be able to respond to the questions of the facilitators of the workshop, participants will need to collaborate and work as a team, both in imagining the possible outcomes of the "what-if" futures, and the implications for their own practice.

DEVELOPING ONLINE DIAGNOSTIC ASSESSMENT – EXPERIENCES OF A LARGE SCALE NATIONAL CASE STUDY IN PUBLIC EDUCATION IN HUNGARY

Gyöngyvér Molnár, Krisztina R. Tóth, Edit Tóth, University of Szeged, Hungary

A long-term project in Hungary aims to devise an online formative assessment system for the first six grades of primary school. The objective of the first phase is to adapt the system in 150 schools and study the related technological and methodological issues in detail.

In this workshop we

1. outline the formative (diagnostic) assessment system;
2. present the results of the first two years of the project, in which online testing was introduced and piloted in various age groups in different school subjects;
3. compare results on paper-and-pencil and online testing in order to identify domains and item formats where the two media may influence the achievements; and
4. present teachers' opinions and attitudes towards assessment and accountability and introducing computer-based assessment in national high stakes testing.

In most of the developed countries international and national assessment programs regularly provide comprehensive feedback on the achievement trends of students. However, they are not suitable for tracking students' individual development, diagnosing learning difficulties or identifying causes for failure, or supporting different solutions. Fostering students' learning processes and facilitating their development require other types of information as well as frequent personal feedback that are more accurate and detailed.

These requirements have resulted in the launch of the "Diagnostic assessments" research and development program of the Center for Research on Learning and Instruction, University of Szeged that can only be adequately conducted with the help of modern information technology devices, keeping the required frequency and accuracy. The activities of the project – launched in 2009 – are organized into seven work packages:

1. Devising assessment frameworks for reading, mathematics and science for the first six grades of primary school;

2. Exploring diagnostic assessments at further cognitive and affective domains;

3. Developing item banks in reading, mathematics and science (ca. 3 x 600 items);

4. Creating a platform for online testing by adapting TAO;

5. In-service training of teachers to prepare them to use the system;

6. Devising diagnostic assessment instruments for SEN students and developing special computer interfaces for SEN students;

7. Meta-analysis of the data of national and international assessments.

The research design of the project makes possible to devise a large number of items both on paper and on computer, namely to build PP and CB item banks as well, and to carry out researches on comparing the achievements and item parameters on the tests using different media. On behalf of the workshop we present the results of the first TBA data collections carried out in the schools equipped well enough in spring 2010.

CLOUD LEARNING

György Seres, Zrinyi Miklos National Defence University, Péter Gerő, ABECE Bt, Ildikó Miskolczi, College of Szolnok, Krisztina Fórika, Zrinyi Miklos National Defence University, Piroska Lengyel, Zsigmond Kiraly College, Hungary

The wide-ranging spread of the internet and the fast internet availability leads to a big breakthrough in the 90th of the last century and in the 1st decade of the new millennium. There is the situation, when electronics turned from subject and tool of education to scene of education.

We must to get acquainted with a new concept at begin of the 10th of the new millennium – it is the Cloud Computing.

Heart of this service is that: all ambitious tasks of data storage and processing are executed by providers in the Cloud, and user must have a simple internet browser. More Cloud Computing services are free, or for any price – which is significantly lower than users own hardware and software charge should be.

Modern interactive education in our time can be up-to-date and cost effective if it takes up special educational Cloud Computing – Cloud Learning – services and Community portals. We show some services like this, which are tested by our "SysAdminLess" team.
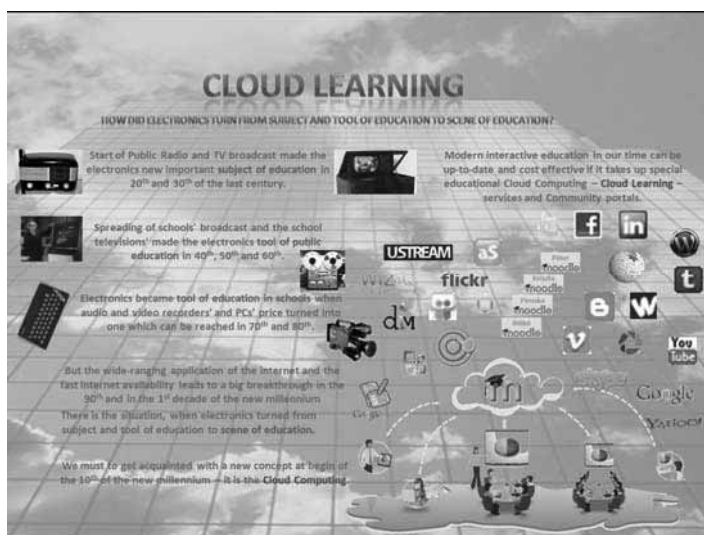
TRANSPARENT SCORES AND RATING SYSTEM OF STUDENTS' KNOWLEDGE EVALUATION: EXPERIENCE OF DEVELOPMENT AND IMPLEMENTATION IN MOSCOW STATE UNIVERSITY OF ECONOMICS, STATISTICS AND INFORMATICS (MESI)

Vitaly G. Minashkin, Lyubov N. Dubeykovskaya, Moscow State University of Economics, Statistics Informatics (MESI), Russian Federation

Russia's entry into the Bologna process has led to the understanding and necessity of implementation and use of the principles of the Bologna agreements in the educational activities of universities. Since each university chooses the sequence of realization of the various parameters of the Bologna process, the MESI primarily decided to develop and use system of evaluation of students' knowledge based on scores and rating (scores and rating system, briefly SRS). The main purpose of this system introduction is to implement mechanisms to ensure the quality of the educational process and evaluation of learning results based on the rules regulating the interaction of faculty and students, structuring and enhancing students' independent work, the onset of incentives to manage their academic performance, standardization and approval of the interim control measures for each subject, increase the objectivity of the evaluation of educational achievement and the results of final control measures.

The implementation of SRS students' knowledge evaluation caused a number of problems to be solved, namely:

- Necessity in thorough elaboration of teaching materials
- Need for fail-safety of e-support
- Reluctance of some students to work actively during a semester
- Significant increase in workload of teaching staff
- Need for regular upgrading computer literacy of teaching staff
- Legal and regulatory issues associated with the repeated taking a course and expel from the university.

Within the aforesaid steps these problems were solved and the threats were mainly eliminated.

The principles of transparency and objectivity in students' knowledge evaluation, use of uniform requirements for teachers and students, consistent approaches to choice of number and form of semester control activities are the basis of technique held in MESI.

In accordance with the methodology the successful subject mastering includes:

- Meeting the requirements of curriculum;
- Compliance with the schedules of educational process and subject learning;
- Semester control activities execution in electronic learning environment;
- Assessing the level of knowledge and skills during final control measures should not be below the satisfactory mark.

The main outcomes of implementation of student's knowledge evaluation technique in MESI for all specialties and fields of study and all forms of study are as follows:

- Students' adaptation to new system;
- Intensification of students' independent work;
- Increasing objectivity of student evaluation by teachers;
- Increase of academic process transparency;
- Decrease of number of complaints from students to University administration;
- Increase of students' performance;
- Creation of conditions for better choice of courses and teachers as well as construction of individual study courses and tracks.

In general, the set of activities related to SRS introduction and usage turned useful and encouraging for improvement of educational process quality.

ORBIS DICTUS – AN INNOVATIVE PLATFORM FOR MULTI-LANGUAGE LEARNING ENVIRONMENTS

Cinzia Angelini, University Roma III, Italy

The Department of Educational Design at Roma Tre University is the promoter of a EU Tempus project named Demed – Development of Master Study Programs in Education, whose general goal is the organization of university master courses preparing staff for future work in the field of education in three Balkan universities: the University of Prishtina (Kosovo), South East European University – Seeu (Tetovo, Macedonia), the University of Tirana (Albania).

One of the specific intents of the project partners was the design and implementation of an e-learning environment in order to make it possible to share teaching modules among these three Balkan universities. This gave origin to the *Orbis dictus* platform. Designed and developed by Diped researchers, the platform has gradually been enriched with innovative elements that have made it more and more user-friendly. One of the features making *Orbis dictus* innovative is that it represents the substratum of a new categorization of distance education combining the individualization of the learning message with the potentialities of automatic translations.

These two aspects, *individualization* and *multi-language environment*, are the two crucial issues underpinning *Orbis dictus*. Individualization expresses itself in two directions: with reference to students (through the adjustment of the learning message) and with reference to teaching (through the adjustment of the platform to the teaching tools and contexts). In fact, in *Orbis dictus* priority is not given to the technological solutions, but to the educational patterns based on the adjustment of the message to the expected skills of the receiver (individualization). And this is where the second aspect, *multi-language environment*, can be introduced. *Orbis dictus* gives users the opportunity to convey a *multi-language* teaching message favouring each single receiver.

But when the learning message is not only expressed, but also translated, individualization becomes even more complex. *Orbis dictus* aims to propose an innovative solution to the problem of translations. If a sender and a receiver speaking the same language are supposed to share the same context, with translations it is the translator who must prove able enough to keep the characteristics of the text unchanged and at the same time translate it in a way that the expected receivers – placed in a context which is different from the one initially identified by the author of the message – understand. So, it is the translator's task

to maintain the contents, the style, and the register of the original text and to make them comprehensible even in a different context.

But what happens if the translator is not a person but a machine? The passage from *human* to automatic translations results into a *loss of context*, of the frame embracing and giving meaning to the text. Here is where *Orbis dictus*' multi-language concept becomes crucial. It refers to the possibility of using automatic translations to transmit the same message in an indefinite number of languages.

Due to its nature, the *box* (the automatic translator) organizing the transfer from one language to the other cannot catch the nuances, the contextual references making a language alive, *vivante* (as Saussure would say). Rather, it represents a sort of *undifferentiated context* surrounding the words without changing in shifting from language to language. In order to compensate this loss of context, it is necessary to understand how the *box* works. The first step is to proceed with subsequent simplifications allowing the message to survive and keep its essential content within a context (the *box*) whose only variations are due to the introduction of words and signs. The following step is the identification and generalization of criteria making automatic translations comprehensible.

Through an empirical approach, Diped researchers are currently defining the *criteria of style* underlying the automatic translator in the different parts of a speech: the structure, the lexicon, prepositions, conjunctions, punctuation etc. It is a two-way approach: from the particular to the general and from the general to the particular.

At the beginning, the translation rules were derived from the translations themselves (particular/general); afterwards, the identified rules were utilized to *restructure* the text as to the form, lexical choices, punctuation (general/particular).

Following this procedure and applying the rules to different texts to be translated into and from several languages, it was possible to define two levels (always responding to the general/particular criterion): that of the *universal* rules, which can be applied to all the languages considered, and that of the *local* rules, which can be applied to specific translations only.

TESTING ENGLISH FOR
SPECIFIC PURPOSES IN SCIENCE (TESPIS)

Walter Zeller, Astyle, Linguistic Competence, Austria

The former Leonardo-da-Vinci project "English for Specific Purposes: Chemistry" (ESP:C), a language course for chemists, also created examinations to evaluate the students' performance of those who completed the course. These examinations, however, do neither reliably distinguish between the language levels B2 and C1, nor do they reflect the needs of linguistic skills in industry to the extent that they should.

With all these ideas and experiences as the background, the idea of "Testing English for Specific Purposes in Science" (TESPIS) came into existence. The main steps of this project can now be described as follows:

- Definitions of the language levels based on the Common European Framework were created for the language as needed in the respective professions.

- Assessing the difficulty of a text is usually a rather subjective approach. So methods were developed to create simple, (electronic) tools to filter authentic language material at the examination for quickly defining language levels.

- The framework of our TESPIS examinations is based on already existing international examinations for general English.

- Each examination contains a reading, a listening, a writing and a speaking part.

- Electronic testing is being developed in co-operation with another EU-project: eChemTest Centres.

- The creation of a short (web-based) course, based on moodle, for new examiners is a further feature of this project.

Beside the project's website found at this address www.tespis.eu, we also have the strong support of the European Distance and e-Learning Network (EDEN, www.eden-online.org), European chemical thematic network association (ECTN, ectn-assoc.cpe.fr), English for Specific Purposes: Chemistry (ESP:C, www.esp-c.org), English for Specific Purposes: Therapy (ESP:T, esp-t.eu), e-learning in conservation science (econsc, econsc.chem.auth.gr/virtualcampus) and Chemistry and Industry for teachers in European Schools (CITIES, cities.eu.org)

KNOWLEDGE-BASED EDUCATIONAL TECHNOLOGIES

Maret Branten, Ylo Kess, Eurouniversity, Estonia

Introduction

The steadily growing quantity of e-study courses in the world raises the problem of how to create a system, enabling the knowledge workers and learners of the global educational area to efficiently use that global knowledge. This report presents one possible approach to modelling of the e-study system on meta-level.

E-portfolio as an e-study knowledge base

E-portfolio is an e-study knowledge base, consisting of content modules created for e-study. E-portfolio here means repositories, digital libraries and others. Content module is the elementary part of the knowledge base – knowledge module. E-study course consists of study modules; a study module is either a copy of the content module or its modification. E-portfolio has the network structure with hierarchical internal structure; the e-portfolio architecture model describes that structure.

Knowledge models

The object of knowledge representation is to express knowledge in computer-tractable form. Frame is an elementary part of the e-portfolio knowledge model. Frame model of knowledge systems would be presented as a set of interconnected sub-models of objects and functionality. Architecture of frame network is a meta-model connecting sub-models and describing relations between them. The set of models is hierarchical: architecture → sub-models → modules. Frame models have some features useful for modelling of large systems and complicated processes, including modularity of models and operational manipulating of frames. E-portfolio knowledge model is network of frames, while modules are bounded into the network by relation frames. On meta-level e-portfolio knowledge model is described by architecture model.

Educational networks of e-portfolios

Integration of local e-portfolios in networks means that we would have a global network of educational knowledge supported and supplied by e-portfolios of universities. The global network of educational knowledge is the hierarchy of local knowledge bases. Accordingly, networks of models describe the network and local knowledge bases.

Knowledge management in universities

Knowledge management in a university is main organisational form because university is a knowledge organisation creating, saving and transferring their own and outsourced knowledge. The knowledge technology as a part of knowledge management in university is a set of procedures over knowledge objects aiming to create and develop interactive system connecting e-portfolio and e-learning. Networking over educational systems of universities creates problems with intellectual properties. Then the knowledge exchange between creators and owners of knowledge leads as to the common knowledge market, where global educational knowledge base contains technological and organisational platform for marketing.

Knowledge management in networks

Organisationally it would be or the free market connecting knowledge owners, either closed e-market, managed by market owner. Anyway, the participants of the exchange should have acknowledged about the products on market or in educational knowledge base. Then a set of models covering educational knowledge modules should be useful for creators and owners, but certainly for professors and students using the knowledge. Networking knowledge technology operates on model networks, as a tool for creation of network, handling the development and sharing of knowledge modules. The concept of Europortfolio as a network of educational and organisational knowledge bases requires their integration and management. The structure of Europortfolio is hierarchical, where local knowledge bases are integrated into global knowledge base.

E-portfolio and e-courses models (case from Euroacademy practice)

Hereby the structure of the e-course "Comparative analysis of income accounting: Estonian accounting vs. US GAAP" is described. In designing this e-course, the modules from e-courses "Estonian accounting practice", "US accounting practice" and "Statistics" are used. The e-courses themselves base on e-portfolios "Financial Reporting" and "Qualitative and Quantitative Research Methods".

EDEN

EUROPEAN DISTANCE AND E-LEARNING NETWORK

DUBLIN
IRELAND
19-22 JUNE
2011
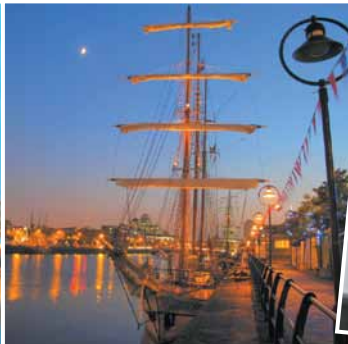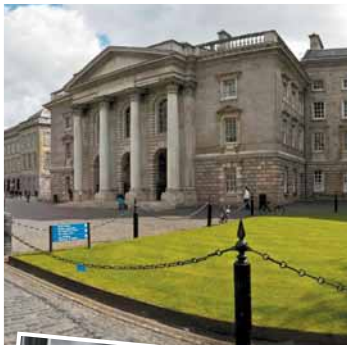
EDEN ANNUAL CONFERENCE

www.eden-online.org