

**Proceedings
of the
10th European Conference
on e-Learning**

Brighton Business School
University of Brighton
UK

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Edited by
Sue Greener and Asher Rospigliosi
University of Brighton
UK

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Contents

Paper Title	Author(s)	Guide Page	Page No.
Preface		xviii	xii
Biographies of Conference Chairs, Programme Chair, Keynote Speaker and Mini-track Chairs		xix	xiii
Biographies of Contributing authors		xxii	xv
Revisiting the Personal Transferable Skills Debate - an eLearning Pedagogical Perspective	<i>Samuel Adu Gyamfi, Lene Tolstrup Sorenson and Thomas Ryberg</i>	1	1
Survey of Teachers' use of Computer/Internet in Secondary Schools in South West Nigeria	<i>Babatunde Alabi Alege and Stephen Olufemi Afolabi</i>	1	8
Issues and Challenges in Implementing eLearning Projects in Higher Education: The Case of Jordan	<i>Hussein Al-Yaseen, Saheer Al-Jaghoub and Nidal Al-Salhi</i>	2	16
The use of Open Educational Resources in Intra-Organisational eLearning and Continuing Education	<i>Antonios Andreatos</i>	3	23
Constructing a Survey Instrument for Assessing Characteristics of Effective Online Teachers	<i>Jonathan Barkand</i>	4	34
When Agents Make Suggestions About Readings	<i>Orlando Belo</i>	5	41
Some Reflections on the Evaluation of Virtual Learning Environments	<i>Nabil Ben Abdallah and Françoise Poyet</i>	5	48

Paper Title	Author(s)	Guide Page	Page No.
Designing A New Curriculum: Finding The Right Blend	<i>Andrea Benn</i>	6	56
Critical Success Factors for the Adoption of eLearning in the Kingdom of Saudi Arabia Educational Institutions	<i>Latefa Bin Fryan and Lampros Stergioulas</i>	7	63
Challenges in Developing e-Submission Policy and Practice	<i>Alice Bird</i>	8	73
Enhancement of e-Testing Possibilities With the Elements of Interactivity Reflecting the Students' Attitude to Electronic Testing	<i>Martin Cápav, Martin Magdin and Miroslava Mesárošová</i>	9	82
e-Assessment Using Digital Pens – a Pilot Study to Improve Feedback and Assessment Processes	<i>Tim Cappelli</i>	9	91
Digital Educational Resources Repositories in Lower and Middle Education in Portugal: Quality Criteria in the International Context	<i>Cornélia Castro, Sérgio André Ferreira and António Andrade</i>	10	100
eLearning: Roles in Distance Tertiary Education	<i>Ivana Cechova, Dana Zerzanova and Jana Berankova</i>	11	109
Independent Learning in Need or in Crisis? Independent Learning Under the new Four-Year Undergraduate Curriculum in Hong Kong	<i>Yin Ha Vivian Chan, Delian Dawn Gaskell, Mei Ah Tan and Lip Yan Felix Chao</i>	12	117

Paper Title	Author(s)	Guide Page	Page No.
The Development and Application of a web Based Metacognitive Mapping Tool	<i>Serdar Çiftci and Mehmet Akif Ocak</i>	13	124
An Exploratory Comparative Study of Distance-Learning Programmes	<i>Marija Cubric, Karen Clark and Mariana Lilley</i>	14	134
The Optimal Teaching Style Based on Variability of Study Materials	<i>Blanka Czeczotková, Kateřina Kostolányová and Jana Šarmanová</i>	15	145
Changing Academics, Changing Curriculum: How Technology Enhanced Curriculum Design can Deliver Strategic Change	<i>Christine Davies</i>	15	152
Web Conferencing for us, by us and About us – the Leeds Met Elluminate User Group	<i>Mark de Groot, Gill Harrison and Rob Shaw</i>	16	156
Tools for Evaluating Students' Work in an Interactive (Open) Virtual Space: Case Study of an eLearning Course in an International Network of Universities	<i>Jana Dlouhá, Martin Zahradník, Jiří Dlouhý and Andrew Barton</i>	17	166
Putting Things in Context - Designing Social Media for Education	<i>Jon Dron, Terry Anderson and George Siemens</i>	18	177
Experimental Assessment of Virtual Students	<i>Michaela Drozdová, Ondřej Takács and Jana Šarmanová</i>	19	186
Priming for Modules: A Case Study Evaluation of 'Pre-Workshop' Online Resources for an Executive MBA Course	<i>Glenn Duckworth</i>	20	195

Paper Title	Author(s)	Guide Page	Page No.
Computer-Mediated Reading and its Impact on Learners' Reading Comprehension Skills	<i>Francisco Perlas Dumanig, Maya Khemlani David and Rodney Jubilado</i>	21	203
Do you see What I see? - Understanding the Challenges of Colour-Blindness in Online Learning	<i>Colin Egan, Amanda Jefferies, Edmund Dipple and David Smith</i>	22	210
Researching in the Open: How a Networked Learning Instance can Challenge Ethical Decision-Making	<i>Antonella Esposito</i>	23	218
Making Constraints and Decisions Explicit to Support Project-Based Collaborative Learning	<i>Gert Faustmann</i>	24	225
A Strategy for the Inductive Generation of Learning Objects in Low-Tech Contexts	<i>Ana M^a Fernández-Pampillón, Elena Domínguez, José M^a Lahoz, Dolores Romero, Isabel de Armas, Susana Palmaz and Jorge Arús</i>	25	235
Cognitive Communication 2.0 in the Classroom – Resonance of an Experience in Higher Education	<i>Sérgio André Ferreira, Cornélia Castro and António Andrade</i>	26	246
To What Extent Does a Digital Audio Feedback Strategy Support Large Cohorts?	<i>Rachel Fitzgerald</i>	27	256

Paper Title	Author(s)	Guide Page	Page No.
Messages of Support: Using Mobile Technologies to Support the Transition of Students on Articulation Routes From Higher National Level to Degree	<i>Julia Fotheringham and Emily Alder</i>	28	266
Blended Learning at the Alpen-Adria-Universität Klagenfurt	<i>Gabriele Frankl and Sofie Bitter</i>	28	274
Evaluating the use of Social Networking Sites as a Tool for Knowledge Sharing for Developing Higher Education in Developing Countries: An Exploratory Study of Egypt and Iraq	<i>Elaine Garcia, Ibrahim Elbeltagi, Sawasn Al-Husseini and Ahmed Abdelkader</i>	29	284
The Relationship Between Mindful Learning Processes and Course Outcomes in Web-Based Learning	<i>Danny Glick and Roni Aviram</i>	30	295
Researching and Sharing – Business School Students Creating a Wiki Glossary	<i>Andrea Gorra and Ollie Jones</i>	31	303
A Qualitative Evaluation of Academic Staff's Perceptions of Second Life as a Teaching Tool	<i>Rose Heaney and Megan Anne Arroll</i>	32	311
Introducing and Using Electronic Voting Systems in a Large Scale Project With Undergraduate Students: Reflecting on the Challenges and Successes	<i>Amanda Jefferies</i>	33	319

Paper Title	Author(s)	Guide Page	Page No.
A Methodology for Incorporating Usability and Accessibility Evaluations in Higher Education	<i>Anne Jelfs and Chetz Colwell</i>	34	326
The Virtual Learning Environment - Directions for Development in Secondary Education	<i>John Jessel</i>	35	332
Multimodal Teaching Through ICT Education: An e-Twinning Program as a Case Study of Intercultural Exchange	<i>Paraskevi Kanari and Georgios Potamias</i>	36	340
Effectiveness and Learners' Evaluation of Combining Audio and Written Online Formative Feedback for Language Learning	<i>Rosario Kane-Iturrioz</i>	36	345
Model of eLearning Project Evaluation	<i>Jana Kapounova, Jana Sarmanova and Marketa Dvorackova</i>	37	355
Bridging the Gap – From Teacher to eTeacher	<i>Andrea Kelz</i>	38	363
Open Courses: The Next big Thing in eLearning?	<i>Kaido Kikkas, Mart Laanpere and Hans Põldoja</i>	38	370
Using a Social Networking Environment to Facilitate Transition Into Higher Education	<i>John Knight and Rebecca Rochon</i>	39	377
Evaluation of the Quality of Learning Scenarios and Their Suitability to Particular Learners' Profiles	<i>Eugenijus Kurilovas, Inga Zilinskiene and Natalija Ignatova</i>	40	380

Paper Title	Author(s)	Guide Page	Page No.
Models of eLearning: The Development of a Learner-Directed Adaptive eLearning System	<i>Stella Lee, Trevor Barker, and Vive Kumar</i>	41	390
Can eLearning Enhance Practice-Based Design Courses?	<i>Jake Leith, Joanna Zara and Malcolm McInnes</i>	42	399
Sophisticated Usability Evaluation of Digital Libraries	<i>Stephanie Linek and</i>	43	408
Social Networks, eLearning and Internet Safety: Analysing the Stories of Students	<i>Birgy Lorenz, Kaido Kikkas and Mart Laanpere</i>	44	415
Learning Management Versus Classroom Management in Technology-Supported Blended Learning	<i>Arno Louw</i>	45	423
How to Represent a Frog That can be Dissected in a Virtual World	<i>Robert Lucas</i>	46	434
Learning by Wandering: Towards a Framework for Transformative eLearning	<i>Marie Martin and Michaela Noakes</i>	47	442
Online Student Engagement: Unfulfilled Promises or Promises Unfulfilled?	<i>Linda Martin, Gary Spolander, Imran Ali and Beulah Maas</i>	48	449
Personalized e-Feedback and ICT	<i>Maria-Jesus Martinez-Argüelles, Josep-Maria Batalla-Busquets, Patricia Noguera-Guerra and Ernest Pons-Fanals</i>	48	456
Evaluation of Multimedia Tools and e-Feedback in Virtual Learning Environments	<i>Maria-Jesús Martínez-Argüelles, Marc Badia-Miro, Carolina Hintzmann and Dolors Plana-Erta</i>	50	465

Paper Title	Author(s)	Guide Page	Page No.
Cyberbullying: A Workplace Virus	<i>David Mathew</i>	50	473
Learning in Smart Environments – From Here to There	<i>Peter Mikulecky</i>	51	479
Using Courseware for More Than Courses: You May Already Hold the Lease on a Versatile Virtual Meeting Space	<i>Karen Hughes Miller and Linda Leake</i>	52	485
An Analysis of Collaborative Learning as a Prevalent Instructional Strategy of South Africa Government eLearning Practices	<i>Peter Mkhize, Magda Huisman and Sam Lubbe</i>	53	492
Ideas for Using Critical Incidents in Oral Debriefing From a Business Strategy Simulation Game	<i>Jonathan Moizer and Jonathan Lean</i>	54	502
Volume Two			
eNOSHA and Moodle – the Integration of two eLearning Systems	<i>Peter Mozelius, Isuru Balasooriya and Enosha Hettiarachchi</i>	55	509
CASE Learning to Structure and Analyze a Legal Decision	<i>Antoinette Muntjewerff</i>	56	517
A Framework for Decision Support for Learning Management Systems	<i>Phelim Murnion and Markus Helfert</i>	57	526
Learning for Life - Building Blocks to Holistic Education	<i>Shekhar Murthy and Devi Murthy</i>	58	535
Student's Characteristics for Note Taking Activity in a Fully Online Course	<i>Minoru Nakayama, Kouichi Mitsuura and Hiroh Yamamoto</i>	59	550

Paper Title	Author(s)	Guide Page	Page No.
Freeing Education Within and Beyond Academic Development	<i>Chrissi Nerantzi</i>	59	558
Why Recording Lectures Requires a new Approach	<i>Paul Newbury, Phil Watten, Patrick Holroyd and Clare Hardman</i>	60	567
eSubmission – UK Policies, Practice and Support	<i>Barbara Newland, Lindsay Martin and Andy Ramsden</i>	61	578
Harnessing the Internet for Authentic Learning: Towards a new Higher Education Paradigm for the 21st Century	<i>Abel Nyamapfene</i>	62	586
Motivational Predictors of Academics' Electronic: Publishing in Nigerian Colleges of Education	<i>Maruff Akinwale Oladejo and Adelua Olajide Olawole</i>	63	593
Psycho-Social Predictors of Students With Disabilities' eLearning: Usage at the Federal College of Education (Special), Nigeria	<i>Adelua Olajide Olawole and Maruff Akinwale Oladejo</i>	64	601
An Integrated Environment for Providing Learning Style Information in a Unified Manner	<i>Fatemeh Orooji, Fattaneh Taghiyareh and Zahra Rahimi</i>	65	609
Using Lifeworld-led Multimedia to Enhance Learning	<i>Andy Pulman, Kathleen Galvin, Maggie Hutchings, Les Todres, Anne Quinney, Caroline Ellis-Hill and Peter Atkins</i>	66	620
The Project Mobile Game Based Learning	<i>Thomas Putz</i>	67	628

Paper Title	Author(s)	Guide Page	Page No.
Using the Common Cartridge Profile to Enhance Learning Content Interoperability	<i>Ricardo Queirós and José Paulo Leal</i>	67	637
The Design and Development of an eLearning System Based on Social Networking	<i>Andrik Rampun and Trevor Barker</i>	68	646
Kansei Design Model for eLearning: A Preliminary Finding	<i>Fauziah Redzuan, Anitawati Mohd Lokman, Zulaiha Ali Othman and Salha Abdullah</i>	69	658
Changing Teacher Beliefs Through ICT: Comparing a Blended and Online Teacher Training Program	<i>Bart Rienties, Simon Lygo-Baker, Natasa Brouwer and Danielle Townsend</i>	70	670
Moodle and Affective Computing: Knowing who's on the Other Side	<i>Manuel Rodrigues, Florentino Fdez-Riverola and Paulo Novais</i>	71	678
Using Google Applications to Facilitate an Effective Students' Collaboration in the Teaching of Informatics to Students of Secondary Education	<i>Eleni Rossiou and Erasmia Papadopoulou</i>	72	686
Training Methods and Tools: Could eLearning be a Viable Solution to Solve SMEs Training Problems?	<i>Andrée Roy</i>	73	697
Using Blended Learning to Develop Critical Reading Skills	<i>Zuzana Šaffková</i>	73	705
A Mobile aid Tool for Crafting Active Learning Experiences	<i>Ahmed Salem</i>	74	716

Paper Title	Author(s)	Guide Page	Page No.
King-Sized eLearning - how Effective can an Online Approach be for Large Module Groups?	<i>Marie Sams, Mary Crossan and Kate Mottram</i>	75	724
Designing Effective Online Group Discussions	<i>Rowena Santiago, Amy Leh, and Minoru Nakayama</i>	76	731
The Game and the Alternating Roles of Learner/Teacher as Facilitators of the Learning Process in Organizations	<i>Vitor Santos and Luis Amaral</i>	77	739
Implementing and Evaluating Problem-Based Virtual Learning Scenarios	<i>Maggi Savin-Baden, Cathy Tombs and Katherine Wimpenny</i>	77	746
The Evolution of eLearning Platform TESYS User Preferences During the Training Processes	<i>Adriana Schiopoiu Burlea, Amelia Badica and Carmen Radu</i>	78	754
Teachers' Skills set for Personal Learning Environments	<i>Zaffar Ahmed Shaikh and Shakeel Ahmed Khoja</i>	79	762
Bridging the Feedback Divide Utilising Inclusive Technologies	<i>Angela Shapiro and Aidan Johnston</i>	79	770
Post-Academic Masters Course in Management of Transfusion Medicine: Why the Difference in Access to the eLearning Between Countries?	<i>Cees Th. Smit Sibingal</i>	80	776

Paper Title	Author(s)	Guide Page	Page No.
Engagement With Students in 'Middle Ground': A Flexible Learning Environment Allowing Simultaneous Access to Social Networking Sites and Formal Academic Space	<i>Anne Smith and Sonya Campbell</i>	82	780
The Learning Management System as a Social Mediator: A Story With a Happy Ending	<i>Dina Soeiro, António Dias de Figueiredo and Joaquim Armando Gomes Ferreira</i>	82	788
Can the Medium Extend the Message? Using Technology to Support and Enhance Feedback Practices	<i>Mekala Soosay</i>	83	794
Implementation and Analysis of an Online, Student Centred Learning Environment to Support Personalised Study	<i>Iain Stewart, William McKee and Kevin Porteous</i>	84	802
The Danger of the Downward Spiral: Teachers and Digital Literacy	<i>Caroline Stockman and Fred Truyen</i>	85	811
PeerWise - The Marmite of Veterinary Student Learning	<i>Amanda Sykes, Paul Denny and Lesley Nicolson</i>	86	820
iSELF: An Internet-Tool for Self-Evaluation and Learner Feedback	<i>Nicolet Theunissen and Hester Stubbé</i>	87	831
Using a Learning Management System for Executing Role Play Simulations	<i>Tone Vold</i>	88	841

Paper Title	Author(s)	Guide Page	Page No.
The Effects of Self-Directed Learning Readiness on Learning Motivation in Web 2.0 Environments	<i>Chien-hwa Wang and Cheng-ping Chen</i>	88	846
Usage Cases: A Useful way to Improve Effectiveness of eLearning web Based Platforms	<i>Cristina Wanzeller and Orlando Belo</i>	89	854
The Virtual Path to Academic Transition: Enabling International Students to Begin Their Transition to University Study Before They Arrive	<i>Julie Watson</i>	90	862
Identifying and Locating Frames of Reference to Inform the Design of Virtual Worlds in Higher Education	<i>Katherine Wimpenny, Maggi Savin-Baden, Matt Mawer, Nicole Steils and Gemma Tombs</i>	91	870
Reaction Lecture: Text Messaging to Increase Student Engagement in Large-Scale Lectures	<i>Koos Winnips, Joost Heutink, and Hans Beldhuis</i>	92	878
A Holistic Approach to Instructional Design for Blended Learning Environments	<i>Li Zhong Zhang</i>	93	886
PhD Papers		95	895
Evaluating the Impact of an Arabic Version of an Adaptive Learning System Based on the Felder-Silverman's Learning Style Instrument	<i>Nahla Aljojo, Carl Adams, Huda Saifuddin and Zainab Alsehaimi</i>	97	897

Paper Title	Author(s)	Guide Page	Page No.
Negotiating Doctoral Practices and Academic Identities Through the Adoption and Use of Social and Participative Media	<i>Andy Coverdale</i>	98	909
Enabling Disruptive Technologies for Higher Education Learning and Teaching	<i>Michael Flavin</i>	99	917
Exploring the Potential of a Mobile Computer lab in a Developmental Context: The Teacher's Perspective	<i>Fortunate Gunzo and Lorenzo Dalvit</i>	100	925
Collaborative eLearning in a Developing Country: A University Case Study in Uganda	<i>Evelyn Kigozi Kahiigi, Henrik Hansson, Mats Danielson, F.F Tusubira and Mikko Vesisenaho</i>	101	932
Applying the Multimedia Learning Theory in the Primary School: An Experimental Study About Learning Settings Using Digital Science Contents	<i>Fabio Serenelli, Enrico Ruggeri, Andrea Mangiatordi and Paolo Ferri</i>	102	943
Designing a U-Learning Course Platform for the Identified Teacher Training Needs	<i>Nazime Tuncay and Hüseyin Uzunboyly,</i>	103	953
Work In Progress Papers		105	971
Someone to Talk to – Using Automated Characters to Support Simulated Learning Activities	<i>Liz Falconer and Manuel Frutos-Perez</i>	107	973
Extreme Scaffolding in the Teaching and Learning of Programming Languages	<i>Dan-Adrian German</i>	108	978

Paper Title	Author(s)	Guide Page	Page No.
Benefits and Barriers: Applying eLearning in the Context of Organisational Change to Improve the Learning Experience for Mature, Part-Time Students	<i>Simon McGinnes</i>	108	982
Posters with Paper		111	
Investigating Student Engagement With an Electronically Delivered Simulation of Professional Practice	<i>Olivia Billingham</i>	113	989
Instrumental Distance Learning in Higher Music Education	<i>Karin Levinsen, Rikke Orngreen, Mie Buhl, Marianne Løkke Jakobsen and Jesper Andersen¹</i>	114	993
Reflections on Academic Blogging as a Vehicle for Professional Development	<i>Peps Mccrea</i>	114	997
A Framework for Understanding Online Learning Communities	<i>Sónia Sousa, David Ribeiro Lamas, José Braga de Vasconcelos and Ilya Shmorgun¹</i>	115	1000
Trust in Distributed Personal Learning Environments: The Case Study of LePress PLE	<i>Sónia Sousa, David Ribeiro Lamas and Vladimir Tomberg</i>	115	1006
Breaking Down Barriers: Development of a Wiki Based Module to Enhance the International Learning Experience	<i>Karen Strickland, Liz Adamson, Carolyn Blight and Wendy McInally</i>	116	1012

Paper Title	Author(s)	Guide Page	Page No.
eLearning in German Higher Education: Technology Implementation as a Challenge for Organizational Change	<i>Novita Yulianti, Michael Lund and Georg Müller-Christ</i>	117	1015
Poster with Abstract		119	
The Impact of Subject Structure on Learning Management System use	<i>David Bond</i>	121	
Can we Learn Putonghua Online?	<i>Yin Ha Vivian Chan</i>	122	
Feedback to Feed-Forward: Is Screencasting an Effective Feedback Tool?	<i>David Comiskey</i>	126	
Mind Mapping: The Future of Student Engagement in eLearning	<i>Kate Mottram</i>	127	
Using Information and Communication Technology in the Classroom, at Physics, Part of the Sciences Curriculum	<i>Florica Paragină, Silviu Paragină and Alexandru Jipa</i>	128	
Mobile Knowledge Sharing for Language Learners	<i>Lyn Pemberton and Marcus Winter</i>	129	
Six Years of Teaching Activity Using the Electronically Assisted Learning and Online Education, in the Pre-University and University Educational System	<i>George Vaju</i>	130	

Paper Title	Author(s)	Guide Page	Page No.
Assessing for Higher Order Abilities: Reconsidering Assessment Strategies for Reflection Using an ePortfolio System	<i>Panos Vlachopoulos and Anne Wheeler</i>	131	
Presentation only		133	
SharePoint as a Platform for eLearning and Assessments	<i>John Kleeman</i>	135	
Using Mobile Devices to Support Your Research and Teaching (or.50 Reasons why you Need an iPad)	<i>Katie Piatt</i>	137	
Campus-Wide Lecture Video Recording Services at Half the Cost: A Learning Journey of Good Practices	<i>Daniel Tiong Hok Tan and Lay Kock Chan</i>	138	

Preface

These Proceedings represent the work of contributors to the 10th European Conference on e-Learning, ECEL 2011, hosted this year by Brighton Business School, University of Brighton, UK. The Conference Chair is Sue Greener, and the Programme Chair is Asher Rospigliosi, both from Brighton Business School, UK.

The conference will open with a keynote address by Don Clark, former CEO of EPIC software and winner of the 'Outstanding Achievement in e-learning Award'. Expect to be enlivened by his challenge: "Don't lecture me!, ..and why technology is only scalable solution". Also on the first day we have Anne Boddington from the University of Brighton speaking on the topic of "Designing Education and Reshaping Learning". The second day will be opened by Professor Gráinne Conole, Director of the Beyond Distance Research Alliance at the University of Leicester in the UK with a talk entitled "Trajectories of learning - new approaches and directions".

With an initial submission of 239 abstracts, after the double blind, peer review process there are 108 academic papers, 7 Phd Papers, 3 Work in Progress papers and 3 non academic papers in these Conference Proceedings. These papers reflect the truly global nature of research in the area with contributions from Australia, Austria, Belgium, Canada, China, Czech Republic, Denmark, Estonia, France, Germany, Greece, India, Iran, Ireland, Israel, Italy, Japan, Jordan, Lithuania, Malaysia, Nigeria, North Cyprus, Norway, Pakistan, Portugal, Romania, Saudi Arabia, Singapore, Slovakia, South Africa, Spain, Sweden, Taiwan, The Netherlands, Turkey, United Kingdom and the United States.

A selection of papers – those agreed by a panel of reviewers and the editor will be published in a special conference edition of the EJEL (Electronic Journal of e-Learning www.ejel.org).

We know you will enjoy and be stimulated by this conference. We hope you will also revel in the uniqueness of Brighton.

Sue Greener and Asher Rospigliosi

November 2011

Biographies of Conference Chairs, Programme Chairs and Keynote Speakers

Conference Chairs



Dr Sue Greener is a University teacher: HRM, Business Context, Research Methods and Learning & Development and has received a Teaching Excellence award from the University of Brighton and is Programme Leader for the Foundation Degree in Business. Sue is also the Course Director: online final year undergraduate course with students in diverse world regions, her researcher interests are focused on e-learning strategy, teacher development and reflective learning. Sue is the co-founder of the Business e-Learning Research Group and a member of the CROME research group on employment issues at Brighton Business School. Her Doctoral research focused on exploring students' readiness for online learning. Sue holds a BA, MBA, EdD, FHEA and is a Chartered Fellow of CIPD.

Programme Chair

Asher Rospigliosi lectures on e-commerce, management information systems, IS strategy, public sector IS and digital marketing at the University of Brighton. His research interests extend to e-learning and innovation in SMEs. Asher is a co-founder of the Business e-Learning Research Group and a member of the CROME research group on employment issues at Brighton Business School.



Keynote Speakers



Gráinne Conole is Professor of e-Learning at the Open University, with research interests in the use, integration and evaluation of Information and Communication Technologies and e-learning and impact on organisational change. She was previously chair of educational innovation at Southampton University and before that Director of the Institute for Learning and Research Technology at the University of Bristol. She has extensive research, development and project management experience across the educational and technical domains. She serves on and chairs a number of national and international advisory boards, steering groups, committees and international conference programmes.

Donald Clarke was CEO and one of the original founders of Epic Group plc, which established itself as the leading company in the UK e-learning market, floated on the Stock Market in 1996 and sold in 2005. Describing himself as 'free from the tyranny of employment', he is now a board member of Ufi LearnDirect (Government agency delivered e-learning to 2.8 million learners), Caspian Learning (learning games tool provider), LearningPool (content provider), Brighton Arts Festival, and a school governor. Donald has won many awards for the design and implementation of e-learning, notably the 'Outstanding Achievement in e-learning Award'.

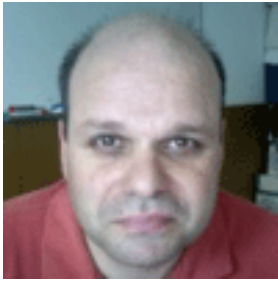


Anne Boddington is Dean of the Faculty of Arts at the University of Brighton. Educated and qualified as an Architect and subsequently as a Cultural Geographer, she currently leads a Faculty of 3,900 students and a portfolio that includes the Visual and Performing Arts, Architecture, Design, Media Studies, Literature, Languages and Humanities. She is also Co-director of the ADM HEA Subject Centre, which we are proud to host at the University. Anne is a Fellow of the Royal Society of Arts (RSA) and an affiliate member of the Royal Institute of British Architects (RIBA) and is an elected member of the executive for the Council for Higher Education in Art & Design (CHEAD). Her initial research interests were rooted in the design and development of the urban and cultural landscape and identity but have expanded to include the strategic design and development of learning and research space and its relationships to pedagogic practice and to educational strategies and governance.

Mini Track Chairs

Dr Antonios Andreatos is a Professor at the Computer Engineering Division of the Hellenic Air Force Academy. He received the Diploma in Electrical Engineering from the Univ. of Patras, the M.S. in Computer Engineering from the Univ. of Massachusetts, the M.Ed in Adult Learning from the Hellenic Open Univ. and the Ph.D. in Computer Engineering from the National Technical Univ. of Athens. Research interests include e-Assessment, Active Learning methods, ICT & Web 2.0 & Open Resources in Education, Didactics of Computer Engineering, etc. He has published over 60 papers in journals and conference proceedings and a book. He is also involved in the scientific committees of many conferences in his fields of interest.





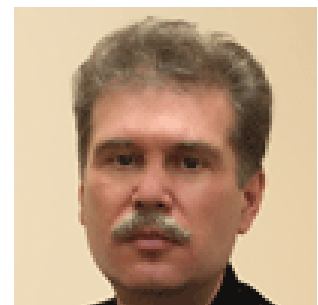
Orlando Belo is an associate professor in the Department of Informatics at Minho University, Portugal. His main research topics are related with data warehouse design, implementation and tuning, ETL services, database preferences, and distributed multidimensional structures processing. During the last few years he was involved with several projects in the decision support systems area designing and implementing computational platforms for specific applications like fraud detection and control in telecommunication systems, data quality evaluation, and ETL systems for industrial data warehousing systems. More recently, he was developing some research work establishing OLAP usage profiles and optimizing OLAP selection methods, applying some of the techniques studied on these areas over typical e-learning scenarios.

Dr Colin Egan is a senior lecturer in the School of Computer Science, at the University of Hertfordshire. Colin has had an interest in accessibility and accessibility issues for a number of years and has presented his work to a range of International Conferences.



Dr Amanda Jefferies is a Reader in Technology Enhanced Learning at the University of Hertfordshire. She is passionate about promoting a positive learning experience for students in HE through careful choice of technologies, to enhance their engagement with studies. She is well-known for innovative research into understanding the student experience through using student constructed reflective video and audio diaries, a technique she refined through her JISC-supported 'Learner Journeys' STROLL project during 2007-2009. She has presented her research to international audiences across the UK, Europe and in North America.

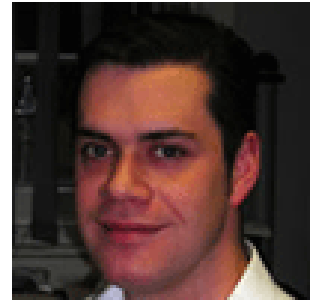
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Revisiting the Personal Transferable Skills Debate - an eLearning Pedagogical Perspective

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Abstract: Personal Transferable Skills (PTS) are essential work skills which are not specific to any subject or profession, and which, though learned in one context may be successfully transferred to and applied in many other contexts. They are skills that enable people to acquire, structure, interpret and put to efficient use, their subject knowledge. There is a growing concern among educational providers and employers' organisations on the lack of PTS of university graduates. This phenomenon has been amplified by the need of university graduates of the twenty-first century to possess skills and knowledge that can be effectively used in new domains and in different situations since there is also an increasing tendency for graduates to take jobs outside their academic field of study. There have been several attempts to promote PTS by university institutions in the traditional classroom settings where three broad approaches for developing PTS within the curriculum have been experimented with. To date, progress so far has been patchy. The paper is in two theoretical parts. The first part seeks to advance the theoretical framework of REALs as the better approach to teaching and learning in our universities. The second part of the paper argues that theoretically, communication theory (which draws on contemporary rhetorical theory) and social informatics theory provide important perspective for the application of eLearning based on REALs in the development of PTS for university graduates. The paper would contribute significantly to theoretical underpinnings of eLearning based on REALs for the development of PTS of university graduates.

Keywords: personal transferable skills, eLearning, Rich Environment for Active Learning, intentional learning, co-operative learning

Survey of Teachers' use of Computer/Internet in Secondary Schools in South West Nigeria

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Abstract: The Federal Government of Nigeria developed a National Policy for Information Technology at the beginning of the new millennium in order to

keep pace with the rest of the world and to meet the challenges of a rapidly changing global environment. Nine years later the Technical Working Committee Group on Information and Communication Technology submitted its report. A major propelling philosophy is to have a modern ICT-driven educational system for the effective delivery of educational services at all levels. To what extent this has been achieved remains to be investigated. The study was a descriptive survey carried out to investigate the teachers' literacy profiles, attitudes towards computers, general integration of Information and Communication Technology and also determine the hindrances experienced by them on the integration of ICT in their teaching. Five hundred and sixty two teachers from private and public schools in southwest Nigeria were randomly selected. Their basic statistics include 58% females and 42% males with varying educational qualifications and working experiences. The questionnaire used consisted of five parts based on teachers' general information, computer literacy, attitude, integration of ICT in their teaching and hindrances. Research questions were generated. Data collected were analysed using simple percentage. The results indicated among others that 87% of the teachers irrespective of their gender, school proprietorship and experience do not use computers in their teaching. The teachers' tendency not to use computers was determined by their lack of expertise in using ICT, non-availability of infrastructure, equipment and software, laziness, technophobia, lack of incentives and support, and their general attitude. It was recommended among others: that computer training programmes are organized for all the teachers in Nigeria, adequate infrastructure and equipment should also be provided in each school, teachers should be well remunerated to serve as incentives and Nigeria should address ICT issue with all seriousness it deserves within the context of her education policy and implementation.

Keywords: Information and communication technologies, technology integration, computer/internet, secondary schools, southwest nigeria, technophobia

Issues and Challenges in Implementing eLearning Projects in Higher Education: The Case of Jordan

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Abstract: Jordanian universities have started to adopt eLearning projects aiming to improve the effectiveness and efficiency of the educational process for both instructors and learners. This paper presents the results of a preliminary study that aims to identify the main issues and challenges facing

these universities in implementing their eLearning projects. The data were collected using a survey to investigate the main factors affecting eLearning projects in Jordanian universities. The results of this study showed that the most important issues and challenges faced by Jordanian universities are human, cultural, regulatory, support, technical and financial respectively. These findings are hoped to be useful for researchers and policy makers as they provide some insights to universities in Jordan and other developing countries about the main issues and challenges that may be faced when planning for and developing their own eLearning systems.

Keywords: eLearning, challenges, higher education, developing countries, Jordan

The use of Open Educational Resources in Intra-Organisational eLearning and Continuing Education

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Abstract: Sustained learning is a crucial factor of an organisation's ability to survive and effectively compete in the globalisation era worldwide. Continually shrinking half-life periods of knowledge and fast changing globalised workplaces, force employees working in knowledge-intensive companies to acquire new knowledge and skills for life. The evolution of Web 2.0, the advantages and boom of New Media, the massive production of open educational resources and globalisation, are bringing revolutionary changes to all forms of education: formal, non-formal and informal. Thus, the need for continuing education and lifelong learning is obvious. Various surveys performed worldwide show that university graduates are not well prepared for today's working environment. Most important skills missing are related to the use of ICT and adoption of emerging technologies, teamwork/ collaboration, creativity, innovation and change management, diversity and Leadership and fundamentals of entrepreneurship. Thus, there is also a need for education of newcomers. The purpose of this work is to examine the use of open educational resources in intra-organisational learning and to examine the properties of Learning Objects such as their metadata, that will facilitate this task. More precisely, this paper initially argues about the advantages of using open educational resources in eLearning and continuing education. Prerequisites for selecting and combining external Learning Objects will be examined. Ways for externalising the organisation's social capital in reusable Learning Objects appropriate for intra-organisational learning will be proposed. The issue of certification of informally acquired knowledge and

skills will be mentioned. The use of open educational resources may enrich existing social capital and facilitate intra-organisational eLearning and continuing education in a cost-effective way. For better results, a formal characterisation scheme of LOs, in the form of a posteriori metadata, will greatly facilitate their organisation, search and retrieval process.

Keywords: open educational resources, learning objects, continuing education, metadata, intra-organisational learning, social capital

Constructing a Survey Instrument for Assessing Characteristics of Effective Online Teachers

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Abstract: This paper will report on a proposed research project, which seeks to create and validate an instrument that can be used to determine the effectiveness of online teachers. This study is the first step in a comprehensive research project that is intended to establish the reliability and validity of a survey for online teachers. A significant body of research has been conducted in identifying and quantifying characteristics of effective online teachers. However, to date, a standardized survey instrument has not been formally accepted or approved to make a qualitative assessment of which characteristics are considered to be most essential for success in an online environment. As education continues to make the shift to a completely online environment, there will be a need to design an assessment system to determine effective and ineffective online teachers. Paralleling this transition is the need for the training and education of teachers to be more effective in an online environment. Certificates in Online Teaching and Learning (OTL) are being offered at universities at the graduate level. These programs are designed to prepare teachers for teaching and learning online. The quality of OTL programs would be greatly increased with a survey instrument to be used with current and graduated students. The survey results will be categorized based on the frameworks used by the National Council for Accreditation of Teacher Education (NCATE). Data will be sorted into the three NCATE categories of Knowledge, Skills, and Professional Dispositions. This categorization will create an easy to use characteristic breakdown for effective online teachers. The use of these results is not limited to self-improvement, but could be used by supervisors and school administration. Based on the literature and results, an assessment matrix will be developed that will allow teachers from any discipline to see a measurement of their effectiveness as an online teacher.

Keywords: online teaching, eLearning teachers, teacher characteristics, effective teaching survey instrument, quality online teaching

When Agents Make Suggestions About Readings

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Abstract: Significant efforts have been made during the last few years in the design and implementation of pedagogical agents for a wide range of application domains. One of the most common target area is the assistance to students in cases of regular subject studying, promoting means that help them to improve their performance and expertise in some specific subject areas. Frequently students ask their teachers about the “best” and more effective bibliographic resources that they could use to study and validate knowledge for some working topics. In this paper we will discuss the basic characteristics of pedagogical agents, approaching their typical functional architecture, and services, reinforcing the discussion on a specific class of pedagogical agents that are responsible to support students during their studying sessions, helping them in the validation of their knowledge, suggesting bibliographic resources information whenever requested.

Keywords: eLearning platforms, agent based computing, intelligent tutoring systems, software agents, artificial intelligent tutors, bibliographic resources suggestion

Some Reflections on the Evaluation of Virtual Learning Environments

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Abstract: This paper aims at pondering over the evaluation question of the VLE. We have carried out an overview of concepts and methods commonly used in Human-Computer Interaction (HCI) in the evaluation of information systems and then we have discussed the limits of their application on the VLE. We are proposing to evaluate the latters according to an activity-oriented approach. It will allow us to expand our field of study to learning situations in which a VLE can be integrated. The learning activity is thus observed not only through the interactions of motivated learners and teachers with VLE but also with the objects and objectives of learning implemented via VLE. This observation is based on the theoretical framework proposed by activity theory. The Engeström model as a form of conceptualization of the structure of activity is essentially explored to understand the elements interacting in a learning situation integrating VLE. We conclude our

contribution by the application of ideas developed by observing the use of a VLE in a learning situation of information seeking and involving small groups of students.

Keywords: VLE evaluation; activity theory; usability; utility; practical acceptability; social acceptability

Designing A New Curriculum: Finding The Right Blend

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Abstract: This paper discusses the development process for a new Undergraduate (UG) Business Programme to be introduced at the University of Brighton (UoB) for the academic year 2012/13. It is the research and preparation which forms the basis of this paper. The focus for this paper was about finding the right balance of e-learning to support learners during their UG experience, with a view to progressing them from passive to active and independent learners. The principal pedagogical strategy is to be collaborative enquiry-based learning and this research was to identify appropriate blended strategies and technologies which would enhance and complement this approach. The concept of collaborative learning indicates that consideration must be given to the formation and development of groups for working in both physical and virtual environments. Both will bring their own challenges but consideration is given to how these will be addressed throughout the lifetime of the programme. The plethora of research into E and blended learning advises that learning with technology needs to be driven by pedagogical principles, including the specific skills that these new learners will require in order to cope with and enjoy the new approach of enquiry-based learning, not normally associated with UG business students. The development required a review of the current technologies available at UoB, alternative technologies and how they are being utilised and incorporated by colleagues in other institutions, together with ways of introducing them to the learners. The research also explored whether or not there should be an overlapping of educational and recreational technologies and is it right to mix. Final attention was given to the assessment of the students, how frequently this should occur and how much should be formative or summative, what format it would take and how much of it would be the responsibility of the tutors. Some of the technologies and collaborative learning were already integrated into the current business programme at UoB and provided useful evaluation from observations of the students together with their feedback. This provided some useful understanding of what their

expectations were as well as identifying specific requirements prior to starting any activities.

Keywords: blended; collaborative; problem-based learning; curriculum design, action learning

Critical Success Factors for the Adoption of eLearning in the Kingdom of Saudi Arabia Educational Institutions

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Abstract: In recent years, Electronic Learning (eLearning) has gained interest and has been widely adopted and acknowledged; it is integrated in many institutions' educational systems. Owing to the major transformation of traditional educational system in the Kingdom of Saudi Arabia (KSA), most of higher educational institutions are currently switching to eLearning system and the rest are expected to switch in the near future. Nowadays there is a universal need to investigate such Critical Success Factors (CSFs) that have significant impact on the adoption of eLearning. The aim of this paper is to identify and prioritise, in order of their importance, the Critical Success Factors (CSFs) for the adoption of eLearning in educational institutions of the Kingdom of Saudi Arabia (KSA). Therefore, the chosen area of research for this paper holds importance in terms of considering the CSFs before and during the adoption of eLearning process especially at this time when KSA is ready to prepare for this educational reform. Although the significance of eLearning cannot be denied and its impact on the improvement of the traditional educational system is well-recognised, there are still gaps reported in the literature for the adoption of eLearning. In order to fully realise the potential of eLearning and understand the challenges in its adoption, it is imperative to identify the CSFs that affect the adoption of eLearning in KSA educational institutions. In order to do so, this paper identifies key success factors that affect the adoption of eLearning through extensive analyses of case studies and the existing literature. For the case study analysis, five KSA educational institutions are investigated through interviews and questionnaires; for the purpose of literature review, data is collected from different resources such as journals, books, conferences papers, newspaper articles, magazines, etc. The research gap is identified so as to highlight the importance of this research. Additionally, the features and benefits of eLearning are discussed and the CSFs for eLearning adoption are identified and presented in a table with respective categorisations. The interpretive, qualitative data analysis methods are used, and findings are presented in

tables and figures. Findings show that of the total 52 CSFs identified, 25% were highlighted only through interviews and survey questionnaires and were not found in the existing literature.

Keywords: eLearning, adoption of eLearning, distance learning, critical success factors, higher educational institutions, education in Kingdom of Saudi Arabia, educational reform

Challenges in Developing e-Submission Policy and Practice

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Abstract: In the current economic climate, higher educational institutions are seeking strategies to enhance the student learning experience and, at the same time, reduce administrative costs. Electronic submission of coursework, e-submission, is frequently perceived as one approach that can help achieve both of these objectives. However, this view fails to acknowledge the diverse needs of the key stakeholders (institutional strategic management, academic staff and the student body) and the increased influence of the latter on institutional policy development. This shift in powerbase imposes additional challenges for those responsible for developing and implementing high stakes institutional change initiatives, such as e-submission policy and practice. This paper begins by reviewing the background to developing and implementing electronic submission policy and practice, in the context of institutional cultures and orientations to academic development. It acknowledges increased influence of the student voice and enhanced difficulty in developing policy and practice when mediating between three equally powerful stakeholders; strategic management, academia and the student body. It offers an insight into the dynamics of these triumvirate influences through a three-year e-submission case study at one higher educational institution. The paper charts the progress of the case through three phases (feasibility study, pilot study and early stage implementation), highlighting the influences of the key stakeholders on outcomes and attempts to gain consensus on policy and practice. The paper concludes by reflecting on the experiences and findings from the case study and making recommendations on how other institutions might approach developing similar e-submission policy and practice.

Keywords: e-submission policy, institutional change, institutional compliance, academic freedom, student voice

Enhancement of e-Testing Possibilities With the Elements of Interactivity Reflecting the Students' Attitude to Electronic Testing

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Abstract: Testing in electronic environment is usually considered to be very effective, however, that does not mean it is objective at the same time, mainly from the students' point of view. Within three years we carried out a research based on questionnaire investigation which aim was to explore students' attitude toward electronic testing. We found out that students' perception of this type of testing depends on whether classification is the main objective of the testing or not. The research also showed that the attitude of students is to a large extent influenced by the level of their previous experience with e-testing. In spite of the fact that testing is in all mentioned groups perceived as modern, effective and interesting, it is not completely accepted by all the students, nor is it considered to be objective. Teachers, on the other hand, perceive e-testing assuredly more positively. The differences in the opinions were obviously caused also by insufficient interactivity in standard LMS systems as well as limited support in evaluating the essay tasks. These were the main reasons for us to concentrate on modification and adaptation of FlashQuestions module implementable into LMS Moodle. The module allows interactive testing utilizing animations. At the moment, we are carrying out an empirical research focused on the effectiveness of testing that employs the interactive media objects. So far, we found out that this method of testing required less time spent on test elaboration by the students in comparison with traditional "paper" testing. The other interesting feature pertains to the increase of average result (number of points gained by the students).

Keywords: e-testing, FlashQuestions, interactivity, animations, feedback

e-Assessment Using Digital Pens – a Pilot Study to Improve Feedback and Assessment Processes

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Abstract: Manchester Medical School is the largest medical school in the UK, with over 2000 students on the MBChB programme. During the final three years of the programme all students undergo regular assessments of their clinical skills through a series of Objective Structured Clinical

Examinations (OSCEs). The OSCEs require students to carry out a series of simulated exercises in front of an examiner. The examiner completes a score-sheet for each student, giving a mark between 1 and 7 for each of four criteria together with a 'global mark', again between 1 and 7. The examiner also leaves a small piece of written feedback on the bottom of each form. Following the exam, all the score-sheets from each of the four teaching hospitals attached to the University are scanned using an optical reader. This involves a large amount of effort and provides many opportunities for errors. Due to the work involved and logistical problems, student feedback from the OSCEs is currently limited to a single mark. Despite the examiners providing the piece of text on the score-sheet, this is only made available to students scoring less than 4 on their global mark. The students and the School are increasingly motivated to allow all students access to the written feedback. Hence, in an effort to increase efficiency of the OSCE process and enable the delivery of student feedback, the Medical School has piloted the use of digital pens as a method of capturing and processing scoring and feedback. This case study presents the process and evaluation of the pilot. The study examines the choice of technology, the aims of the pilot and an evaluation of the technology to assess whether objectives have been achieved. An impact analysis of the use of the pens over a five year period also shows the return on investment.

Keywords: e-assessment, digital pens, feedback

Digital Educational Resources Repositories in Lower and Middle Education in Portugal: Quality Criteria in the International Context

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Abstract: The thematic of Digital Educational Resources (DER) and digital educational repositories at primary and secondary education levels is of growing centrality in the educational themes in the international debate. In order to make it easier for teachers and students to find the best and relevant learning resources and to encourage teachers' uptake of innovative materials and learning styles, authorities and/or companies in European countries have launched web based educational repositories. Following this trend, about two years ago, three major institutions in Portugal have launched their repositories: *Portal das Escolas* (ME), *Casa das Ciências* (FCG) and *BOA*

(INESC-ID). After examining the state of the art of educational repositories in Europe, it was found that those three Portuguese repositories are not mentioned in recent European reports and so the study here presented seemed to be very relevant. This work aims to develop a descriptive and comparative study, in order to characterize the reality of the Portuguese repositories and compare it with European examples of good practices. To guide this investigation, the following question was theorized: “*How are the Portuguese institutional repositories, for primary and secondary education levels, positioned in what concerns international quality criteria?*” Our methodology design is a qualitative one and of type i) descriptive, as it is intended to characterize the main Portuguese institutional DER repositories for primary and secondary school education, aiming to assess the key dimensions that affect their quality and ii) comparative since it has in view comparing those repositories with reference European ones. In this sense, *Lektion* in Sweden and *Scoilnet, Portal for Irish Education* in Ireland are considered. The study was undertaken from the view of the DER producers and users. As a tool for data collection it was used a framework of analysis built on the *Guía para la Evaluación de Repositorios Institucionales e Investigación* (GERII), a joint publication of the Spanish Ministry of Science and Innovation and other organizations in the fields of Education, Science and Technology (Villar et al, 2010). The GERII guide includes a set of guidelines for the creation and evaluation of a repository, bringing together a battery of 31 evaluation criteria, distributed over seven dimensions that any repository must accomplish to meet quality and therefore was considered an excellent basis for our analysis. Comparing the three Portuguese repositories, target of this study, with two reference European repositories in order to contextualize the national reality in the international arena will stand for the Portuguese institutions that hold the repositories as an opportunity for improvement. Thus, Portuguese teachers will have an increased chance to access an eclectic collection of quality resources, in order to diversify their teaching strategies.

Keywords: comparative study; digital educational resources; evaluation; quality; repositories

eLearning: Roles in Distance Tertiary Education

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Abstract: Information and communication technologies (ICT) have undergone a rapid development in accordance with advances in the society. This state has to be reflected in the teaching process, while teaching

languages is no exception. Language training at the University of Defence (UoD) is carried out on both a full-time as well as a distance study basis. E-learning is an integral part of both forms of language study programmes. The possibilities of students' involvement into the process of creating study supports, especially for teaching and learning specific terminology were employed to determine the influence of technology-supported materials on the students' language learning. The co-operation with students enables their more active participation in study material preparation and during the lesson itself, the content of which responds to the needs of particular specialisations. This approach opens a different perspective to the teachers who prepare the study materials for teaching special terminology in co-operation with individual departments of the faculty. The students' involvement motivates both sides of the educational process and influences them qualitatively. The basis for the research were semi-structured interviews the aim of which was to find out how Information and Communication Technologies (ICT) help the distance students in their study, how distance students assess ICT in their language training and especially how the students assess LMS Barborka. The second part of the research was a questionnaire survey aimed at creating a distance learner profile dealing with technology usage for language learning. We also wanted to find out if our distance students prefer to: use up-to-date technologies, the Internet, an in-house Study Portal and on-line sessions in language lessons be taught in a classical way (without computer technology programs). The paper describes our research, the methods used and our respective findings and suggests implications of the research for a broad range of educational fields. It will be of interest to stakeholders in education and those who seek to be informed users and or promoters of computer technology for learning purposes.

Keywords: distance learning, LMS Barborka, students' participation, electronic study material

Independent Learning in Need or in Crisis? Independent Learning Under the new Four-Year Undergraduate Curriculum in Hong Kong

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Abstract: Accompanied with the rapid development of technology, independent learning, especially in the format of multi-media, has inspired a great deal of enthusiasm and energy in academia over the past few decades. This is certainly the case in Hong Kong since the number of university

students has continued to increase dramatically. One particular point that has placed Hong Kong in the spotlight is that there will soon be a complete switch from the previous 3-2-2-3 education curriculum to the 3-3-4 curriculum in 2012. Under this new system, university students will be required to spend four years rather than three to obtain an undergraduate degree. In response to this, Hong Kong teachers and administrators have been propelled to reconsider the role self-access centres should play in this situation. The eight tertiary institutions currently funded by the University Grants Committee have all been running language centre or self-access centre, sometimes both. The majority of these centres provide language learning resources and language support, some of them are directly under language centres. The Independent Learning Centre (ILC) of the Chinese University of Hong Kong is a special case. It serves more or less as a standalone unit, and there have been instructions from higher authorities to broaden its scope from language to subject-related matters. The ultimate goal is to create an online platform that contains comprehensive teaching/learning materials on various disciplines for students to study on their own. This paper uses the ILC as a point of investigation. Through discussing the challenges and difficulties it faces in the process of transition, this study explores the role self-access centres should play, including what is practical and reasonable, and what is theoretical and idealistic. It begins with a review of the concept of independent learning and the ideology behind it, followed by a discussion of autonomous learning in Hong Kong and the functioning of the self-access centres, proceeds with the challenges the ILC faces, and concludes with possible solutions to these challenges in the face of the upcoming four-year curriculum. It is hoped that this research can shed light on what independent learning means, if technology is the ultimate solution to budget strain, and how self-access centres should perhaps function with the benefits of students in mind.

Keywords: independent learning, autonomy, education reform, financial imperatives

The Development and Application of a web Based Metacognitive Mapping Tool

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Abstract: Teachers support metacognition by following different teaching methods in face to face learning environments. However, literature shows

that web based learning environments lack of the use of tools which support and guide the students' metacognitive activities. The primary purpose of this study is to give insight about development of a metacognitive mapping tool (MMT) supporting the college students' metacognitive learning abilities. The participants of this study were 25 third grade college students selected from Gazi Faculty of Education, Gazi University. The students participated in a six week qualitative study. They studied an online Database Management Course by getting support from the tool. The tool was developed on the four components of metacognitive skills which were planning, monitoring, evaluation and revision. The tool was utilized for an asynchronous web based course. The tool allowed students to plan their studies, monitor and evaluate their progress. After monitoring and evaluation, students could revise their planning and change their thinking patterns. A content analysis was carried out to examine students' interviews. The focus of the interviews was to investigate the students' perceptions and purpose of utilization. This study argues that using the tool gives the students an opportunity to choose exact content of the course and to plan the content for individual aims. The tool used in this study can assist time management and tracing of the students' personal study progress.

Keywords: metacognition, metacognitive mapping tool, web based education, eLearning, metacognitive learning process

An Exploratory Comparative Study of Distance-Learning Programmes

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Abstract: In this paper we describe an exploratory study of distance learning practice. We review five different distance learning programme models from five different schools at the University of Hertfordshire, each varying in production and presentation. We situate the programmes in an extension of Weller's pedagogy-technology space, and we further qualify their pedagogy, using Chickering and Gamson's principles as a basis for evaluation. The results of our analysis show that while the flexibility offered to students and economics of distance learning are indeed important drivers for implementation and adoption of distance learning, the quality of teaching and students' learning experience is less well understood and frequently overshadowed by the above-mentioned factors. Moreover, we found that certain principles for 'good teaching' become more important than in the face-to-face scenarios, some principles assume different meaning in distance learning situations and new principles related to effectiveness and

'affordability' of on-line communication emerge and gain in importance. The study aims to help develop a framework for analysis to be a tool for programme planners in a dynamic education environment. It is already helping in formulating implementation of the ambitious distance learning strategy at University of Hertfordshire but can also help other higher education institutions that aspire to provide quality distance learning education in the future as well as in informing other providers of distance learning materials and tools.

Keywords: distance learning, distance learning programmes, distance learning pedagogy distance learning models, Chickering and Gamson's principles

The Optimal Teaching Style Based on Variability of Study Materials

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Abstract: Teaching by standard eLearning is being gradually replaced by a new form - personalized eLearning. Personalized eLearning is understood as not only an instruction tailored to each student according to his characteristics, but it is also adaptable according to the actual conditions under which the learning takes place. Pilot testing of students and subsequent analysis determined a group of student's characteristics to which the eLearning study environment can be adapted. These characteristics must be put into accord with forms and variants of created learning materials. This paper deals with the assignment of an appropriate method of learning management to students' individual learning styles.

Keywords: adaptive eLearning, virtual teacher, teaching styles, learning styles, teaching methods

Changing Academics, Changing Curriculum: How Technology Enhanced Curriculum Design can Deliver Strategic Change

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Abstract: This paper describes a case study resulting from a JISC Building Capacity Project at the University of Glamorgan. The case study indicates that curriculum design can be used a vehicle to engage staff with technology for learning and teaching, and provide the means to initiate sustainable staff

development. At the start of the project, a research survey revealed that whilst academic staff were reasonably proficient in the use of the institutional VLE, they were unaware of many of the tools and resources that could be useful within their subject disciplines. Some staff identified training needs, and indicated a preference for one-to-one support over group training. The survey also revealed evidence that some staff clear use technology in innovative and effective ways within their courses. In response to the research data the project team took a three-pronged approach to building the capacity of academic staff to use technology in their learning and teaching in a sustainable way: Remove the barrier of lack of awareness of useful technologies – this was undertaken through in-faculty drop-in sessions to demonstrate hardware and software and answer queries; and seminars and blogs to provide more detail of the ways in which the vast range of available technologies could fit into subject teaching and research activity Encourage staff already competent in using technology – by organizing regular ‘self-help’ groups to allow sharing of new ideas and good practice Reach staff with limited engagement with technology – by arranging one-to-one interviews using appreciative inquiry approaches to explore their subject learning and teaching traditions and identify the ways in which technology enabled tools and resources could be integrated Emphasis was placed on the curriculum rather than on the technology. Tools and resources –particularly Open Educational Resources (OER) - were discussed in the context of improved curriculum design and established tangible benefits (JISC Infonet, 2008). Learner benefits were also a focus, with emphasis on the key role of the tutor in guiding learners towards the effective use of technology in their learning (JISC, 2009). This case reveals that an institutional approach to curriculum design can be implemented through sustainable approaches at subject level. Thus a top down mandate for change can be implemented through a bottom-up engagement with practitioners in the language and approaches of their own discipline. Such an approach moves from central support into the common practice with departmental and course team debate.

Keywords: technology-enhanced learning; staff development; curriculum design

Web Conferencing for us, by us and About us – the Leeds Met Illuminate User Group

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Abstract: How do you implement a strategy for institutional adoption of web conferencing? What are the potential benefits for students, tutors, support

and administrative staff? What strategies can maximise those benefits? How do you provide the relevant staff development? At Leeds Metropolitan University answers have been sought by bringing together current users - meeting in web conferences naturally - to shape, to share and to develop their ideas. This case study first describes the environment in which it makes sense for higher education institutions to fast track the implementation of appropriate aspects of web conferencing. It next describes the establishment and remit of the University's web conferencing group. It analyses web conferencing benefits and implementation recommendations as presented in the group and in core related activities. Finally it identifies both the quick wins on offer and the challenges to be met from the institutional, student, and staff points of view. This paper explores what is possible when the principles that underlie technology supported student centred learning are applied to technology supported user centred staff development. It specifically addresses the suggested conference theme: <<Web Conferencing options in the current and developing economic climate>> This promising and productive experiment in both user driven staff development and, more generally, the dissemination of ideas and sharing of good practice will be of interest to all responsible for shaping and supporting their institutional web conferencing policies; providing insights into: The benefits and quick wins for an institution prepared to adopt web conferencing The challenges and ways in which they can be addressed Effective staff development strategies in a changing and economically restrained environment

Keywords: web conferencing, staff development, Elluminate, online learning, change management

Tools for Evaluating Students' Work in an Interactive (Open) Virtual Space: Case Study of an eLearning Course in an International Network of Universities

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Abstract: This article presents a brief analysis of changes in educational practices associated with the "third role" of higher education institutions (HEIs) that are occurring not only at an institutional level, but also within the learning process taking place at lower levels (individual, course, program) and could be effectively combined with the introduction of eLearning methodologies into teaching that stress the social aspects of learning. Teaching in the open space provides the opportunity to use active forms of teaching / learning and creates conditions for social learning. Conceptual and

practical shifts would also involve methods of assessment to justify their benefits and stress certain qualities in higher education (HE). Based on these theoretical considerations, practical experience with the eLearning course “Multiple Perspectives on Globalization and Sustainable Development” operated as part of the international Virtual Campus for Sustainable Development (VCSE) eLearning program is analyzed. The method of teaching was geared toward independent and collaborative student work in a wiki environment and the development of key competences necessary to understand and be active in the complex field of sustainability. The authors show how to practically apply the pedagogical principle that educational objectives, methods, learning environments and assessment procedures must be aligned. For assessment, a combination of evaluation tools was introduced, such as rubrics evaluated by teachers and questionnaires completed by the course participants which provided feedback on course outcomes in comparison with its educational goals. The method of assessment focused on “students’ approaches to learning” is described, and the possibilities for promoting and evaluating social learning processes that would contribute to the development of capabilities to communicate across disciplinary and academic boundaries within higher education are discussed.

Keywords: higher education, eLearning, competences, social learning, Wiki, assessment

Putting Things in Context - Designing Social Media for Education

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Abstract: The rich promise of social software in formal education can be offset by a clash between hierarchical organisational structures and the bottom-up, distributed nature that characterizes network development and growth. Learners often experience confusion when using social networking systems within formal education systems, negating many of the potential benefits of sharing, collaboration, communication and personal ownership associated with social networking systems. This often leaves learners and their teachers lost or at least disorientated in social space. Social networking systems are mainly based on explicit individual social connections, while students and staff in academia constantly shift between overlapping but delineated hierarchically organised community contexts like classes, committees, research groups, centres and schools as well as less formal person-to-person networks. Each context presents different needs for communication, shared resources and connectivity. Most existing educational

social software systems blur these contexts into a single, confused and confusing sub-optimal space that is neither fully social and user controlled nor fully institutionally controlled. In this paper we describe a set of partial solutions that we are evolving for the Elgg system, providing *multi-faceted profiles* for both users and groups to allow control of content, presentation and audience for shared artefacts, catering for different social, organisational and personal/group contexts. A facet is represented as a page comprised of draggable widgets. Unlike the static views often associated with e-portfolios, these facets can be interactive, inviting comment, assessment and other responses in specific contexts. Facets can be moulded to fit the shifting contexts of academic activities and leisure lives, thus reducing the confusion of network, group, set and personal spaces that besets current social software use in education, without losing the personal control, sociability and ownership that makes it valuable in the first place.

Keywords: social media, higher education, technology-enhanced learning

Experimental Assessment of Virtual Students

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Abstract. In this fast developing society full of changes is learning getting more and more important. How can we make it more effective? One of the approaches uses electronic learning with its capability to adapt learning process to individual students needs. Students' characteristics important for adaptive learning must be known in order to achieve this. In this paper the most frequently used method – the questionnaire is used to identify the students' characteristics. The problem is that even small number of student's properties leads to vast number of its combinations. To make the design of adaptive learning easier, we try to narrow this combinations by setting few virtual students with given values of respective properties that represent most common combinations of student properties. In this paper we describe the methods and results of virtual student assessment using quantitative analysis of filled learning styles questionnaire. We created new questionnaire that measures sensual perception, motivation and learning styles. Sensual perception describes which form of information suits students best: visual, auditive, verbal or kinesthetic. Social aspects concerns with type of company that student prefers when learning. The systematic approach describes sequence of learning, which can be either in logical sequence of steps or almost randomly, without connections, in great steps. We divide way of learning on deriving and experimenting. In accordance to sequence of learning we can divide students on detail oriented, which focus on small

pieces of information and compose them to the global picture, and holistic, which focus on big pieces of abstract information from which it works through to details. The approach of learning can be divided into: deep, where student's main goal is to fully understand the curriculum, strategic, where are prioritized results and effectiveness and surface approach, where students only try to meet basic requirements. Degree of student's ability to independently control his learning is given by his self regulation of learning. This questionnaire was filled by 500 students from different fields of study. We analyzed these results using clustering, decision tree and principal component analysis. Cluster analysis tries to discover groups of mutually similar objects which differ from other groups. We set virtual students using this method. Decision tree analysis focuses on one property and tries to discover other properties that affect its values. Several interesting dependencies between properties were discovered using this method, for example students have high motivation if they do not possess surface learning style.

Keywords: learning styles, eLearning, data mining, virtual students

Priming for Modules: A Case Study Evaluation of 'Pre-Workshop' Online Resources for an Executive MBA Course

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Abstract: This case study looks at a series of 'pre-workshop' resources and tasks developed for the Executive MBA (EMBA) at the University of the West of England (UWE). Students on the EMBA course at UWE are generally in full time employment and therefore do not have the opportunity to follow a traditional semester - or year - long module structure. For each module on the EMBA programme, the taught classroom based component runs as a five day intensive block. It is therefore very important for the students to get to grips with concepts and terminology for each module as quickly as possible so that the time spent in class can be used for high level discussions and debates as well as the more traditional lecture formats. This is common of a variety of executive education and CPD courses across the sector. A set of online resources were developed for a range of modules on the EMBA course and delivered online. Their aim was to 'prime' the students for the modules in advance of the classroom based components. As well as providing readings, the resources provided a range of online interactive exercises to introduce the topics covered on the module and to help the students assess their level of learning. Student evaluations were conducted on three modules to assess the

usefulness of these pre-workshop resources. These took the form of surveys with likert-type questions and more open ended questions, as well as informal group discussions. Views of the academic staff teaching on the modules were also sought. For all three modules evaluated, the pre-workshop resources were seen as being a very valuable resource. There were fears that students would not complete the exercises and readings before the classroom based sessions began, but the majority of them did so. They reported that the exercises helped them to structure their learning and that they felt more confident and prepared for the first day of classroom based teaching. Lecturers also felt that the resources and exercises were useful – they felt that they were able to engage with students at a higher level from day one of the classroom based sessions. This case study will look at the evaluations in more detail and go on to assess whether a ‘pre-workshop’ component may be of use on a variety of other executive and CPD intensive courses.

Keywords: priming, pre-workshop activities, online learning, interactive exercises

Computer-Mediated Reading and its Impact on Learners’ Reading Comprehension Skills

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Abstract: Teaching reading is not an easy skill as most students today easily get bored of reading written texts in books and other traditional reading materials. With the emergence of technology and its fast development, educators have integrated the use of computers in teaching reading. Due to technological breakthrough, a study on computer-mediated reading and its impact on the reading comprehension skills of learners of English as a Second Language (ESL) is discussed. This study uses an experimental research design to determine the impact of computer-mediated reading on students’ reading comprehension skills. A total of 140 freshmen engineering students at Mapua Institute of Technology, Philippines took part in the study. To carry out the study, the participants were divided into an experimental and a control group. The findings of the study reveal that the use of computer-mediated reading results in a significant improvement in students’ reading comprehension skills. The findings are supported by statistical computations using the independent t-test in determining the significant difference in the pre and posttest results of the two groups. After exposing them to the treatment significant learning is acquired by those in the experimental group as compared to those in the control group. The study shows that computer-mediated reading creates a significant impact on students’ reading

comprehension skills specifically in following directions, noting details, sequencing events, getting the main idea, making inferences and making generalizations. On account of the significant findings of the study, it is recommended that teachers should use computers in the reading classroom.

Keywords: computer-mediated reading, reading comprehension skills, English as a Second Language (ESL), eLearning, language teaching

Do you see What I see? - Understanding the Challenges of Colour-Blindness in Online Learning

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Abstract: In this paper we introduce the 'Hertfordshire Colour-blind Emulator' (HCBE) software application. Currently, our aim is to raise awareness of the challenges that the colour-blind encounter on their learning journey. HCBE emulates four major types of colour-blindness: protanopia, deuteranopia, tritanopia and monochromacy. HCBE accepts an image file and outputs that image in the way that a colour-blind learner would see the original inputted image. For any inputted images there are four options for outputted images, one for each colour-blind type. Colour-blindness is often considered to be a mild disability where, on the whole, a colour-blind learner has developed his/her own "coping mechanisms" to avoid, but not to eliminate, problems in their learning. The problems faced by some colour-blind users of online games have recently been highlighted in the research, this paper identifies some of the issues for students in their learning. The Equality Act 2010 places the responsibility of making reasonable adjustments to aid the disabled on the educational practitioner by providing legal rights for disabled people, irrespective of the severity of the disability. We show that colour-blind learners do have problems interpreting information when that information is presented as images. In particular with increasing reliance on using VLEs (Virtual Learning Environments) as a repository for study materials then it is possible that the challenges which colour-blind users suffer will be exacerbated. Estimates of the frequency of colour-blindness show that there are approximately 8% males and about 0.4% females who are colour-blind. It is also our experience that few practitioners are aware of the problems that colour-blindness can cause and even fewer practitioners that make any reasonable adjustment as required by the UK's Equality Act 2010.

Keywords: colour-blind, eLearning, online learning, disability, accessibility, Equality Act 2010

Researching in the Open: How a Networked Learning Instance can Challenge Ethical Decision-Making

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Abstract: This paper focuses on ethics issues implied in a prospective virtual ethnography study aiming to gain insights on participants' experience in an emergent context of networked learning, namely a MOOC – Massive Online Open Course. A MOOC is a popular type of online open course, that provides free content and expertise to anyone in the world who wishes to enroll. This kind of informal lifelong learning initiative is enabled by a network-based pedagogy and is enacted in a distributed technology-mediated learning environment. The purpose of this article is to explore competing views on ethical decision-making when researching in such a globalized, online and open learning setting. Considering the challenges of this new elearning inquiry context, issues as the underlying research ethics models, the roles of researcher and participants and the integrity of the research process are discussed in their interplay with the evolving ethos of the ethnographical methodology being adopted to investigate participants' views. Elements drawn from the design of a qualitative study are here utilized to identify an empirical instance that shapes and is being shaped by research ethics decisions. The study aims to answer the following question: what are the affordances (opportunities and challenges) of online open courses as they emerge from the participants' perspectives? This paper considers the potential operationalization of the above research question and discusses both theoretical and methodological issues arising from applying research ethics to this specific case of Internet inquiry. In this sense, ethical approaches in online research contexts as well as main ethical decisions are discussed and justified, envisioning a submission to an institutional ethics review board before undertaking the ethnographical study. Topics such as privacy concerns in a public online setting, choice between overt and covert research, researcher as observer or participant, narrow or loosely defined application of the informed consent and anonymity are outlined, presenting a range of different options. This article intends to show that ethical decisions are an iterative procedure and an integral part of the research design process. Moreover, it endorses the opportunity to produce localized and contextualized ethical decision-making. To this end, it takes into account the guidance available (research ethics literature; narratives of ethics procedures applied to empirical cases); the ethics debates within the ethnographical tradition and the nature of the setting being researched (the specific format of the networked learning instance being examined). The discussion here proposed orientates ethical decision-making towards an overt and participant

research approach, an informed consent intended as a 'public notice' and a consideration of participants both as authors in the online setting and as human subjects embedding unexpected privacy sensitiveness. However such decisions are intended as many starting points to build a research ethics protocol intended to a degree as a work in progress, in a problem-solving approach guided by the practical wisdom of participants emerging over time.

Keywords: internet research ethics, massive online open courses, virtual ethnography, situated ethics

Making Constraints and Decisions Explicit to Support Project-Based Collaborative Learning

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Abstract: Learning projects serve as motivational instruments to transfer knowledge and competences relating to real world problems. Yet, the learning effect varies among participants. The anticipated results of a project and their relation to real life questions are formed by complex requirements and, while the project advances, the complexity of the results emerging increases. Furthermore, project groups often consist of participants with little experience in the subject of the project. While the project progresses, the overview of requirements and results already developed is lost. The learning effect can now be raised by making the requirements on the expected project results as well as the decisions for existing results explicit. In this way, participants understand the decisions of others engaged in the ongoing project and they are able to align the existing results with the requirements imposed on them. Additionally, new ways of collaborative learning are possible when, for instance, the task is to develop constraints on or between the respective project results. Former research developed a concept to keep less experienced project members in the productive process while forcing other project members to give arguments for their results. The current work describes an approach which aims to integrate the requirements on results in the learning process. While arguments were to include digital documents or specific parts of these documents for clarification purposes, the incorporation of explicit requirements is now also manifested in digital documents. The requirements can then be related not only to single result documents, but also to whole sets of expected documents. The paper gives an example of a software development project where some design documents have to be

developed. It shows how constraints on these documents are presented and how these constraints affect the collaborative learning process.

Keywords: project-based learning, cscl, arguments, digital documents, learning process

A Strategy for the Inductive Generation of Learning Objects in Low-Tech Contexts

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Abstract: This article proposes a strategy to create inductive and incremental LOs in tertiary education low-tech contexts such as the field of Humanities. We take a teaching context to be low-tech when the teachers are not computer specialists and also have poor IT support. This is the case with many university schools in Spain, such as the Faculty of Philology at the Universidad Complutense de Madrid (UCM), where the work reported here has been carried out. In a low-tech context, the use of Educational ICT is considerably expensive, if not impossible. However, university faculty feels more and more compelled to use ICT tools in their teaching, e.g. e-learning platforms. In the process of adaptation and integration of ICT into teaching, a basic issue is the transformation of good teaching materials into digital format in the simplest and most cost-effective way. Good results can be obtained by applying the Learning Object (LO) model when creating digital teaching materials, but the models and tools to build LOs are not easy to understand or use without prior knowledge, and their application requires computer support beyond what is usually available in low-tech contexts. The results of the research carried out during the last decade thanks to a number of research grants show that, by using the appropriate models, tools and strategies, it is possible to bring ICT to IT-illiterate teachers and get excellent results regarding the educational use of ICT by these teachers. In the present work a solution has been designed and tested to disseminate teaching materials through the generation of LO collections in low-tech contexts. This solution is based on applying a novel strategy to inductively construct LOs from the original materials. This is done by applying a model and a repository of LOs, developed and tested in previous works, and a new quality model for LOs collaboratively developed with the beneficiaries of this strategy, i.e. IT-illiterate Humanities teachers. The authors of this paper are part of a mixed team of IT-specialist and IT-illiterate Humanities teachers who developed and applied this strategy. Our paper aims to provide a real and complete picture of the problem and the solution developed.

Keywords: learning objects, repositories, authoring, digital learning resources, educational ICT

Cognitive Communication 2.0 in the Classroom – Resonance of an Experience in Higher Education

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Abstract: The communication in the classroom is often carried out on a one-to-many basis, with the teacher, before an audience of dozens of students, playing a traditional role. In this context, still commonly practiced, it is pertinent to introduce mechanisms of interaction mediated by technology, since research shows a significant correlation between the use of technology, the time spent in social media and the engagement of students. In fact, literature shows that social media has attracted the interest of academics more likely to use technology in education, who thereby seek new ways to motivate their students to a more active learning. The adoption of cognitive communication 2.0 morphology, in traditional contexts such in communication one-to-many, is a challenge to be overcome. We consider so of great importance creating and evaluating resources and pedagogical practices that are aligned with this new paradigm. In this study, we intend to make a contribution to understanding the problematic of the morphology of cognitive communication in the context of the classroom in Higher Education, with the integration of web 2.0 tools. On the approach to the problem, we have explored a PowerPoint presentation with the integration of the micro blogging tool Twitter, as a basis for addressing the characteristics of cognitive communication 2.0. For data collection a questionnaire was designed, based on literature, and intended to evaluate several dimensions of the resource used, namely: i) pedagogical issues, ii) technological aspects, iii) cognitive learning; iv) interactions in the classroom; v) positive behaviour in the classroom; vi) negative behaviour in the classroom. The goals of this study are: i) to validate the instrument for data collection, ii) to assess the perceptions of students regarding the effects of the resource and pedagogical practices used in the classroom dynamics iii) to set in context and to relate the cognitive communication 2.0 in the classroom with other components of the Hybrid Institutional Personal Learning Environment. This is an exploratory type research, since it seeks to provide a greater familiarity with the problem and to identify dimensions and items to be included in the questionnaire. The data collected will be processed under a quantitative perspective. Considering, therefore, the nature of the study we did not seek to establish correlations between variables, but only to identify trends, using descriptive statistics. It is expected that the results obtained will contribute to the

articulation of web 2.0 tools with traditional cognitive communication in the classroom, in such a manner that positive impacts will result in pedagogical and technological effectiveness and thus in students learning achievements.

Keywords: classroom; cognitive communication; learning; micro blogging; Twitter; web 2.0

To What Extent Does a Digital Audio Feedback Strategy Support Large Cohorts?

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Abstract: The UK National Student Survey (NSS) regularly highlights student dissatisfaction with feedback, identifying factors such as timeliness; personalisation; specific information on how to improve in a clear and understandable manner and the level of detail given to students related to learning outcomes. For a large cohort, achieving these targets can be difficult and students are more likely to be at risk of receiving rushed and vague feedback as lecturers strive to return results as quickly as possible. In his research into the use of digital audio for feedback in the JISC Sounds Good Project, Bob Rotherham suggests that audio may be a way to assist “lecturers looking for a way of giving students good quality feedback on their work whilst saving time” Rotherham (2008, p1). Saunders et al (2005) suggests that a good teacher is one will take advantage of ICT opportunities in order to enrich the students experience, and this research evaluates the potential to provide meaningful, quality feedback to a large group of first year students on a Information Management module at Northampton Business School, via digital audio files. Using an action research methodology, this first cycle of research evaluates the process from the creation of the digital audio files right through to the personalised approach of returning the files to the students via the virtual learning environment. This paper analyses the effect of the experience on the lecturers involved and through subsequent group discussion and questionnaires, this research also evaluates the thoughts of the students involved and considers the overall impact on both home and international students. Initial results indicate that for large cohorts there is no simple answer but electronic feedback is certainly seen as more personal, more beneficial and digital audio may have some unexpected benefits for stakeholders. This paper will identify how this method will be reviewed for a further action research cycle.

Keywords: digital audio feedback, feedback and assessment, action research

Messages of Support: Using Mobile Technologies to Support the Transition of Students on Articulation Routes From Higher National Level to Degree

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Abstract: This paper explores the role mobile technologies can play in supporting students' transition to second and third year of university degree study along articulation routes from Higher National Certificate (HNC) and Higher National Diploma (HND) study at college. Articulating students face particular challenges associated with, typically, adjusting to a step up in the level of their academic studies, acclimatising to an unfamiliar academic culture, and integrating into an existing cohort of students. 'Message of Support', a project funded by the Edinburgh, Lothians, Fife and Borders Regional Articulation Hub (ELRAH), developed a range of SMS, podcasts, and DVD resources, drawing on the voice and experience of existing students, in order to support new students and staff in their respective parts in the articulation journey. Through a process of action research, it was found such resources can aid the transition process by offering timely reassurance and information to students as well as valuable development materials for staff. Responses to the challenges of using mobile technologies as support mechanisms for articulating students were also identified.

Keywords: articulation; student support; SMS; mobile technologies; podcast; ELRAH

Blended Learning at the Alpen-Adria-Universität Klagenfurt

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Abstract: The application of blended learning, i.e. the combination of face-to-face and eLearning elements, is one of the university's declared goals and seen as a chance to cope with the challenges educational institutions are facing today. After several years of implementing eLearning and blended learning at the Alpen-Adria-Universität Klagenfurt (AAUK), a survey has been conducted to detect the status quo. The survey shed light on the potential of eLearning and blended learning as well as risks, fields of application and contentedness. Furthermore, the survey focused on the benefits of blended learning as well as on reusability. Data were collected with online and paper questionnaires and 1154 valid answers (collected over a period of three semesters) were obtained. Students and lecturers were asked to judge, how

studying is supported by the various forms blended learning offers. Furthermore, it was investigated how common different forms of blended learning are and what the most frequented tools are. Students see great potentials of eLearning and blended learning in flexible learning (24 hours a day 7 days a week), in using their study time more efficiently and in being able to learn at their own pace. In addition, students were asked about their attitude towards mobile learning, as this form of learning is planned to be further expanded in the near future. The eLearning service department has additionally collected suggestions for improvements regarding the eLearning and blended learning environment at the AAUK. Based on these results our already existing service of video-recording lectures has been further expanded. Apart from that, we have started to offer a “secure exam environment” where online exams can take place on a grand scale. With this special software students can use their own devices but have no access to any of their files or to non-specified Internet resources.

Keywords: blended learning, potentials, risks, benefits, video recording of lectures, secure exam environment, online testing

Evaluating the use of Social Networking Sites as a Tool for Knowledge Sharing for Developing Higher Education in Developing Countries: An Exploratory Study of Egypt and Iraq

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Abstract: Educational institutions are today facing increasing pressures due to economic, political and social upheaval. This is only exacerbated by the nature of education as an intangible good which relies upon the intellectual assets of the organisation in terms of its staff. It is within this context that Social Networking Sites (SNS) offer an important potential alternative method to manage and share knowledge within educational institutions. The focus of this research therefore explores the role that SNS could play in relation to the development of Higher Education (HE) within developing countries with a focus on the countries of Egypt and Iraq as having one of the highest and lowest rates of internet usage within the Middle East respectively. In order to gain a better understanding of the potential drivers and barriers to the use of SNS as a knowledge sharing (KS) tool within educational institutions, within the developing world, a case study approach has been used. This approach consisted of semi-structured interviews with forty members of staff, both senior managers and academic staff, within Mansoura University’s Faculty of Commerce in Egypt and Al-Mustansirya University’s Faculty of Economy and

Administration in Iraq. The results show there are both areas of agreement and difference in the views of staff within both institutions. In both cases issues of culture appear to affect the participation of female staff and additionally age appears to be a predictor of use. However between the institutions there appears to be wider differences relating to the existence of KS strategies, the extent to which staff understand the nature of SNS and technology in general and the extent to which Senior Managers and other staff views are shared. Overall the results suggest that Mansoura University in Egypt is far more prepared for the use of SNS as a KS tool and some usage appears to already be occurring. Within Al-Mustansirya University, Iraq however the usage of SNS as an organisational tool appears to be unlikely to occur within considerable promotion and changes to strategic drivers.

Keywords: social networking sites, developing countries, case study, higher education, knowledge sharing

The Relationship Between Mindful Learning Processes and Course Outcomes in Web-Based Learning

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Abstract: Online education has been growing rapidly within all levels of education. Reports published in 2007-2009 by the Sloan Consortium based on responses from over 2,200 colleges and universities in the US reveal that institutions report record online enrollment growth on both a numeric and a percentage basis. Nearly 96% of the very largest institutions, schools with 15,000 enrollments, have some online offerings, and about two-thirds of the very largest institutions have fully online programs. The Association of International Educators predicts that by 2020, global higher education demand for seats will reach 200 million. Much of this growth will be in distance education. While online education is growing rapidly, the impact of online learning on course outcomes has been subject to considerable debate. In 1983, Richard E. Clark famously argued that media have no more effect on learning than a grocery truck has on the nutritional value of the produce it brings to market. Recent research findings support Clark's statement revealing that students taking online courses score lower than students in face-to-face or blended courses. The research hypothesis is that the main reason for the little impact online learning has on learning outcomes is lack of *Mindful Learning Processes* (MLP), a new term coined by the authors of this study. The authors define MLP as an online course that is based on four interconnected components: learning theory, learning environment, learning process, and assessment. The goal of this paper is to check whether the

research hypothesis may be accepted. To achieve that, the authors have reviewed case studies describing online courses published in peer-reviewed journals in the area of educational technology and e-learning. They authors have identified three case studies that fulfilled the MLP requirements stated above, and analyzed them in terms of learning theory, learning processes, learning environment and assessment. To measure the impact of the MLP on course outcomes, the authors analyzed these case studies in terms of test scores and students' perception of the e-learning experience. Analysis of the three case studies reveals that the outcome of the three case studies was positive in terms of achievement outcomes and students' opinion about course. The authors conclude that a Mindful Learning Process may lead to a meaningful and pedagogically sound course where theory, design, learning and assessment harmonize with each other. These findings support earlier work on instructional technology that found that the reason for the learning benefits of computer media is not the medium of instruction, but the instructional strategies built into the learning materials.

Keywords: Mindful Learning Process, web-based learning, impact on learning, text analysis, review of research, learning outcomes

Researching and Sharing – Business School Students Creating a Wiki Glossary

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Abstract: Often students find that the terminology involved in a new subject can be a barrier to learning, Some theorists term this 'cognitive load' - a high amount of information that the brain has to process before it can begin to construct new knowledge. Glossaries have been used in many different educational contexts; however traditional glossaries are passive and have less capability to promote student engagement. This paper outlines a small scale study in a UK business school that used a small wiki situated within the Virtual Learning Environment to encourage students to construct their own glossary at the start of a module. Whilst many studies have looked at use of wikis in student work, especially collaborative projects, relatively few have investigated the use of wikis for constructing simple glossary entries created by students. In our study each student was allocated a particular subject related term. The students were instructed to construct a wiki entry describing what the term meant, citing at least two appropriate references. The study was evaluated by a variety methods including quantitative analysis of the Virtual Learning Environment usage and access statistics, alongside qualitative and quantitative survey data. Generally the quality of the entries

was very high and students indicated that writing the wiki glossary entries helped them to understand the terminology of the new subject. Students stated that they had read a number of entries over the course of the module and some chose to reference the wiki in their final written assignment. Our research indicates that students found *creating* the wiki more useful than the finished resource itself.

Keywords: wiki, glossary, active learning, VLE

A Qualitative Evaluation of Academic Staff's Perceptions of Second Life as a Teaching Tool

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Abstract: The aim of the study described in this paper was to investigate the potential of Second Life® (SL) as a teaching tool on an undergraduate Psychology programme at University of East London (UEL). A qualitative methodology (Interpretative Phenomenological Analysis; Smith, 1996) was chosen as we wanted to allow the participants to express openly their first hand experience of using SL in their teaching at the same time as bringing the researcher's interpretation to bear. We interviewed four lecturers, with varied prior experience of online teaching, before and after they conducted a tutorial-type session within SL (although one participant was interviewed once only - after his session). From the interview transcriptions, we identified three superordinate themes, namely 'comfort', 'investment' and 'clear rationale'. Participants stated that the virtual and anonymous nature of SL appeared to allow students who might have had difficulty voicing their questions/concerns in a traditional, physical environment to engage actively in the session. It was also seen as a useful adjunct to the physical campus for students studying at a distance for reasons of geography, illness, bad weather and the like. However, these positives had to be offset against drawbacks such as the lack of non-verbal cues so important to staff in the physical classroom and the potential for staff embarrassment in front of students in what is a challenging and unpredictable environment. (Unlike students, staff could not hide behind their avatars.) Given the unique characteristics of SL and the not insignificant investment of both time and resources by both staff and students to take full advantage of the environment, they all emphasised the need for a clear rationale for its use. All felt it had obvious potential for activities such as role play exercises, problem based learning scenarios and student presentations but were less certain about its suitability for tutorials (the main activity experienced during the study) and other forms of group teaching. In sum, this study illustrated that with adequate training of both staff and students, clear

strategies for use and a supportive and encouraging institutional environment, SL can be a beneficial addition to the teaching and learning repertoire of higher education.

Keywords: second life; staff perceptions; interpretative phenomenological analysis

Introducing and Using Electronic Voting Systems in a Large Scale Project With Undergraduate Students: Reflecting on the Challenges and Successes

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Abstract: Electronic Voting Systems (EVS) have become a popular medium for encouraging student engagement in class-based activities and for managing swift feedback in formative and summative assessments. Since their early days of popularity and introduction some five or more years ago, the author's UK based University has been successful in refining strategies for their use across individual academic Schools and Departments, as previously reported at ECEL (e.g. Lorimer and Hilliard, 2008). The focus of this paper is a reflection on the introduction of EVS with 300 first year undergraduate students in the School of Computer Science, within the context of a wider 'change' project in teaching and learning affecting the whole institution. The author examines what lessons can be learnt following this rapid scaling up of EVS activity both at a local level and more widely across an HE institution and in reflecting on the successes and challenges of this experience provides key indicators for success and useful support for others considering using EVS. The paper first considers the landscape of EVS use within the UK and then the specific introduction of EVS at her own institution, before exploring the issues in her own academic School around the latest phase of their introduction as part of an institution-wide project to review measures to support assessment and feedback.

Keywords: electronic voting systems, change management, assessment, feedback, staff training, challenges, successes

A Methodology for Incorporating Usability and Accessibility Evaluations in Higher Education

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Abstract: Digital academic resources are rapidly growing in number and range of content, including visual as well as text based materials. To access these resources in a timely and effective way necessitates an easy to use and easy to learn environment. We consider in this paper the needs and requirements of disabled as well as non-disabled students who use these resources for study-related activities. We are currently involved in evidence-based research at the Open University on the uptake of usability, accessibility and learnability in the resource development cycle. To gain feedback from students we use a number of qualitative research methods primarily through interviews and observation studies and in our evaluations we unite disabled and non-disabled student user experience for final reports to faculties and developers. The aim is to develop best practice with guidelines and information to support the institution in its development of web-based provision. At the Open University we have nearly 12,000 students with a declared disability, so ensuring the accessibility of course materials and websites is of primary concern as a large proportion of our provision is mediated online. However, we also need to retain the usability of resources because of the large non-disabled student population (approx 180,000 post graduate and undergraduate students). Therefore we collaborate together to ensure that differences in usability and accessibility feedback are acknowledged and potential conflicts are part of the evidence we use when reporting to Module Teams and developers. What we are able to demonstrate in our paper is the ability to include multiple forms of evaluation including 'expert' walk throughs and the use of different assistive technologies, and end user evaluations. We report on further developments of the methodology developed by Colwell and Jelfs (2005; 2007) which is thought to be unique in ensuring that potential conflicts between usability and accessibility are minimised. In our paper we will present recent Open University developments to illustrate our methodology.

Keywords: accessibility, usability, evaluation

The Virtual Learning Environment - Directions for Development in Secondary Education

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Abstract: While the use virtual learning environments (VLEs) in universities and colleges is now relatively established, this is not the case in many schools today. This paper examines the particular demands made of VLEs in secondary education in the UK and how effective and innovative use inside and outside the classroom could be promoted. Work currently being carried out with teachers in five schools as part of a two-year EU-funded project [1] is reported. Surveys to establish the perceived needs of teachers and senior managers were followed up by curriculum-led workshop sessions totalling six days with up to four teachers in each school working with another teacher who is highly conversant with VLE technology. Qualitative data gathered through field notes, observations, focus groups, recorded interviews and on-site documents were analysed in terms of the uptake and use of the technology and the quality of learning activities developed. It was found that innovation in the school setting is a potentially complex process; schools have a variety of responsibilities and demands that must be concurrently accommodated. With regard to the quality of learning activity and student engagement, a theoretical framework is introduced within which technology-use can be mapped. In relation to this and the use of VLE technology, the scope for learning as participation was explored. Principles arising from monitoring the sessions included teacher ownership of development; embedding the use of the technology to existing learning objectives or teaching and learning resources; levels of personalisation; external comprehensibility in view of the availability of a VLE to a variety of users. It is also argued that development of the use of the VLE in the school context could lead to both curriculum enhancement and curriculum transformation. [1] The work carried out in the UK along with partner institutions in Spain and Italy forms part of a two-year project 'Teaching to Teach with Technology' funded by the EU Leonardo Da Vinci Life Long Learning Program.

Keywords: VLE, learning perspectives, professional development, secondary education

Multimodal Teaching Through ICT Education: An e-Twinning Program as a Case Study of Intercultural Exchange

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Abstract: Multimodality is a key factor in promoting knowledge through multidimensional aspects in an approach, determined by social environment. In the approach presented, school is a part of an accepted social context. This paper shows that development of critical visual literacy via ICT education and e-learning combined with conventional activities can be an innovative multidisciplinary approach for the development of pedagogical projects. The cultural program in particular presented, which was carried out in the island of Spetses in Greece, was integrated in this approach. The ultimate goal was to create a film transfer of a local legend by the students of Spetses' junior high an area culturally challenged. The program was integrated to an e-twinning project (e-learning European exchange program) concerning revitalizing local legends through e-learning, filmmaking, teaching local History through French language and intercultural exchange with the cooperation of two European schools, one in the Greek island of Spetses and one in Chorwowie in Poland. Through this e-learning project the students carried out a different multimodal approach of French Language and Local Culture achieving the development of their creativity and imagination through cultural e-interactivity and their cognitive and social awareness as well.

Keywords: multimodal approach, social semiotics, e-twinning, cinema, local history, public school

Effectiveness and Learners' Evaluation of Combining Audio and Written Online Formative Feedback for Language Learning

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Abstract: Within the factors and drivers identified as leading assessment in higher education, feedback often emerges as 'the most powerful single influence' (Gibbs & Simpson, 2004) on students' engagement and achievement. Although research on feedback is relatively new, in particular, that relating to audio feedback technology, the results indicate that such has to be aligned with the assessment criteria and learning outcomes in addition to being timely in order to respond to students' expectations (Weaver, 2006). Furthermore, not all types of tutor comments are equally useful as Walker

(2009) reports. Price et al (2010) argue that “the learner is in the best position to judge the effectiveness of feedback, but may not always recognise the benefits it provides” leading to the need for an improved student advice on how to understand and use feedback. This paper reports on the development of a multi-faceted approach to providing formative feedback on a blended e-learning module. The method combines immediate written feedback on web-based learning materials and formative online assignments with near-immediate written and audio feedback through audio eMail technology (Wimba voice eMail) regarding online oral tasks. The study was conducted over a period of four years using a multi-method approach to qualitative and quantitative data collection and analyses from a total of 100 students studying Spanish for Business at beginner’s level. The use of both written and audio feedback is welcomed by students and seems to overcome some of the problems highlighted in previous research on formative assessment regarding quality, detail and timing of feedback. Nevertheless, a few students reported technical difficulties and/or misapprehension regarding the use on campus of audio eMail technology for oral assignments. The paper also presents the results on the correlation between students’ grades and improvements on formative online assignments and quality of feedback and concludes with reflections and advice on the introduction of audio feedback in combination with other forms of formative feedback.

Keywords: effectiveness; online formative feedback; language learning; audio and written feedback; students’ evaluation

Model of eLearning Project Evaluation

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Abstract: The paper deals with the model of eLearning evaluation process, specifically with a proposal of methods and means for eLearning project evaluation. There are many approaches to eLearning projects evaluation. Let us consider eLearning as an educational project. An educational project, just like other projects, is comprised of design phases, proceeding one after another and interrelating. An eLearning project passes through several phases of its development: from planning through the development of study supports and the pilot stage, to usage of project results in instruction, namely in distance learning. eLearning project can be evaluated during each of its phase and as a whole project as well. It means for each phase of the project we have to collect reliable information to determine criteria of the phase quality. After evaluation of the phase we define feedback as a response to the results of performed analysis. In the present paper we want to demonstrate

our way of dividing the eLearning project into phases like phases of the system development life cycle. We evaluate each individual phase. We have determined activities of evaluation, input information, outputs and staffing of the activities. We chose information that employs as measures needed for quality evaluation of each phase and of the project as a whole.

Keywords: evaluation of eLearning, eLearning project, project life cycle, eLearning project phases, project evaluation

Bridging the Gap – From Teacher to eTeacher

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Abstract: Virtual learning environments have become part of nearly every educational programme in higher and further education. Hence, competent teachers, tutors and trainers are a major key to success in higher education and need a thorough grounding in how to design, produce, use and evaluate e-learning and blended learning resources. But how do teachers actually gain the skills and insights you need to practice e-learning and blended learning effectively and efficiently and how do they develop a critical understanding of the pedagogical issues involved in the design, development and implementation of e-learning in their professional context? This paper focuses on the support offered to acquire and extend the skills needed to “teach online” from the institutional point of view of an Austrian university of applied sciences. It is shown in what way an institution tries to support teachers to gain the know-how to “transform” their teaching methods, to support them to make effective use of learning management systems and the web as an educational resource. Finally, the paper refers to what kind of nationwide training is offered to university teachers to develop the competencies needed to teach online effectively.

Keywords: e-teaching, e-qualifications, train the trainer, professional development

Open Courses: The Next big Thing in eLearning?

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Abstract: During the last 15 years, eLearning has undergone a number of changes regarding openness of the learning environment, learning resources as well as the process of teaching and learning. After the initial period, when

eLearning used mostly the tools of 'ordinary' Web, the first-generation of eLearning emerged – large, mostly proprietary environments which firmly separated the chosen (students and tutors) from the 'barbarians at the gates' (the rest of the Internet) by using accounts and passwords. The tools themselves were shaped by creators, not users – due to closed source and restrictive licenses. WebCT and early Blackboard were prime examples of this generation. The second generation of eLearning rode the wave of free and open-source software, bringing along a much greater variety of tools as the environments became open for modifications (e.g. Moodle, Ilias). This generation also emerged along with the rise of open content (powered by free licenses like the Creative Commons family) which in turn established the Open Educational Resources (OER) movement, examples of which are Connexions, LeMill, MIT OpenCourseWare and others. We propose that the emergence of Personal Learning Environments combined with collaborative wikis signify the next stage of eLearning. Open in both the environment and the process, it facilitates a more flexible and also more challenging model of learning. Massive Open Online Courses (MOOC) represent the radical conception of openness in eLearning, as all MOOC courses are open for enrolment for any Internet user. We started to use Wikiversity and personal blog-based learning environments in 2008. This paper provides a summary of our experience with teaching 18 open courses in 2008-2011, with more than 560 enrolled students. We analyse the design, learning process and learning outcomes of these open courses using the knowledge building theory by Bereiter as our main frame of reference and the framework analysis of the courses.

Keywords: open courses, personal learning environment, wiki, blog

Using a Social Networking Environment to Facilitate Transition Into Higher Education

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Abstract: Transition into higher education (HE) can be challenging for incoming students. Literature identifies three main areas where students may benefit from support: social, practical and academic. This paper discusses a case study that explores the potential of a social networking environment to provide support in these areas. The Learning Development Unit (LDU) at Bucks New University launched Startonline in 2010. This online pre-sessional environment used the social networking platform Ning to provide new students with access to non-subject-specific academic activities (e.g., critical thinking), social networking tools and practical information. As a pilot, the aim

was to observe where students focussed their attention and explore the affordances of a social networking environment for facilitating transition. Startonline ran for the month leading up to the beginning of the academic year. Around 300 students participated. Quantitative analysis of platform user data was conducted and student and staff participants were interviewed, providing useful qualitative data. Postings and replies were counted and organised into the following themes: social, practical and academic. Findings highlighted that students' engaged intensely in social and informational aspects of the environment, but remained resolutely uninterested in generic academic activities. There was, however, considerable self-directed interest in finding subject-specific information and learning activities. Personal involvement of subject-teaching staff seemed the determining factor in this. This project underlines the usefulness of SNSs in providing powerful opportunities for students to establish social networks as they transition into higher education. Methods for engaging students academically in social networking environments are also suggested.

Keywords: transition, social networking, social capital, affordances, engagement

Evaluation of Quality of Learning Scenarios and Their Suitability to Particular Learners' Profiles

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Abstract: The aim of the paper is to investigate and present a comprehensive scientific model and several methods suitable for the expert evaluation of quality of learning scenarios. A special attention is paid to their suitability to particular learner groups (i.e., profiles). The solution of learning scenarios quality evaluation and optimisation problems could help educational institutions to select suitable learning scenarios for the particular learner profiles. The research results will be implemented in iTEC – a four-year, pan-European research and development project focused on the design of the future classroom funded by EC 7th Framework Programme. The main objectives of iTEC are to develop and refine a range of teaching and learning scenarios for the future classroom, to develop decision support criteria that facilitate the selection of scenarios that can be mainstreamed and taken to scale; and to carry out large-scale pilots in up to 1,000 classrooms in at least 12 European countries exploring both the integration of technologies and how

these impact on teaching and learning practices. Suitability of several iTEC scenarios to particular learner groups is analysed in the paper. A number of multiple criteria decision analysis principles are applied to create a comprehensive quality model (criteria tree) for evaluating learning scenarios. Several optimisation methods are explored to optimise learning scenarios in conformity with particular learner's profile. Several practical examples of iTEC learning scenarios have been evaluated against the proposed model and methods. The research results have shown that both Analytic Hierarchy Process (AHP) method to establish the weights of quality criteria and several fuzzy optimisation methods are suitable to solve learning scenarios' multiple criteria evaluation and optimisation tasks for particular learner profiles.

Keywords: learning scenarios, evaluation of quality, multiple criteria decision analysis, learner profile, optimisation methods, Analytic Hierarchy Process (AHP)

Models of eLearning: The Development of a Learner-Directed Adaptive eLearning System

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Abstract: In many eLearning contexts, materials are designed to be self-paced, with the content being available anytime, anywhere for learners to study independently. Commonly, without the presence and immediate feedback of an instructor, distance learners are left to their own devices to negotiate their learning path and to monitor their own progress. Furthermore, learning a complex topic structured in terms of various media and learning materials requires learners to make certain instructional decisions concerning what to learn and how to go about their learning. In other words, self-paced learning requires learners to self-regulate their own learning (Hadwin & Winne, 2001). Very often, learners have difficulty regulating learning in higher education when topics are complex and unfamiliar and it is not always clear to the learners if their instructional decisions are optimal. (Azevedo, Cromley, Seibert, & Tron, 2003) Research into adaptive eLearning systems has attempted to facilitate this process by providing recommendations, classifying learners into different preferred learning styles, or highlighting suggested learning paths (Brusilovsky, 1998). The aim of this research is to explore how learners can self-directed and self-regulate their online learning both in terms of domain knowledge and meta knowledge in the subject of computer science with a flexible and adaptive eLearning system. Two educational theories:

experiential learning theory (ELT) and self-regulated learning (SRL) theory are used to aid learners' in their learning paths. As a result, changes in domain-knowledge, meta-knowledge, learner experience, learner satisfaction, perceived controllability, and system usability are being measured. All in all, this paper sums up the research work being done on the initial development of the system, instructional design framework based on the two theories, experimental design plan and course material examples as well as related issues.

Keywords: adaptive systems, eLearning, instructional design, learning design

Can eLearning Enhance Practice-Based Design Courses?

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Abstract: In recent years the focus for UK Higher Education has been on improving student experiences; technology has played a crucial role in transforming the curriculum, evidenced in a series of initiatives funded by the Joint Information Systems Committee (JISC) (HEFCE, 2009). The adoption of online learning and teaching techniques on practice-based courses, within the field of art and design, have often been seen as controversial, due to the vocational nature of the discipline. This paper seeks to understand, through the application of action research, what affect the incorporation of blended learning has had on the professional practice element of a practice-based course and compare students' responses to results published by one of JISC's completed programmes, 'Learner Experiences of eLearning.' (JISC, 2009) Objectives To identify how a blended programme of eLearning and face-to-face teaching of business and professional practice can support and enhance learning in design-led practice-based courses To understand how the eLearning method of teaching delivery can contribute to flexibility of learning in design-led practice based courses. To identify areas where such an approach contributes to the best use of resources in response to the impact of socio-economic conditions on the education sector. Work to be carried out To design and live test the delivery of a business and professional practice programme using a blend of eLearning and face-to-face teaching. To identify the perceived/real benefits and limitations of such an approach by the analysis of interviews/focus groups/questionnaires with students and staff from the School of Architecture and Design at the University of Brighton. To identify the elements of course delivery that best suit an online approach and those that are more suited to a face-to-face model. To identify the key resources required for this eLearning method of delivery and how they differ

from those required for a more traditional face-to-face approach. Compare cohorts who have adapted to the blended learning model of teaching from the more traditional face-to-face learning, with those who have experienced blended learning from the beginning of their course.

Keywords: online, blended, practice-based, eLearning, design

Sophisticated Usability Evaluation of Digital Libraries

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Abstract: Digital libraries are an important headstone for distant education. Thereby, modern digital libraries encounter not only the classical provision of documents, but also other related services like publishing portals or lists of hot topics. Another upcoming challenge is the connection with Web 2.0. Thus, the functionalities of online libraries will change and becoming more and more complex. Accordingly, the usability evaluation of these complex functionalities has to be assured and adapted to the new challenges. The proposed methodology of sophisticated usability evaluation follows a spiral model for prospective recommendations. The usability evaluation is done by an iterative process. This is in line with the state of the art and most modern models in usability engineering. However, in contrast to the existing models, we propose an explicit combination between systematic quantitative investigations and focused usability studies. The proposed multi-method approach addresses different important elements of a sophisticated scientific usability evaluation. The core elements of the cyclic process are repeated usability benchmarking, focused usability studies, derivation of recommendations and decision on the planned improvements in the face of the overall strategy. The repeated benchmarking allows a quantitative measurement of advantages and drawbacks as well as improvements and impairments. The quantitative benchmarking data can also help assigning the gravity of usability-problems or the importance of a specific innovation. Depending on the requirements of the users and the developments of the digital library, the specific usability-studies could be qualitative or quantitative or a mixture of both. The overall aim of these studies is the formulation of concrete practical recommendations. The recommendations have to be aligned with the technical possibilities and strategic decisions. After the improvements and innovations were implemented, a new benchmarking cycle can take place. The four elements can be flexible combined. This procedure ensures not only a holistic and sophisticated usability evaluation, but also the openness for new challenges and opportunities of the 21st century. The

described approach will be exemplarily explained by the ZBW – Leibniz Information Centre for Economics.

Keywords: iterative evaluation, usability, digital libraries, multi-method approach

Social Networks, eLearning and Internet Safety: Analysing the Stories of Students

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Abstract: eLearning has recently become more social and open, involving open educational resources, open courses, open learning using personal learning environments or social networks. We believe the schools are not ready for this yet, as strategies and regulations supporting open learning are not up to date. It may seem easier to restrict the use of Twitter, Facebook etc rather than integrate them into the learning process. Our study which was based on the qualitative analysis of 201 stories written by secondary school students shows that a typical safety incident is not solved adequately when existing regulations are used by the schools. We carried out the qualitative analysis of 201 e-safety related short stories presented by students (aged 12 to 16), parents, teachers, school IT managers and police, collected through the Safer Internet in Estonia EE SIC campaign. 2/3 of the stories are fictional – they may be based on urban legends which however appear to refer to real stories. 1/3 of the stories reflect real incidents. We mapped typical behaviour patterns and templates, beliefs regarding privacy as well as regulations and limitations concerning the use of social networks at schools. We found that most of the solutions used by schools to ensure e-safety are either technical or purely regulation-based, only some schools appeared to have studied or elaborated on pedagogical or behavioural aspects. Problems are defined by limitations and regulations while actual safety incidents (whether in- or outside school) remain largely unsolved (or even undetected). Schools tend to excuse their unawareness with „we'll react when it happens“ (secretly believing that it will not happen). Most schools also try to delegate such problems to parents - who in turn look upon schools for help, as their only reaction to safety incidents is often just applying time limits on Internet use. Thus there is an urgent need for information and working guidance mechanisms for managers, teachers, parents and students. These matters must be solved well before schools reach the critical mass in using eLearning, social networks and modern gadgetry as parts of curriculum. Schools are expected to apply new technologies in teaching and learning, but safety of student and teachers is paramount in this context.

Keywords: online safety, schools, policy, new technologies, social media

Learning Management Versus Classroom Management in Technology-Supported Blended Learning

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Abstract: The comprehensive University of Johannesburg (UJ), South Africa, had to adapt to a fast growing student and academic community. Since 1998 a learning management system (LMS) has been introduced as to broaden the physical boundaries of classrooms over four campuses, student residences and residential areas (worldwide). The Centre for Technology Assisted Learning (CenTAL) was established to accommodate students, teaching and research staff and empower them to keep up with current and future trends in technology-assisted learning. Currently a blended learning approach, with direct face-to-face (F2F) contact with students, is followed and driven by the “learning to be” philosophy of teaching and learning. F2F contact is supplemented with a remote e-learning environment hosted in an LMS. Consequently, the implementation of technology in teaching and learning became an adopted phenomenon and promised increased success in higher education. However, changing curricula, staff turnover and increasing student numbers resulted in the efficacy of the LMS used, to be questioned. Moreover, the actual learning experiences of students are often dismissed as a new paradigm and statistical evidence leads to a contradiction about blended learning efficacy during annual course evaluations. This occurrence often causes confusion when effective use of an LMS is discussed. Subsequently, this inception forces the perception of key role players in two directions: managing virtual learning environments and managing learning within an electronic learning environment. Ultimately, *learning management* as viewed by the constructivist, and *classroom management* as viewed by the behaviourist, are aligned by presenting various examples from an LMS for operational e-learning. Therefore, this paper points out the different perceptions of lecturers towards the effective use of an LMS as remote component for blended learning at UJ. Emerging from the above rationale, this paper points out traditional perceptions of lecturers towards e-learning and further poses the question: Is *learning management* or *classroom management* the platform for effective blended learning design? Findings and conclusions further addresses the consolidated data substantiated over a period of three years in nine faculties during research in professional development of faculty members related to effective, blended learning. The data and examples are presented as qualitative and, where more clarity is required, substantiated by quantitative data. The actual examples presented, point out teaching practices where classroom management was used as point

of departure and then contrasted with examples where learning management was used as a starting point. This paper further reveals e-learning environments where this dichotomy becomes distinguishable but inseparable. An in-depth discussion extrapolates instructivist and constructivist approaches to be extremes of a continuum whereby ideal balance becomes a superlative teaching application for both F2F and online learning environments. In this case study this pedagogical paradigm escalates to an imperative for implementing effective technology-supported blended learning at the University of Johannesburg.

Keywords: technology-assisted learning; e-learning environment; learning management system (LMS); learning management; classroom management; technology-supported blended learning

How to Represent a Frog That can be Dissected in a Virtual World

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Abstract: One of the problems in creating a realistic virtual dissection is how to represent the solid nature of a substance and any subcomponents it may have using surface modellers such as SketchUp (Sketchup 2011) and Maya (Maya 2011). Although solid modellers are available, models produced by them are not generally usable by modern game engines. This paper describes a practical method of representing and manipulating objects so that they can be cut at arbitrary points by a planar knife and behave as though they were solid. Although this paper is mostly concerned with cutting through 3D models in order to give the illusion of them being made of a homogenous material, some discussion of how other aspects of the dissection process is also included. Background on how models are represented by meshes made from lists of triangles is given. The representation and the algorithms to support the cutting operations are given at a fairly high level. Complete implementation details and discussion of all possible pathological cases are not included. Some examples of the cutting process being used on a simple and more complex object are given. In particular we show how a model of a Malteaser can be cut in half where its internal texture is a photograph of the actual insides of a real Malteaser. This gives a very realistic cut that entirely creates the illusion of the 3D model being solid. We also show how the skin of a frog can be represented so that it appears to be solid when cut. This paper will be of interest to implementers of any 3D virtual application requiring the realistic representation of arbitrary planar object cutting.

Keywords 3D, virtual, dissection, cutting, surface modelling

Learning by Wandering: Towards a Framework for Transformative eLearning

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Abstract: As technology continues to flatten the world and as Web 2.0 changes the way knowledge is created and shared, tertiary education institutions are turning increasingly to eLearning to extend access to students globally as well as to improve the quality of their learning experience. Learning Management Systems (LMS) currently dominate the delivery of eLearning at this level. Though these systems have extended functionality by including some Web 2.0 tools, they are generally perceived as a 'walled garden', essentially embodying the traditional transmission paradigm of teaching and learning rather than the philosophy of Web 2.0. This is leading, particularly in the blogosphere, to calls to break down the walls of the LMS and to explore more open online courses. There is, however, an emerging view that Web 2.0 ideals can be realised within an LMS environment, provided the environment is aligned with these ideals. This paper supports that view. It presents a case study of an eight-week eLearning course based on this premise, offered in spring 2011 as part of a doctoral programme in Instructional Technology by Duquesne University, Pittsburgh, USA, and designed and delivered within an LMS by an instructor living in Northern Ireland. The course is underpinned by the concept of learning by wandering. The pedagogy is aligned with the fundamental Web 2.0 philosophy. Within broad parameters, it is flexible, student-centred and, from an early stage, student-led. Students are encouraged to use a variety of Web 2.0 tools, according to their preferences, to collaborate in preparation for their leadership role and as a language to express their ideas and to share their learning. The teacher's role is identified as sage at the side. This case study is intended to contribute to the provision of a framework for transformative eLearning through fostering a Web 2.0 ethos within a traditional learning environment.

Keywords: learning management systems; Web 2.0 ethos; case study; learning by wandering; sage at the side; transformative eLearning

Online Student Engagement: Unfulfilled Promises or Promises Unfulfilled?

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Abstract: Engagement is often seen as a reliable proxy for learning (Coates, 2005) but also in general abilities and critical thinking (Gellin, 2003), student satisfaction (Kuh et al, 2007), cognitive development (Pascarella & Terenzini, 2005) and improved grades (Tross et al, 2000). Whilst Coventry University have made significant efforts to support early engagement and promote good technology support, experience indicates that some students of on line programmes continue to experience "engagement challenges". These include choosing to study in isolation; students maximizing offered flexibility of eLearning to the detriment of synchronous collaboration, accessing learning materials only shortly before the submission of assessed work is due and as a result failing to move from surface level to in-depth approaches of cognitive processing (Henri, 1992). As a result what was intended as a dynamic, interactive medium for shared learning can become a pragmatic approach to individualistic achievement. In response to these concerns on a distance based online Health and Social Care degree, a project was launched to explore the impact of collaborative peer assessment and whether this would result in greater motivation to develop and share approaches to learning. Would developing this increased "critical space" (Jankowska & Atlay, 2008) result in an improved level of academic work being presented for assessment?

Keywords: on line; peer assessment; collaborative; student engagement; shared learning

Personalized e-Feedback and ICT

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Abstract: In the context of the adaptation of the new undergraduate, graduate and postgraduate degrees to the European Higher Education Area (EHEA), the student centered learning (SCL) is an approach which aims to overcome some of the problems inherent to more traditional forms of

education by focusing on the learner and their needs, rather than being centred around the teacher's input. Thus the student becomes the protagonist of his learning process by means of doing learning exercises or activities. So, these learning exercises or activities constitute the axis the student's learning process. As far as they are evaluated and corrected in a systematic and rigorous form, they turn into the most direct and automatic channel that allows the student to get clear and concrete information on the foreseen aims' and competences' attainment. The aim of this article is to analyse the effectiveness and the efficiency of giving a more personalized feedback by means of ICT to the learning exercises or activities done by the students. The way to achieve it is to offer the tutors a diversity of multimedia tools (text, oral, video, etc...) that facilitates this task. The objective is to reduce the time of preparing the feedback and thus to make it easier as well as to achieve a higher impact. The work has been undertaken in a virtual classroom where the tutor is provided with a kit of ICT tools that allows him to send to each student a personalized comment on his exercises or activities. To make this comment, different complementary alternative forms to written feedback have been explored in order to achieve greater motivation and greater impact. This alternative forms have been chosen taking into account the personality of the tutors participating in the project as well as their origins and profession paying special attention to their abilities in transmitting knowledge. That's why one of the main proposals is trying to get best communicative capabilities of each one. The results show that the students find personalized feedback very positive, because it makes learning easier and thus more motivating. In order to implement personalized feedback in an efficient way from the tutor's point of view, several actions should be undertaken such as technical training in communication and pedagogy, modifying the way of correcting the exercises or activities and also adapting the dimension of the classroom by taking into account that the number of students is a key element for this tutorial model.

Keywords: personal e-feedback, ICT, student centered learning, improvements in students rendability

Evaluation of Multimedia Tools and e-Feedback in Virtual Learning Environments

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Abstract: There is a high consensus that one of the key elements to ensure knowledge attainment in a virtual university context is the existence of regulatory processes of learning, which allows students to regularly evaluate their learning process. In asynchronous learning environments one of the usual strategies to facilitate this regulation is the use of feedback mechanisms between the student and tutor. But in the environment of large groups of students written personalized feedback may be too laborious for the tutor. In this paper we present a pilot project focusing on the context of Degree in Business Administration from the Universitat Oberta de Catalunya. We have explored ICT tools to give feedback (audio, video and screenshots). The aim is to improve the effectiveness and efficiency of the learning regulatory process. During one semester the project was implemented by taking a virtual classroom with a reduced number of students in specific subjects using alternative ways to written feedback. In order to evaluate the effects of using these alternative multimedia tools, the results obtained have been compared with the other benchmark groups taking into account the following aspects: academic results, assessment of students, evaluation of tutors, and hours of dedication of tutors. The implementation of the pilot test and evaluation of results have allowed to draw some conclusions about the conditions under which the use of multimedia tools in feedback may in fact help the adjustment process in virtual learning.

Keywords: feedback, virtual learning, ICT, personal feedback in large groups

Cyberbullying: A Workplace Virus

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Abstract: This paper explores workplace cyberbullying in an education institution in the south of England, in which declarations of zero tolerance towards bullying masked the reality that it was silently condoned as a means of controlling staff. As with face-to-face bullying, cyberbullying is a matter of

impact and not necessarily of intent; and here we contemplate the role of the bully and the role of the victim, while viewing an example through a lens of control theory. The following questions – Is there a *need* for bullying in the workplace? Does it serve a function? Does bullying help contain workplace anxiety as well as create it? – are posed. The case of a man in his mid-thirties, who was systematically bullied by his manager for eighteen months, is presented. Here I examine the social structures that the bullying enforced (and destroyed) and examine what the subject learned from the manager's behaviour. In my commentary on this case study I refer to Wilfred Bion's work on workgroup anxiety. In *Group Psychology and the Analysis of the Ego*, Freud explores group formation and the giving up of individual ideals for the group ideal. I argue that something analogous happens in a workplace environment in which bullying is rife and in which a scapegoat must be found, even if there is no corresponding misdemeanor for which he must be punished. I examine the need for homogeneity when it comes to bullying, as well as the issues of power; transference; the defence against paranoid anxieties; and what happens when a manager is troubled by others' intelligence. Finally, in the second half of the paper, I extrapolate a future of cyberbullying. The name of the company in question has been made anonymous and throughout this paper is referred to only as 'the Institution'. Similarly, the name given to the victim – Rob – has been invented for the sake of anonymity, at his request.

Keywords: cyberbullying, bullying, anxiety, control

Learning in Smart Environments – From Here to There

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Abstract: Recently, ten years after the *Information Society Technologies Advisory Group* (ISTAG) Report (Ducatel et al 2001) was issued with several visions of smart environments for various purposes, we could already evaluate the results achieved. One of the original scenarios by ISTAG was the *Scenario 4: Annette and Solomon in the Ambient for Social Learning*. The vision presented in the scenario started an intensive research resulting in a number of projects aiming at design and utilization of various smart learning environments. In the paper, which is based on our ongoing research, we wish to remind several recent important attempts in the area of smart environments designed for learning.

Keywords: smart environments, ambient intelligence, ubiquitous learning, scenarios

Using Courseware for More Than Courses: You May Already Hold the Lease on a Versatile Virtual Meeting Space

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Abstract: The University of Louisville (Kentucky, USA) is a large, urban institution on three separate campuses that includes undergraduate, graduate, and professional schools such as education, business, medicine, law, and engineering. The institution also offers staff/faculty development opportunities, corporate learning, and life-long learning for the community as a whole. Blackboard™ is our online course platform and every section of every course (face-to-face, online, and blended) is automatically issued a course site to be used at the discretion of the instructor. A few years ago, those of us who teach online realized that the “organizations” option in Blackboard™ had far more potential for student, faculty, and staff support than we were using. The “organizations” option provides a virtual meeting space that can be used to facilitate discussions, share documents, administer events, conduct quizzes and surveys, broadcast e-mails, link to media, wikis, and blogs, and track the type and frequency of activities by each participant. While none of these capabilities are unique to BlackBoard™, what is unique is that in BlackBoard™ these capabilities are bundled so users have access to all capabilities in a controlled (password protected) environment. The two critical differences between “organization” sites and traditional “course” sites are (1) once an organization leader has been designated, the leader controls who may log into the site and the role they play; and (2) organization sites are not time-bound by the academic calendar. Admission to traditional course sites are limited by administrators to include only faculty assigned to the course and students enrolled in the course and the site usually expires at the end of the term, semester, or quarter. In Blackboard™, organization sites have all of the functionality of course sites without the two major limitations; therefore we could use our imaginations, and either apply the functions as they were intended or repurpose them to meet other needs. The purpose of this paper is to share five brief case studies that illustrate the range of uses to which we have applied the BlackBoard™ organizations option to support students, faculty, and staff in hopes that these ideas may be transferable to other institutions. Each case shows at least one unique application. Although there are a few technical limitations to Blackboard™ organization sites, in general the benefits outweigh the limitations. We argue that when an institution uses fewer types of platforms (or other software packages); they reduce training time for developers and users and maximize the value

delivered by the learning platform provider. Using a platform provided through central administration also reduces costs to individual schools, departments, and programs as they need not purchase additional software to support their unique needs. Organizational learning also increases as departments learn from each other's examples of how the organizations' option can be applied.

Keywords: non-traditional applications of learning platforms; student, faculty, staff support

An Analysis of Collaborative Learning as a Prevalent Instructional Strategy of South Africa Government eLearning Practices

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Abstract: A skills shortage seems to be engulfing the South African workplace in all economic sectors (Statistics South Africa 2010). In turn, increasing unemployment rates feed off such lack of critical skills, that cripples the productive capability of those who are supposed to be economically active. Subsequent to the 2001 parliamentary decision to migrate the government's information system (IS) to an open source platform, the State Information Technology Agency has been faced with the task, among others, to facilitate training during and after the migration process. According to Department of Public Service and Administration (2006), different instructional delivery methods will be used – including eLearning, which allows for a lifelong learning, collaborative learning, flexible, just-in-time, just-in-context learning experience for users who are learning the new platform. In this paper, the researcher will determine the prevalent instructional strategy in relation to current instructional technology available to support eLearning practices in SITA. In doing so, the authors will employ grounded theory analysis techniques within a case study conducted in SITA – the custodian of the open source migration project (Charmaz 2006). The grounded theory analysis technique allows the authors to create a relational networks of codes, as they emerge, for interview transcripts that will be interpreted to determine the instructional value of the instructional tools used in learning practices. In this study, an instructional strategy framework is developed based on code networks as emerged from grounded theory analysis. The result proves to favour collaborative learning as an efficient and effective instructional strategy to support eLearning practices in the public sector, given multiple constraints, towards realising a fully-fledged eLearning programme.

Keywords: instructional design, instructional technology, instructional strategy, collaborative learning, eLearning and eLearning delivery modes

Ideas for Using Critical Incidents in Oral Debriefing From a Business Strategy Simulation Game

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Abstract: Reflecting on events or experiences can be an important means by which learning is achieved. Specifically, a critical incident is some kind of significant occurrence that can stimulate learning through questioning what has happened and why. Essentially, critical incident analysis is concerned with reflecting on causes and impacts. An incident can be regarded as critical when the action taken has contributed to an outcome, either positive or negative. A series of incidents can be reflected upon in a debriefing setting using a structured approach to help to challenge people's assumptions and promote personal and professional learning. Critical incidents are a good medium for achieving reflective learning on the nature of situational events. However, there are a number of reasons why it can be difficult to learn from incidents in the real world, and why therefore, simulation games may facilitate effective learning through the application of a critical incident method. This working paper seeks to present ideas on how critical incidents can be used by instructors in oral debriefing to stimulate learning in a business simulation gaming setting. This is based on a case study of using a total enterprise game named the Business Strategy Game to teach part-time, post-graduate / post-experience students. The students, in teams, took on the roles of Directors of a global corporation and played out strategies and decisions over a simulated period in the life of the company. Following this, students were orally debriefed and assessed on what they had learnt about strategy making from the critical incidents that surfaced in course of playing the game. Three sources of critical incidents were introduced during the debriefing, upon which the students could comment, namely: macro-environment, competitive environment and internal environment of each simulated company. Preliminary findings from the debriefings has indicated that using a critical incident method did provide significant opportunity for students to think causally and better reflect on the connections between actions and consequences under circumstances of gaming complexity. An agenda for a fuller qualitative analysis of the student debriefings is proposed.

Keywords: critical incident, event, reflection, learning simulation game, business strategy game, oral debriefing

eNOSHA and Moodle – the Integration of two eLearning Systems

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Abstract: eNOSHA is an open source Learning Object Repository (LOR) developed at the University of Colombo School of Computing (UCSC) in a collaboration between UCSC in Sri Lanka, and two universities from Sweden during 2009 and 2010. eNOSHA is a system where content developers and instructional designers can store and reuse learning objects on 4 different aggregation levels. The system was built based on a need analysis at UCSC in late 2008 and was taken into use at the eLearning Centre at UCSC in early 2010. The system has so far been successful and supported the organisation and reuse of elearning content at the UCSC eLearning Centre (eLC). However, there still exist several reasons for further improvements when it comes to usability and user-friendliness. Moodle is one of the most popular open-source Course Management Systems (CMS) and has been used in the daily work at UCSC during the last 5 years. Moodle is an effective system for building courses and structure course material but features for storing, retrieving and version handling of learning objects is still under construction in the Moodle community. Persons working with course development need a LOR as well as a CMS in their daily work but to be forced to multiple logins and switching between systems is not good usability or user-friendly. This paper is about the integration between the eNOSHA system and the Moodle system and how it best should be done. Should the eNOSHA system be connected and integrated as a Moodle module in collaboration with the Moodle developing community or is it a better idea to build a module in eNOSHA that handles the communication with Moodle? From a developer's perspective, the building of a Moodle module to handle the connection to the eNOSHA system would be a fast and convenient alternative since the Moodle module template provided by moodle.org could be used as a skeleton for an integration of the additional functionality. However, the Moodle community did not like the idea of integrating the eNOSHA LOR as an additional Moodle module and the main reason is that they have other plans for storage of learning objects in the version 2.0 of Moodle that is expected to be released in September 2010. After some more communication with the Moodle community we decided to choose the other alternative and construct the integration as a part of the eNOSHA system. The first testing of the system integration at the UCSC has so far given us positive feedback and this extension will be included in the coming version 1.6 of the eNOSHA Learning Object Repository.**Keywords:** learning object repository, system integration, eNOSHA, Moodle, content management system, open source

CASE Learning to Structure and Analyze a Legal Decision

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Abstract: Legal practitioners and legal scientists need to have knowledge of the general rules that apply in the legal system. This involves both knowledge of the legislation and knowledge of the decisions by judges that function as general rules of law. Law students preparing themselves for the legal profession need to acquire these kinds of knowledge. A student has to have knowledge about where to look for decisions, understand the structure of decisions and learn to determine what makes a decision relevant to the body of applicable rules in the legal system. Legal education primarily aims at acquiring insight in the legal sources, their history and background. This basic knowledge is of great importance; legal problem solving is hardly possible without an understanding of the legal knowledge. To illustrate the use of this knowledge in practice, teachers work through decisions as examples. However, it is difficult, if not impossible, to learn by explanation or by imitation alone. A more effective way to obtain expertise is by actually performing the task, i.e. students should do the exercises, while the teacher provides feedback on their solutions. For effective learning, also the solution process should be monitored and provided with feedback. Furthermore it is desirable for students to be able to ask for help at any time during the process. They should also be able to practice over and over again. An ideal situation would have a teacher available for every student, monitoring the student while practicing and providing support where and whenever necessary. However, this being not practically feasible, the second best option is to offer the student electronic support. CASE (Case Analysis and Structuring Environment) is an environment where a law student can practice with finding decisions, with structuring its text and with analysing the decision in order to be able to determine in what way it adds to the body of applicable rules in the legal system. CASE is developed using a principled and structured design approach. A short description of this approach is followed by an analysis of the learning task, the difficulties law students experience and the remedies proposed on the basis of both the task analysis and the stated difficulties. This is followed by a description of architecture, functionality, platform and implementation of CASE and a description of a session with CASE and future work.

Keywords: instructional design, coaching systems, legal problem solving

A Framework for Decision Support for Learning Management Systems

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Abstract: Learning Management Systems (LMS) provide a valuable platform for eLearning that offer great flexibility. However, compared to traditional learning environments they are challenging and complex for decision-makers, both teachers and learners. At the same time, LMS environments offer opportunities for analysis by storing large quantities of data, such as web log files and data about students and content, which are not generally available in the traditional environment. Motivated by approaches in other domains, such as e-commerce and clinical management, in this article we propose to relate the complex decision environment with the possibilities of using large quantities of data. In this paper we review relevant literature on educational data mining (EDM) and combining that with a standard data mining methodology we propose a conceptual framework that appropriately relates the methods of data mining to the settings of teaching and learning in a LMS environment. In contrast to other frameworks, our conceptual framework enables EDM research to be more integrated with the task domain. In our framework, teaching and learning activities and the decisions required to control those activities are addressed by relating the following three elements: pedagogy; learning activities; and decision-making. The significance of our work is that the framework enables us to compare between different research studies as well as provide practical guidelines for developing EDM solutions. The framework also provides a number of further directions for researchers which follow naturally from a decision-centric perspective and from the full implementation of the contextual phases of the data mining life cycle

Keywords: educational data mining, learning management systems, decision support, programme evaluation

Learning for Life - Building Blocks to Holistic Education

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Abstract: Robert Byrne philosophically stated, “The purpose of life is a life of purpose.” The paradox of modern educational approaches lies in the acquisition of the means to life, rather than a life with meaning. It’s no wonder that despite material successes, modern society finds itself in restless disquiet. While mental happiness has been found to correlate with materialistic and spiritual happiness, studies also indicate that materialistic well-being alone may not lead to spiritual happiness (Bhattacharya 2010). The learning principles and their pedagogical connotations have been extensively researched in literature, reported, and applied to suit learning styles and methods. Bloom’s taxonomy (Bierly, Kessler, and Christensen 2000) and Kirkpatrick’s model (Bates 2004) have been used with reasonable success in building and evaluating learning strategies. Yet, while the focus has remained anchored on doing things right, at times, one is left reflecting, “Are we doing the right things?” The existence of a skills-gap between an academically produced intake and industry expectations has become a cliché. Lack of adequate professional and life skills are impacting harmony in teams, creating mistrust in intentions, affecting work-life balance, and above all, shaking ethical foundations in society. The moot question to address is, “does our educational system build good human beings?” Has an overdose of material pursuits diverted us from the wisdom of good living and holistic fulfillment? This paper addresses lifelong learning within a holistic framework. The authors propose specific lifelong learning constructs ranging from pre-school education to retirement from active work-life. Beyond the normal precincts of workplace competencies, the authors explore life-skills that are needed to make societal pursuits worthwhile. Through an internet-based survey, the authors identify key life-skill-gaps that grapple with and divert a modern life from purposeful living, and suggest methods by which such learning content could be embedded into educational systems. The paper favors community-linked group-based learning and suggests methods to adapt current learning approaches and technologies to build holistic life-competencies for the millennial generation (for purposes of this paper persons’ born after 1980).

Keywords: lifelong learning, learning approaches, skill-gaps, life-skills, wisdom-gap

Student's Characteristics for Note Taking Activity in a Fully Online Course

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Abstract: Since student's notes are a reflection of the progress of their education, analysis of notes taken can be used to track the learning process of students who participate in fully online courses. This paper examines the relationship between the performance of note-takers and the characteristics of these students, including their personalities, learning experiences, information literacy and note-taking skills. A fully online course was conducted for undergraduate students in Economics. Participants were asked to study each course module and present their notes to the lecturer every week. The student's learning performance was then measured using online tests, weekly confirmation tests with a proctor, and a final exam. The total number of valid participants in the courses was 54. Three factors of note-taking skills were extracted, according to the survey. They are (1) Recognizing note taking functions, (2) Methodology of utilizing notes and (3) Presentation of notes. The first factor score correlates with mean scores of confirmation tests, while the third factor score correlates with online test scores. Therefore, the three factors are responsible for different aspects of learning. The sum of the assessment scores for note-taking correlates with mean scores of online tests ($r=0.51$), with confirmation tests scores ($r=0.54$) and with the scores of the final exam ($r=0.46$). The effectiveness of the contents of the notes for exam scores was also measured.

Keywords: note taking, fully online learning, student's characteristics, learning experience, correlation analysis

Freeing Education Within and Beyond Academic Development

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Abstract: What can Academic Development (AD) and other professional areas and disciplines learn from free-range farming? Open Educational Resources (OER) and Open Educational Practice (OEP) are mushrooming and Massive Open Online Courses (MOOC) are here already. The idea of moving away from battery-type Academic Development Activities and silo

modules and programmes towards open cross-institutional approaches in line with OEP are explored within this paper based on a recent small-scale, fully-online study. This brought together academics and other professionals who support learning, from different disciplines and professional areas who are studying towards a Postgraduate Certificate (PgCert) in Teaching and Learning in HE/Academic Practice during a facilitated open Problem-Based Learning (PBL) task around assessment and feedback using freely available social media. The study aimed to explore if and how online PBL can be used within PgCert provisions to provide opportunities to connect, communicate and collaborate in a community of practice beyond institutional walls. The phenomenographic methodology underpinned this research. Participants' experiences in this open Academic Development activity were captured through individual remote interviews, a series of questionnaires and reflective accounts. Findings indicate that open online PBL has the potential to enable learners and educators to break out of academic and virtual silos. It also widens meaningful collaborative learning within Academic Development in multi-disciplinary and multi-institutional groups –something participants in this study commented extremely positively about. This provides evidence that freeing AD is the way forward to share available resources, and establish more organic and healthy learning communities beyond the module, programme and institutional level. Recommendations are made to Academic Developers and other tutors on how to bring learners from different programmes, institutions and countries together online using social media to create the conditions and the environment for a meaningful, rich and fruitful exchange and enable collaborative formal and informal learning.

Keywords: open educational practice, academic development, social media, problem-based learning, phenomenography

Why Recording Lectures Requires a new Approach

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Abstract: It is now commonplace for Universities to record lectures with video cameras. Indeed there are several off-the-shelf systems, which Universities can purchase to provide this type of functionality, e.g. Echo360, Panopto etc. There are also several distribution outlets available, such as iTunesU and YouTube EDU, which Universities can use to distribute this recorded media to students. However, the capture of standard lecture material with these systems can only provide partial support to learning. Material recorded in this way can be engaging for students who attended the original lecture, but has less efficacy for students who are seeing the material

for the first time. To be truly effective learning mechanisms in their own right, these new recording systems need to address two key issues. Firstly, current lecture material is overwhelmingly designed for the live lecture theatre audience. Consideration is rarely given to how these materials will support learning when viewed as stand-alone learning resources. Secondly, as lecture theatres are rarely designed for video capture, the off-the-shelf recording systems are often severely limited by the environment, equipment and resources available. Lighting and camera position are key considerations that have a big impact on the quality of the captured material, but are generally restricted by the environment required for the live audience. This paper reviews these two key issues and presents both a framework for the production of teaching material targeted at video capture, and the bespoke recording system developed for online learning in the School of Informatics at the University of Sussex. Additionally the paper covers analysis of download rates, qualitative staff and student feedback and lecture attendance and shows that using this framework has a significant effect on the student interaction with recorded material. Other types of online support such as providing copies of lecture slides are also discussed and a tangible improvement in engagement over these techniques is shown.

Keywords: digital video, video streaming, multimedia, podcast, eLearning

eSubmission – UK Policies, Practice and Support

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Abstract: eSubmission is currently being implemented in universities within the UK Higher Education (HE). The process of implementation is generally occurring in departments and Schools with institutional changes in policy and practice following afterwards. This paper provides a strategic overview of the current situation and focuses on key issues concerning the impact of eSubmission. The term eSubmission is used very widely to cover a range of activities which include eSubmission, eMarking, eFeedback, eReturn as well as plagiarism deterrence and detection. For clarity and distinction between these activities the term eSubmission is defined as online submission of an assignment in this paper. The research was undertaken through the Heads of eLearning Forum (HeLF). HeLF is a “network of senior staff in institutions engaged in promoting, supporting and developing technology enhanced learning” (HeLF, 2011). It was established in 2003 and currently represents over 120 HE institutions in the UK. It meets regularly every year at events

relating to topical issues in strategic eLearning developments. eSubmission is having an impact on the roles of academics, administrative staff and learning technologists. It is changing the roles of academics and administrators as well as the relationship between them. It is creating extra work for learning technologists who support both academics and administrative staff and sometimes students using eSubmission. The technical infrastructure is in place within universities and often there is integration with Virtual Learning Environments. eSubmission is closely related to plagiarism detection as a digital version of an assignment is required to use the plagiarism software. In most universities plagiarism software is available across all courses, but it is generally used on an opt-in basis by individual academics or by a whole department. There are contrasting views on whether the plagiarism software is used for student development or plagiarism detection. The development approach (carrot) is often recommended but in practice the plagiarism detection (stick) approach is used. HeLF members were overwhelmingly positive to a proposed new role for HeLF to collate and publish and share practice in areas of eLearning such as eSubmission.

Keywords: eSubmission, policy, process, change, HeLF

Harnessing the Internet for Authentic Learning: Towards a new Higher Education Paradigm for the 21st Century

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Abstract: This paper discusses the use of authentic assessments in a second year undergraduate course in communication systems and networking to help students acquire relevant and up-to-date networking skills. In the authentic assessments presented in this paper, students solve real-life networking issues commonly faced by practising network specialists. The Internet is used as the primary source of information, and students are encouraged to form ad hoc teams to collaborate in gathering and analysing the available information. However, each student is required to separately submit an independently compiled individual report documenting the student's solution to the problem. Turnitin, an anti-plagiarism software tool, is used to ensure that the report is the student's own individual effort. A rubric based on a guide developed at the Washington State University is used to assess the student's acquisition of critical thinking skills. Preliminary findings suggest that students generally feel that these authentic assessments enable them to master skills that they cannot otherwise acquire in typical lecture-based studies. However, a minority of students in the cohort under study appear to be disenchanted by the Internet-enabled authentic assessment introduced in

the course module. Whilst acknowledging that the emerging Internet-enabled student-led learning, of which the authentic assessment approach described in this paper belongs to, may well be the way higher education learning and teaching may proceed in the future, the paper concludes by suggesting three pertinent questions that need to be investigated further. These questions relate to the nature of the pedagogy for this emerging form of learning and teaching as well as the nature of the changing roles and relationships between students, lecturers and their primary higher education institutions.

Keywords: the internet, authentic assessment, critical thinking, Turnitin, autonomous learning, higher education learning and teaching

Motivational Predictors of Academics' Electronic: Publishing in Nigerian Colleges of Education

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Abstract: In the modern era of digital information revolution, the application of electronics to almost every aspect of human endeavours is on the increase. For instance, in the area of scholarly or academic journals, electronic publishing has gained unprecedented popularity both in the developed and the developing nations. The main thrust of the present study therefore, is to examine the predictive power of some academics' motivational characteristics on electronic publishing in Nigerian Colleges of Education. The study adopted the descriptive survey design which is 'ex-post facto' in nature. It purposively selected the three Colleges of Education in Oyo State, with 350 participants selected through disproportionate simple random sampling technique. Three validated self-designed instruments were used for data collection. Six hypotheses were formulated and tested at 0.05 level of significance. Findings revealed that attitude towards technology ($r=0.67$) and computer self-efficacy ($r=0.56$) were significantly related to electronic publishing. Also, there were significant differences in electronic publishing based on gender ($t = 2.29$, $df = 348$, $P > 0.05$) and age ($t = 2.22$, $df = 348$, $P > 0.05$) respectively. The greatest challenges electronic publishing now faces are acceptance and continual patronage among scholars. Nigerian College academics need to embrace digital publications and appreciate the value of this medium for scholarly communication. Thus, College academics should exhibit positive attitudes and be more self-efficacious about electronic publishing. Institutional administrators should put in place, necessary motivational mechanisms such as giving free or subsidized laptops and modems to the academics, and organize regular training and re-training workshops or seminars on internet.

Keywords: electronic publishing, attitudes, computer self-efficacy, self-concept, motivation

Psycho-Social Predictors of Students With Disabilities' eLearning: Usage at the Federal College of Education (Special), Nigeria

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Abstract: There has been growing interest in the education of students with disabilities in the recent times. This is contingent on the fact that students with disabilities constitute distinct population whose educational needs are different from those students without disabilities. Also, the application and usage of Information and Communication Technologies (ICTs) as indispensable force to aid teaching-learning processes has equally been on the increase. Instructional use of information and communication technologies carries a peculiar importance as they help in meeting the instructional needs of students with disabilities who cannot follow the requirements of normal educational processes. Thus, information and communication technologies have become frequently used devices in modern instructional settings by all stakeholders, students with disabilities inclusive. These technologies regulate, direct, guide and shape students with disabilities' academic activities and social interactions. Consequently, the increased use of these technologies and the recent developments in adaptive software and hardware have enabled students with disabilities to participate in, and do things that used to be difficult or impossible for them. Several studies have been carried out on eLearning usage, but not much on students with disabilities in Nigeria. This study therefore, provided a causal explanation of students with disabilities' eLearning usage through the analysis of some psycho-social variables such as gender, nature of disability, computer self-efficacy, technological confidence and attitude towards technology. The study adopted descriptive research design of the "ex-post facto" in nature. The Federal College of Education (Special), Nigeria was purposively selected. Two hundred and fifty participants were selected through simple random sampling technique. Three validated self-designed instruments namely Students' Computer Self Efficacy Scale ($r = 0.75$), Attitudes towards Technology Questionnaire ($r = 0.86$), Students' Technological Confidence Scale ($r = 0.75$) were used to collect data. Two research questions and hypotheses each were answered and tested to pilot the study. Regression analysis and t-test were used for data analysis. The five factors combined accounted for 17% of the total variance in students with disabilities' eLearning usage. The order of magnitude in terms of relative contributions were computer self-efficacy ($\beta = .048$), technological confidence ($\beta = .041$), attitude towards technology ($\beta = .038$), gender ($\beta = .025$) and nature of disability ($\beta = .018$). Furthermore, there were significant differences between nature of

disability ($t=2.29$, $df= 248$, $P <0.05$), and gender ($t=2.21$, $df=248$, $P <0.05$) on students with disabilities' eLearning usage. Computer self-efficacy, technological confidence and attitudes towards technology significantly predicted students with disabilities' eLearning usage. Institutions should device a mechanism for keeping the students with disabilities highly motivated throughout their programmes. Adequate communication facilities should also be provided for students with disabilities who may be disadvantaged in the inclusive educational system. Students with disabilities should develop positive attitude towards technology so as to keep abreast of latest information as it affects their education.

Keywords: psycho-social variables, students with disabilities, computer self-efficacy, attitude towards technology, eLearning usage

An Integrated Environment for Providing Learning Style Information in a Unified Manner

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Abstract: Learning styles inventories provide insights into student perceptions about how they prefer to learn. Since learning styles have notoriously some inconsistencies and invalidities, it is unreliable to base instructional decisions on just one learning style preferences. This paper introduces a new approach to integrate various learning style modelers in a unified system. The unified system contains some predefined phases in modeling each style's dimensions and some representing suggestions in order to visualize modeler results. Four popular learning styles along with their specific dimensions and report representations have been studied to demonstrate how to synthesize various inventories into a single representation of learners' learning styles. Utilizing integrated environment in the University of Tehran, department of electrical and computer engineering, has revealed some dependencies between a modeler dimensions as well as some correlation between two modelers' dimensions. The implication of this effort is to provide advice about how web-based instructions can be modified to accommodate learners' differences.

Keywords: user model, learning style, learning style questionnaire, web-based educational system, eLearning

Using Lifeworld-led Multimedia to Enhance Learning

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Abstract: In 2010, the School of Health and Social Care developed a collaborative lifeworld led transprofessional curriculum for health and social work disciplines harnessing technology to connect learners to a wider view of evidence based practice. The purpose was to increase use of technology-enhanced learning, introduce lifeworld-led philosophy to the curriculum, release staff potential, and expose students to research undertaken within the School. Delivered to over 600 undergraduate students from community development, midwifery, nursing fields, occupational therapy, paramedic science, physiotherapy and social work, the Exploring Evidence to Guide Practice Unit was facilitated by a number of resources including lectures, group work and a variety of web-based learning materials. Central to the unit were seventeen web-based case studies which included the human experience of the impact of specific illnesses (such as stroke and living with dementia) and more general experiences (such as social isolation and homelessness). Each case study provided stories and poems, qualitative and quantitative research and policy and practice issues related to specific topics. At the heart of the philosophy underpinning the case studies and unit was an opportunity for students to integrate understandings about different kinds of knowledge for practice, conventional evidence, understandings about the person's or service user's experience and the student's own insights that came from imagining 'what it was like' for the person experiencing a condition or situation and encountering human services (Galvin and Todres 2011). The project built on the successful development of Wessex Bay, a virtual community of case scenarios, used as problem-based triggers to engage students in learning activities relating to the residents (Pulman, Scammell and Martin 2009). This paper discusses the development of the web based case studies and how they integrated visual and audio materials with the aim of enhancing the lifeworld experience of students.

Keywords: Lifeworld, technology, transprofessional, web, humanising care, healthcare

The Project Mobile Game Based Learning

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Abstract: The specific aim of the project “mobile game-based learning” - supported by the EU within the 6th framework programme - was to design, develop and pilot a prototype game platform that might be used to efficiently develop games for m-learning. The basic idea is to use the mobile phone to implement games bridging the real and virtual world. These games are firstly intended to directly support learning via opportunities to develop knowledge and cognitive skills in an exciting and inspiring – and hence in a highly emotional – way, and secondly to indirectly motivate users to refer to other media for learning purposes. In general, all students liked the games and also the mGBL platform. All indicators show that students like to use the games in a real tertiary education environment. Some of the students requested usage of the resource in other university courses. Many of them pointed out the efficiency, flexibility and ease of use of the platform. The new experience, fun and playability of the games gave them additional motivation. More than half of the students stressed that they learned more by playing the games, paid more attention while playing the games, and were more engaged when using the “learning by playing” method.

Keywords: eLearning, mLearning, serious games, game based learning, mobile phones

Using the Common Cartridge Profile to Enhance Learning Content Interoperability

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Abstract: The concept of Learning Object (LO) is crucial for the standardization on eLearning. The latest LO standard from IMS Global Learning Consortium is the IMS Common Cartridge (IMS CC) that organizes and distributes digital learning content. By analyzing this new specification we considered two interoperability levels: content and communication. A common content format is the backbone of interoperability and is the basis for content exchange among eLearning systems. Communication is more than just exchanging content; it includes also accessing to specialized systems and services and reporting on content usage. This is particularly important

when LOs are used for evaluation. In this paper we analyze the Common Cartridge profile based on the two interoperability levels we proposed. We detail its data model that comprises a set of derived schemata referenced on the CC schema and we explore the use of the IMS Learning Tools Interoperability (LTI) to allow remote tools and content to be integrated into a Learning Management System (LMS). In order to test the applicability of IMS CC for automatic evaluation we define a representation of programming exercises using this standard. This representation is intended to be the cornerstone of a network of eLearning systems where students can solve computer programming exercises and obtain feedback automatically. The CC learning object is automatically generated based on a XML dialect called PExIL that aims to consolidate all the data need to describe resources within the programming exercise life-cycle. Finally, we test the generated cartridge on the IMS CC online validator to verify its conformance with the IMS CC specification.

Keywords: eLearning, standards, interoperability

The Design and Development of an eLearning System Based on Social Networking

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Abstract: For many people the internet “eLearning” experience can be rather lonely, lacking as it does, the opportunity for interaction between students and the sense of community and sociability of a well delivered live lecture. As a result the potential benefits from eLearning may fail to materialise because of this lack of student stimulation, involvement and interaction. The basic premises of this project was that students prefer an audio visual rather than solely text based medium, and prefer sociable rather than solitary individual study. It is hypothesised that social networking which builds virtual communities allows connectivity, interaction and in the context of eLearning holds the promise of making learning a more pleasurable interactive process. Based on investigation current issues of eLearning and discovering the possibility of eLearning in social networks, the authors describe the development and evaluation of an online eLearning application intended to enhance the interaction levels of learners in a virtual eLearning environment. It was hoped that eLearning could be more enjoyable by providing a friendly internet forum where students were able to post problems and ideas connected with their subject domains, pose and answer peer questions, thus generating lively interactive chat, whilst simultaneously developing communication and analytical and support skills. A prototyping process model

was applied in designing the application to maximise the user involvement during requirement gathering and design. In the paper, the design process consists of five iterations is described. The application was developed based on the concept of two popular social networking websites, Youtube and Facebook. It was our hypothesis that social network websites have several drawbacks in terms of their educational use. These potential drawbacks are described in the paper. The ways in which the authors allowed for these during the design and development phases of this project is also explained. The application was evaluated using four evaluation methods, observations, interviews, questionnaires and database records analysis. The results of this evaluation are presented in the paper. It was found that learners had a positives experience of using the application and based on learners' comments we present a discussion on the possible reasons for this.

Keywords: Web 2.0, eLearning, application development, social networking, multimedia

Kansei Design Model for eLearning: A Preliminary Finding

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Abstract: Positive emotion plays an important role in learning. Previous researchers have emphasised the importance of positive emotion for effective learning. Although some researchers have documented the association between emotion and eLearning, few studies have addressed users' emotional experience during their interaction with eLearning material. Therefore, this research paper highlights the importance of emotion and aims to associate users' emotional experience in eLearning in a convergence of interface, content, and interaction design, of the learning material. In an experimental setting, we adopt the Kansei Engineering (KE) methodology that has been proven successful in associating emotion and product design characteristics. The Kansei Engineering technique is used in this research to translate the users' Kansei (feeling and desire) into the design elements of the online course. The instruments used in this research include ten online database courses, and 478 adjectives have been used to represent the users' emotional experience. Respondents are comprised of 36 undergraduate students from a public institution of higher learning, in Malaysia. The findings led to the development of a Kansei design model, which aims to provide instructors and designers with clues for engineering a positive emotional experience, for students learning in an online environment. The positive

emotional experience is targeted to facilitate, not only the capable students, but also the at-risk students, by enhancing their learning experience. Recent research has also highlighted the need for new techniques to identify at-risk students, as well as to support their learning. Therefore, identifying a good emotional design for eLearning will hopefully assist better learning, not only for the good student, but also, and more importantly the at-risk student. This paper presents the preliminary findings of the first experiment conducted by the researchers. Results reveal the key adjectives for describing emotional experience in online learning, as well as the specific design elements of the online course, associated with these emotions. Additionally, this paper briefly discusses a proposed model for positive emotional experience in online learning; a description of the Kansei Engineering technique adopted for this study; the analysis and findings, as well as a brief explanation of future research directions.

Keywords: online course, Kansei Engineering (KE), emotion, design elements, eLearning, emotional experience

Changing Teacher Beliefs Through ICT: Comparing a Blended and Online Teacher Training Program

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Abstract: Teachers' beliefs towards learning, teaching and ICT may have a strong impact on how learning opportunities are designed and implemented. However, research has shown that providing effective opportunities for teachers to develop skills and competence with ICT tools in order that they effectively redesign their learning environments are not straightforward. In this study we examined two teacher training programmes, both multidisciplinary, that aimed to use and develop understanding of learning and teaching as well as ICT as it related to practice of teachers. In Study 1, 74 teachers from eight higher education institutes in the Netherlands participated in an online teacher training module. In Study 2, 31 teachers from one higher education institute in the UK participated in a blended approach. Data were gathered by using the Teacher Beliefs and Intentions (TBI) instrument of Norton et al. (2005), in a pre-post test design, in order to measure changes in the participants' beliefs and intentions towards knowledge transmissions and learning facilitation. The results indicate that the teacher beliefs and intentions in the online programme have not substantially changed during the module,

although the beliefs towards knowledge transmission were lower in the post-test. In contrast, participants in the blended programme have significantly increased their beliefs and intention towards learning facilitation. Future research should assess the long-term impact of blended and online teacher training programmes on students' learning experiences.

Keywords: teacher beliefs, teacher intentions, comparison of teacher training programs, blended vs. online learning

Moodle and Affective Computing: Knowing who's on the Other Side

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Abstract: In traditional learning, teachers can easily get an insight into how their students work and learn, and how they interact in the classroom. However, in online learning, it is more difficult for teachers to see how individual students behave and learn, and very important, their mood to do it. Student's emotions like self-esteem, motivation, commitment, and others that are believed to be determinant in student's performance can not be ignored, as they are known (affective states and also learning styles) to greatly influence student's learning. This paper deals with the student's behavioural and affective aspects in virtual learning environments to enhance the students' learning, gain and experience. The goal is to achieve a similar performance to a skilled teacher that can modify the learning path and his teaching style according to the feedback signals provided by the students - which include cognitive, emotional and motivational aspects. This can be done through the recognition of students actual mood, and we propose a framework to implement and address such issues in Moodle.

Keywords: affective computing, learning styles, eLearning, Moodle

Using Google Applications to Facilitate an Effective Students' Collaboration in the Teaching of Informatics to Students of Secondary Education

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Abstract: This paper describes the results of an empirical research on the impact of eLearning in the students' activities in respect of their educational record, their active attendance and their collaboration in the class at the teaching of the Informatics course, in the Experimental School of Aristotle University, Thessaloniki, Greece. The investigation of blended learning effectiveness, using online collaborative tools (as Google Applications: email, groups, calendar, forum, chat, shared documents), concludes that blended learning as an additional/complementary tool of teaching and learning is effective as much in students' performance as in their positive attitude to the use of new technologies in the educational process of the Informatics course. More specifically the students' attitudes before, during and after the use of technology as a supporting tool of educational process is investigated. Additionally the research paper examines the way that students' active attendance in the educational process - with the exploitation of eLearning and techniques of collaborative learning from distance- is encouraged,. The current research does not aim to compare the effectiveness of exploitation of eLearning with the one without it, but it approaches students' motivation and it gives an example of good practical exploitation of ICT. An educational framework of blended learning implementation which uses collaborative online tools (less important point the tool itself) to support a "web-based" class complementary to face-to-face class facilitates an effective students' collaboration and improves the efficiency of learning regarding both students' grades and their positive attitudes in using Information and Communication Technologies (ICT) in the educational process.

Keywords: blended learning, collaborative learning, teaching Informatics, secondary education

Training Methods and Tools: Could eLearning be a Viable Solution to Solve SMEs Training Problems?

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Abstract: The purpose of this study is to identify the different training methods and tools used by larger businesses and the problems associated with these methods and tools and to determine, through a multiple case study, the extent to which small and medium-sized enterprises in Atlantic Canada use the same methods and tools than the other businesses, and if so, if they face the same problems than other organizations in the use of these methods. The purpose of the study is also to verify if the utilization of eLearning may solve some of the training problems encountered by SMEs, and if so, why?

Keywords: eLearning, SME, training methods, training tools

Using Blended Learning to Develop Critical Reading Skills

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Abstract: Teacher education programs expect student teachers to succeed in a wide range of academic tasks that, apart from content knowledge, require effective application of their cognitive strategies as well as their academic abilities. In order to help the students meet these requirements, a great emphasis should be placed, among others, on their ability to read critically. However, students usually come to university with limited experience in academic reading, which reflects in their failure in academic tasks and at worst, consequent withdrawal from the university. Therefore, the introductory Study Skills course for the first year EFL students was modified so that it offered students an extended exposure to the reading tasks and activities through blended learning. An on-line module that supplemented in-class sessions was designed so that it complied with the principles of scaffolding instruction that helps students, by offering enough support, apply skills and strategies independently. This also aimed to “facilitate motivational development in reading” and assured “that the students are not lost or ill-guided” (McNamara, 2007). For tutors, this scheme helped intensively assist the students’ learning and thus foster comprehension monitoring. The effects of the course were examined and the following research questions were addressed: What are common students’ deficiencies in critical reading skills? Does the computer-mediated instruction help students understand more in-

depth subject matter? What further adjustments of the course will have to be done? The article presents an insight into the EFL teacher trainees' common reading problems, reports on the effectiveness of the on-line environment as judged by the students, and addresses desirable measures in further research.

Keywords: blended learning, critical reading, reading competence, scaffolding

A Mobile aid Tool for Crafting Active Learning Experiences

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Abstract: A successful mobile aid tool would prove valuable in the design of learning experiences for both the student and the teacher. For the students, it motivates and challenges them through a hands-on interactive process, and gives them the needed time, software, and learning experiences environment to construct their own mental image of the information they are exposed to. Such a tool would allow the students to assess their mental model representation both inside and outside the class and keep modifying it if needed, until it proves to be the right model (as per *Bloom's Taxonomy* of Learning Domains). For the teacher, it helps them to create a successful design of the course and is valuable both for initial design as well as for iterative improvements of the initial design. For both the student and the teacher, it offers multi-interactions, and receiving immediate feedback. In this paper we introduce a mobile aid tool for designing Active Learning experiences that fulfils these attributes. This mobile tool is composed of a course information data bank, questions bank, interactive Smart-Quiz system with automated self assessment technique that offers instant feedback and a communication system. It is applied in a college level course that introduces undergraduates to Engineering Design process, and is delivered in Active Learning format. J2ME is used to develop this mobile tool and it is targeting Java ready mobile wireless sets that are highly common among the students nowadays. A study was conducted for two semesters, using qualitative and quantitative methodologies for data collection and interpretation to measure the effect of this tool on students' attitudes and performance. Two control groups were selected each semester – one is using this tool and the other isn't – to the experiment. The study showed positive effects of this tool on both attitudes and performance in favour of the first group.

Keywords: mobile learning, learning experience design, active learning, in class environment, out of class learning, assessment

King-Sized eLearning - how Effective can an Online Approach be for Large Module Groups?

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Abstract: There are ever increasing challenges facing academics in introducing more innovative approaches to learning, improving the student experience and ensuring resources are managed more efficiently. eLearning is increasingly being used as a mechanism for the delivery and assessment of students, however this can present its own set of challenges, particularly when delivering this approach to large groups of students. Additionally, it is important on business programmes that students get used to and develop skills in online communications as many will be required in employment to use email and web based technologies. Online discussion also provides a platform for a truly student centred approach in exploring teamwork and collaboration (McLoughlin and Luca 2002). This paper explores the findings of a research study undertaken at a UK Higher Education institution which delivered a new blended learning module (Management and Organisational Behaviour) and online assessment to over 400 first year business undergraduates over 20 weeks. This included a range of technology approaches such as online case studies, DVDs, discussion forums, voice boards, quizzes and mind maps. The paper discusses the benefits and drawbacks of undertaking the programme as part of a group of over 400 students and will include recommendations that can be adopted across other institutions that are considering online or blended learning to students within a given timeframe. The findings discuss a broad range of areas including the importance of flexibility in online learning and promotion of independent learning, assessment, and motivation to engage. It covers the first level of the research, in terms of perceptions of engaging with large groups of students online; however has scope for further analysis of each of the themes discussed.

Keywords: eLearning, e-assessment, learning, large, groups, modules

Designing Effective Online Group Discussions

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Abstract: Together with lectures, class discussions are mainstays of university teaching. Instructors engage their students in class discussions to further interpret, analyze, evaluate, infer, reflect on or explain what is being learned in class, in other words, to engage students in high-level thinking. Instructors are now turning to technology (e.g., GoogleDocs, Blackboard) to enhance group discussions and to overcome traditional constraints especially in large classes. However, when converting from face-to-face to online format, group discussions, which are primarily student-student interactions, are the most difficult activities to design and implement (as compared to student-teacher or student-content interactions). Failure to provide effective group discussions in online classes adversely impacts the quality of online teaching and student learning. It then becomes imperative that faculty learn how to design online group discussions effectively so that they can provide students with successful high-level thinking experiences and increase the level of student engagement. The first part of this paper will present the following: the rationale for the use of a faculty learning community to help faculty become better designers of online group discussion activities, the process that was involved in the structuring of the faculty learning community, and the set of instructional design guidelines that the FLC generated. The second part of the paper will present the implementation results, including the SoTL (scholarship of teaching and learning) integration that was carried out by one of the members of the faculty learning community. This includes the improvements made to the original assignment activity as a result of peer review, what worked or didn't work, as indicated by the results of a student survey, and reflections for the next re-design. The paper will conclude with a reflective summary of how results from the use of faculty learning community and the integration of SoTL can contribute to designing effective online group discussions.

Keywords: online teaching, online group discussions, faculty learning community, scholarship of teaching and learning, high-level thinking skills, faculty development

The Game and the Alternating Roles of Learner/Teacher as Facilitators of the Learning Process in Organizations

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Abstract: In this work a new strategy is proposed for online training of members of medium and large organizations, based on the sharing and exchange of knowledge among them. The strategy is supported with the creation of intra-enterprise online communities, where all members assume, simultaneously, the role of trainer and trainee. The interaction in the community is achieved through a game, in which each participant challenges others to learn what he has to teach in his domain area, sharing information and resources on matters that they dominate and where are, at the same time, challenged to learn other subjects from different professional areas. The adoption of this model could change the classic positioning of distanceLearning systems based on Internet by giving a very significant role to the learning communities and to the use of games as a challenging way to improve the level of expertise of the members of an organization, helping them to cooperate and to better exchange information.

Keywords: learning organizations; learning communities; eLearning; gaming

Implementing and Evaluating Problem-Based Virtual Learning Scenarios

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Abstract: This paper will describe a project adopting a pedagogical approach aimed at implementing and evaluating a problem-based learning project in an immersive world. The project involved an iterative process of testing scenarios using student feedback to improve upon the scenarios. This paper will also present findings from the project that will argue that developing pedagogically driven scenarios may offer a new liquidity to learning, and that combining technology with pedagogy can present mutual benefits.

Keywords: problem-based learning, virtual worlds, pedagogy

The Evolution of eLearning Platform TESYS User Preferences During the Training Processes

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Abstract: The use of eLearning platform TESYS during continuous training programmes started in 2005, when the first training project PHARE was initiated. Therefore, a study conducted in 2005-2007 highlighted that the requirements of platform TESYS users were influenced by their personal characteristics rather than the characteristics of the eLearning platform. In the period 2007-2010, eLearning platform TESYS has been continuously improved in order to meet both the needs of the user and the demands of the teachers. Taking into account both, user requirements and technological developments, the eLearning platform TESYS has been improved and, consequently, our study aims to analyze how users perceive technological improvements of the platform during a new training process conducted in 2009-2011. In the course of the research, we followed the correlation between the experienced users and the first-time learners on eLearning platform TESYS. Therefore, our quantitative and qualitative research reveals that users' expectations and needs referring to the eLearning platform TESYS are inhomogeneous and unpredictable. The relationship between learners-professors is very important in the knowledge management process. The course structure is a very important qualitative variable that contributes to the satisfaction of the learners and the quality of the eLearning platform Tesys cannot supply the content of the chapters. The practical implications of our research are important both for the users of the eLearning system that need different levels of competences in using eLearning platform, and for the technical team which deals with the management of the eLearning platforms in order to understand the needs of the learners and to adapt the technological characteristics of the platform to these requirements to obtain high results. The study indicates that the role of the human factor in the eLearning process is prominent and users perceive any improvement of the eLearning platform as necessary and even mandatory for a proper functioning. This article will represent the framework for our future research, its goal being the study of the relation between the satisfaction of the eLearning platform TESYS users and the results obtained in exams by the students that answered our questionnaires. Based on the grades we will determine whether there is a direct correlation between the results obtained in the exams, the content of the courses and the usefulness of the eLearning platform.

Keywords: eLearning platform TESYS, knowledge, users satisfaction, usability

Teachers' Skills set for Personal Learning Environments

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Abstract: This study provides an in-depth investigation of the issues that may impact the critical role anticipated from today's teachers to perform while using their personalized learning approaches and hence, in guiding students develop their personal learning environments (PLEs). Using modified Delphi method (Kenis, 1995; Webler, 1991), the researchers worked with 34 experienced PLE stakeholders taken from the areas of research, teaching and practice from different geographic regions of the world to discover teachers' skills and competencies for PLEs. A questionnaire instrument was developed through analysis of the existing literature with the goal of providing a recognized foundation to the participants based on the previous work. An exhaustive list containing teachers' 60 personalized learning skills was developed. In the three-round process of this study, participants consented on teachers' five core PLE competencies, found earlier by Shaikh and Khoja (2011a), and formulated a skills set for each competency. Based on the findings, the researchers argue that teachers need to become involved with the relevant skill sets; they will then develop and become entrenched in these new fields of learning.

Keywords: personalized learning, personal learning environments, teachers' PLE skills, e-learning, Delphi study

Bridging the Feedback Divide Utilising Inclusive Technologies

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Abstract: The aim of this action based research project is to enhance the student learning experience through the production of vidcasts that focus on the conventions of academic writing in Glasgow Caledonian University's School of Building and Natural Environment (BNE). Vidcasts (using a blend of narrated audio and on screen images and slides) aim to meet students' individual academic writing requirements. Four vidcasts have been produced at this stage; the first level focuses on an introduction to academic writing explaining and illustrating how to write a paragraph at micro level and how to apply the conventions of referencing. The second level considers how to plan, construct and write a report including a detailed breakdown of appropriate material for each section of the report. Level three concentrates on features of group reports whilst level four is aimed at executing a complex report applying a case study format. Each vidcast has links to additional support

materials that are available on the web. The objectives were to produce models of good practice on the issues of academic writing conventions at four distinct levels. The vidcasts have been placed on the virtual learning environment (VLE), Blackboard, and feedback was requested from student representatives studying across the programmes in BNE. We are also exploring the effectiveness of three different approaches that have been applied to obtain feedback; these included the use of online feedback on the Effective Learning Service's website through Google analytics and Poll Everywhere, an interactive electronic voting tool and tracking students' use via the university VLE. An integral aspect of this project is the involvement of students and BNE staff in the evaluation of the different approaches. We recognise that the feedback, like the vidcasts, should be context based and acknowledge that one size does not fit all. Thus, we acknowledge that the feedback mechanisms will need to be inclusive and tailored to different ability levels as well as for different cohorts of students. An interesting outcome from this project has been that despite students noting the importance of receiving timely feedback from staff; they appear unwilling to complete surveys giving feedback formally, although willing to express their views anecdotally. One reason could be that students are constantly being asked to complete evaluation from individual end of module forms to National Student Survey leading to survey fatigue. This suggests that using immediate feedback formats such as Poll Everywhere has a role in encouraging students to respond although it is acknowledged that there could be insufficient time for students to reflect.

Keywords: academic writing conventions, feedback, vidcasts, student learning

Post-Academic Masters Course in Management of Transfusion Medicine: Why the Difference in Access to the eLearning Between Countries?

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Abstract: Health care includes supportive services such as laboratory, radiology and blood transfusion. Blood safety and sustainability of the blood supply is increasingly organized on a WHO advocated nationally supported principle where regional blood procurement centres supply hospitals. To manage such regional or national blood supply centres, leadership development is paramount. Since 2004, WHO has initiated a specific post-academic Masters course focused on management of Transfusion Medicine

(MMTM). This MMTM course is largely based on eLearning (distance learning principle). Approach – Since the eLearning course became operational in 2006 there have been registered two dozens of qualified fellows from a variety of developing countries and a few more advanced countries. Fellows are provided personal electronic instructions how to access once all criteria including acceptance of a proper post-academic dissertation proposal have been met. The access codes are personal and not public and need to be archived during the course to guarantee a continued access over time. Fellows were followed during the eLearning period and their progress monitored and evaluated. Specific attention was given to the ease of handling the e-environment and its related e-technicalities. Fundamental are access to internet, uninterrupted power supply, consistence of use of a computer (PC or laptop) and computer literacy. Results –Most of the fellows come from developing parts of the world, predominantly sub-Saharan Africa. There are distinct differences in country infrastructure and e-environment. Although academically qualified (in-country University diploma's) a majority is not familiar with e-technology and computer handling other than some internet exploring and basic office functions like Word and PPT. Accessibility awareness is not really developed. Major obstacles encountered are – inconsistent internet access due to supplier problems; unreliable power supply due to poor and incompetent infrastructure; virus contamination of lap tops and PCs due to frequent uncontrolled use of memory sticks in internet café's and through friends and relatives; poor and not maintained firewall conditions; mediocre computer literacy, particularly when skills beyond basic office functions are required; lap top and PC breakdown due to uncontrolled working conditions and improper working environments; Conclusions – As fellows are scattered around the world, and live in developing societies with a limited e- and ICT teaching infrastructure, it would be appropriate to include in the eLearning package an instructive e-module on how to handle and manage the eLearning tools, how to manage day-to-day problems of access and downloading, as well as re-access for e.g. e-exams and access to new modules in the course. Such instructive e-module would contribute to a better accessibility awareness leading to a more easy and customer friendly e-access.

Keywords: postgraduate masters, eLearning, evaluation

Engagement With Students in ‘Middle Ground’: A Flexible Learning Environment Allowing Simultaneous Access to Social Networking Sites and Formal Academic Space

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Abstract: Content: The twenty first century student demands more from universities in terms of engagement that is flexible, accessible and immediate. This means Universities revisiting their engagement agenda at a time when financial constraints can least afford expensive technologies and resource dependent engagement solutions. Solutions are likely to be varied however they must fundamentally deliver what students expect in terms of engagement. Engagement requires a partnership between academe and student body, but often this relationship is a tension between what universities want to deliver, and what students expect to receive. This complex environment of constraint, tension and expectation means that solutions will be tested by both parties on those variables. In pursuit of solutions it is presumed that there could be a ‘middle ground’ that would be acceptable to both parties. The aim of this paper is to present the concept of ‘middle ground’ engagement, where parties engage using a simple, cost effective and easily accessible communication tool. Middle ground is an emerging concept informed by results from a study of student communication and interaction. It enables freedom of movement for the user to communicate, engage and participate with others. The tool tested in the study is not a formal learning space such as a VLE, or a branded social space such as facebook, but rather a flexible environment allowing simultaneous access to social networking sites and formal academic space. The subsequent challenge is to shape and roll out a communication tool that is ‘middle ground’.

Keywords: engagement, participation, formal/informal learning, social learning, collaborative learning, social interaction

The Learning Management System as a Social Mediator: A Story With a Happy Ending

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Abstract: Learning is social and mediated, as argued by social constructivism. When learning groups gather very different people, this difference can be challenging. We had an Interpersonal Relationships course, a large class, around fifty students working collaboratively in groups where

students from different degrees, academic years and ages, some of them deaf, tried, and to some extent were able, to communicate. We analyze this example of how diversity can be an asset and Moodle can act as a mediator. We were carrying out a participatory action research project within a blended learning environment supported by Moodle to develop collaborative and personal pedagogical strategies to improve the inclusion and engagement of higher education students in their own learning and evaluation. We have used content analysis of the online discussions held by the students, reflective descriptions of the classes, the students' e-portfolios, and interviews with the students. The paper describes, from this project, the challenges and potential of using Moodle in a learning context where deaf students interact with hearing students and illustrates how Moodle can facilitate inclusion and the participation of the students.

Keywords: blended-learning, diversity, higher education, inclusion, participation, social constructivism

Can the Medium Extend the Message? Using Technology to Support and Enhance Feedback Practices

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Abstract: The research reported in this paper investigates the use of technology-supported feedback that enhances student understanding/learning. According to the UK National Student Survey (NSS) which gives final year undergraduates the chance to reflect on their course and to have their views heard, students are markedly less positive about feedback on their assessments than about other aspects of their learning experience. Thus, there is strong rationale to provide more effective feedback that enhances understanding and learning by exploiting the potential benefits that Technology Enhanced Learning (TEL) has to offer, whilst reducing the burden on tutors as being the sole providers of feedback (Sadler 2010). These issues are addressed in this research, which is a small-scale evaluation project using a mixture of quantitative and qualitative methods, exploring the role of technology in the process of giving and receiving feedback on the final year BSc. (Hons) Computing programme at Leeds Metropolitan University (Leeds Met). The primary data is obtained from a mixed method approach using questionnaires and interviews. The research findings suggest that although tutors apply a variety of feedback mechanisms dependent upon the nature of the learning, teaching and assessment (LTA) design of their modules, students do not hold a uniform view of what effective feedback means and how it could be used to enhance their understanding and learning. It is also found that students perceive feedback as being useful

when it is mediated through a guided dialogic process where a common consensus is more likely to be arrived at. It is interesting to note that characteristics of effective feedback in face-to-face delivery are not diminished in blended learning delivery. The results have implications for increasing awareness in students on how to recognise what constitutes feedback, as well as how to use it. The results also support the evidence that when technologies that maximise dialogue and learning as shared discussion of tasks are used appropriately, the emphasis shifts from delivering instruction to producing learning. Further, the findings propose that in supporting time-starved tutors who are under pressure to provide effective feedback, the pedagogic opportunities that technology affords can be suitably harnessed for collaborative learning, in particular self and peer feedback provision. Within Higher Education (HE) curricula, this translates as an opportunity to promote self-regulation through independence and personal ownership of learning, increasing students' ability to self-assess and self-correct, skills which form the hallmarks of undergraduate education. The paper concludes with recommendations to influence existing feedback practices through technology-supported activities to benefit students' learning experiences.

Keywords: technology-enhanced feedback, exemplars, peer feedback, self-regulation

Implementation and Analysis of an Online, Student Centred Learning Environment to Support Personalised Study

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Abstract: The majority of University teaching is still heavily predicated towards the use of the lectures (Lammers & Murphy, 2002). While there are many issues with the lecture as an educational tool, lectures are still an outcome-effective and a cost-effective way of presenting information, when it is delivered by subject experts in a structured form which supports the linear development of concepts and promotes the depth of understanding characteristic of this level of education (Heward 2003). However, the current generation of students display a lifestyle in which they are used to accessing information in a variety of modes across a range of platforms, often concurrently. (Kennedy et al, 2008). In particular they tend to prefer to work with small chunks of information and to assimilate them by relating them to other pieces of information in their own time. The challenge faced by educators is how to take advantage of the benefits of the traditional lecture approach while also gaining from the advantages of Web 2.0 technologies

where user-driven discussion, user generated content , and the capability to take non linear routes through information and content can all contribute to the learning experience (Ravenscroft, 2009). While traditional Virtual Learning Environments such as Blackboard are moving towards this with the incorporation of technologies such as Wikis and blogs, there is still a rigid structure to such systems which makes it difficult to truly integrate these elements into the learning experience. The authors have worked for a number of years in the area of lecture capture, both to support students with disabilities and also to provide rich learning resources. Recent work has led to the development of a software prototype which has been applied to material designed for and gathered in a classroom environment to produce web-based, self-guided learning products. This prototype integrates a range of resources (captured lecture video, audio and presentation slides) but in addition to simply presenting this content as a passive viewing experience, many other resources including tutorials, FAQs and student feedback are used to drive the navigation through the content and to allow the students to discover and develop linkages within the content. This paper describes the evolution of the specification of the prototype, the development of the software and the feedback received from the students who utilised it. A critical analysis of this data is presented and from this the specification of the next evolution of the software is presented.

Keywords: lecture capture, personalised learning, student centred, Web 2.0

The Danger of the Downward Spiral: Teachers and Digital Literacy

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Abstract: Results from two surveys taken in secondary schools throughout Belgium and the UK, and many individual findings in existing literature, point towards the fact that there are not only a number of factors influencing the successful implementation of educational technology, but also that the power of these factors can have defining effects on the behaviour of teachers towards the technology and its educational use. Rather than describing the actual research done, this paper intends to propose a theoretical framework to apply to the dynamics of the adoption process of new technology in learning by teachers, as formed by the results of the qualitative and quantitative data of the research and its comparison to existing literature. The adoption process takes the form of a spiral, and teachers are defined by the movement on that spiral path according to the influence of three inner and four environmental factors. The primary purpose of this paper is to provide

anyone active in the field of education with a useful tool to assess risks during the integration of new technology in an educational setting, but especially to raise awareness of the danger of a downward spiral, which not only undermines our investment of time and money into these promising new technologies, but which also puts the learners at a great disadvantage when providing useful tools for their benefit which are, in the end, not fully or even wrongly used.

Keywords: adoption process, digital literacy, secondary education, technology integration

PeerWise - The Marmite of Veterinary Student Learning

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Abstract: PeerWise is a free online student-centred collaborative learning tool with which students anonymously author, answer, and evaluate multiple choice questions (MCQs). Features such as commenting on questions, rating questions and comments, and appearing on leaderboards, can encourage healthy competition, engage students in reflection and debate, and enhance their communication skills. PeerWise has been used in diverse subject areas but never previously in Veterinary Medicine. The Veterinary undergraduates at the University of Glasgow are a distinct cohort; academically gifted and often highly strategic in their learning due to time pressures and volume of course material. In 2010-11 we introduced PeerWise into 1st year Veterinary Biomolecular Sciences in the Glasgow Bachelor of Veterinary Medicine and Surgery programme. To scaffold PeerWise use, a short interactive session introduced students to the tool and to the basic principles of good MCQ authorship. Students were asked to author four and answer forty MCQs throughout the academic year. Participation was encouraged by an allocation of up to 5% of the final year mark and inclusion of student-authored questions in the first summative examination. Our analysis focuses on engagement of the class with the tool and their perceptions of its use. All 141 students in the class engaged with PeerWise and the majority contributed beyond that which was stipulated. Student engagement with PeerWise prior to a summative exam was positively correlated to exam score, yielding a relationship that was highly significant ($p < 0.001$). Student perceptions of PeerWise were predominantly positive with explicit recognition of its value as a learning and

revision tool, and more than two thirds of the class in agreement that question authoring and answering reinforced their learning. There was clear polarisation of views, however, and those students who did not like PeerWise were vociferous in their dislike, the biggest criticism being lack of moderation by staff.

Keywords: PeerWise, veterinary, MCQ, student-centred, peer feedback, reflection, student engagement

iSELF: An Internet-Tool for Self-Evaluation and Learner Feedback

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Abstract: This paper describes the development of the iSELF: an Internet-tool for Self-Evaluation and Learner Feedback to stimulate self-directed learning in ubiquitous learning environments. In ubiquitous learning, learners follow their own trails of interest, scaffolded by coaches, peers and tools for thinking and learning. Ubiquitous learning solutions include on- and off-line, formal and informal learning. To benefit from its possibilities, learners need to develop competencies for self-directed learning. To do so, a self-evaluation tool can help the learner to get insight in his/her own development, to manage and monitor his/her own learning process, to collaborate in learning, to relate the learning to 'real life' needs, and to take control over educational decisions. The iSELF is developed in an iterative process in three phases, complying to the following high level requirements: (1) Enabling learning anytime, anywhere; (2) Supporting self-directed learning; (3) Evaluating learner, learning solutions and job-needs; (4) Assessing learner competencies; (5) Using card-sort method for questionnaires; (6) Facilitating questionnaires 'under construction'; and (7) User-friendly design. The resulting online tool contained a card-sort module, looking somewhat like a 'solitaire' game, a profile module to evaluate core competencies, and a feedback module to suggest learning possibilities in a ubiquitous learning environment. The iSELF was developed to be not only a learner tool but a scientific tool as well. Using the tool, two self-evaluation questionnaires were developed and psychometrically tested: competencies for multidisciplinary cooperation in a Network Centric Organization and self-directed learning competencies. They are used in various populations: e.g. students, employees from small and medium enterprises, crisis management organizations, and the military. Usefulness and usability of the self-evaluation tool were valued positively. It contributes to an adaptive ubiquitous learning environment in which the learner can make the educational decisions according to self-directed

learning principles. The iSELF will stimulate self-directed learning in a ubiquitous learning environment and will help to create learners for life.

Keywords: self-evaluation, self-assessment, internet-tool, ubiquitous learning, self-directed learning, feedback.

Using a Learning Management System for Executing Role Play Simulations

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Abstract: Learning Management Systems (LMS's) are generally used for storing and deploying learning material. In this experiment, however, it is used to keep track of, and store, a role play simulation. The script and roles for the role play simulation were invented and developed by the participants, building on what the participants found relevant to test in a simulation. The LMS was used to capture and store the conversation to see if this could be used for evaluation purposes. However, unexpected problems required changes to the running of the experiment. Instead of using a chat-function (which was the original plan), the participants had to use a discussion forum. The participants found the approach interesting and reported on a minor learning outcome from the development workshop. They reported a lack of learning outcome from the role play due to the fragmented dialogue and technical problems. They also indicated a preference towards shorter scenarios and repeated plays, incorporating the information gathered from the debriefing following each play session.

Keywords: learning management systems, role play simulation, experiential learning

The Effects of Self-Directed Learning Readiness on Learning Motivation in Web 2.0 Environments

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Abstract: Recent studies argue that the emergence of Web 2.0 has significantly advanced learner-centred eLearning. However, critics have also suggested that learners could easily become overwhelmed in a completely learner-centred Web 2.0 environment. This indicates that learners are not easily motivated to concentrate on Web 2.0 learning activities. The

researchers of this study speculated that learners' self-directed learning readiness might affect learner motivation in Web 2.0 environments. Two research hypotheses were made for the study: 1. learners' Internet experience affects their self-directed learning readiness; 2. self-directed learning readiness is related to Web 2.0 learning motivation. A questionnaire survey was conducted and pilot study showed that overall reliabilities of the questionnaire were satisfied. The subjects of the study were sampled from the college students who were frequent users of local Yahoo! Answers. Data from 334 valid questionnaire responses were collected and statistically analysed. The results indicated that learners with 10 years or more web experience exhibited a significantly higher average score for self-directed learning readiness than learners with less web experience, suggesting web experience significantly influenced the self-directed learning readiness. The results also indicated that the correlation coefficients between each subcategory of self-directed learning readiness and each subset of Web 2.0 learning motivation were highly significant, suggesting that the higher the self-directed learning readiness, the higher the Web 2.0 learning motivation. These findings are especially useful as a reference for educational practitioners to adapt learners' self-directed learning readiness to Web 2.0 environments. Moreover, the findings can also be used to reduce the concerns of people who are sceptical of web 2.0 learning.

Keywords: Web 2.0, self-directed learning readiness, learning motivation, learner control

Usage Cases: A Useful way to Improve Effectiveness of eLearning web Based Platforms

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Abstract: In this paper we propose a more effective use of the eLearning platforms resources, in order to decrease the effort and time required to derive useful knowledge and bringing up together multiple valuable contributions to overcome resource maintenance difficulties. The primary target of our work is the role of a Web based platforms' administrator (and promoter) that hasn't enough experience on site optimization and resource maintenance. Our idea to deal with this challenge is to assist such tasks, providing a system that acquires and reuses the knowledge gained from the experience in solving problems concerning administration activities. The

system explores the case-based reasoning approach to accomplish its duty of suggesting a suited solution for particular usage data analysis problem, on an eLearning Web based platform, as well, supporting the collecting and structuring of the knowledge contained on successful solved usage problems. We describe the system and propose its application to the specific domain of eLearning Web based platforms optimization. We are specifically engaged in facilitating the collection and cataloguing of knowledge in this area, so it can be shared, evaluated and finally reused in new situations.

Keywords: eLearning web based platforms, web usage mining, clickstream analysis, case-based reasoning, web usage analysis, eLearning platforms optimization

The Virtual Path to Academic Transition: Enabling International Students to Begin Their Transition to University Study Before They Arrive

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Abstract: Institutions receiving international students for postgraduate study are now committing time and energy to the development of online transition resources to enable students to prepare for the demands of a different academic culture before they arrive. Important questions underlying such initiatives are identifying what kind of digital resources will both engage international students and be of most use to them in preparing for this transition, and how to effectively reach students. Current institutional initiatives are taking several forms. A popular model is to offer browsable advice/tips or FAQs about life and study at a particular institution together with, for example, video clips of other international students describing their experiences there. These may be open and web-hosted or accessible through a password protected area on an institutional website or VLE. Less commonly found are video and other media embedded in learning resources developed in the form of 'learning objects' which have been designed to offer key information through structured interactive learning activities supported with answers and feedback. Importantly, these also offer opportunities for language improvement at the same time since they are supported by help, feedback and transcripts. This case study focuses on a project to develop and deliver a pre-arrival online course of interactive learning resources for all incoming international students to one UK institution. Building on five years of experience in delivering pre-arrival, tutored online courses to pre-sessional course international students, the project team developed institution-specific learning objects and incorporated open resources from the website, 'Prepare

for Success', developed by the same institution. The project seeks to deliver a self-access online course with three strands to it to address students' concerns and needs. These are to prepare international students for the location in which they will be living and studying (the city of Southampton - its key features and amenities); to introduce them to practical aspects of British life and culture (e.g. setting up a bank account, shopping in a UK supermarket) and to familiarise them with key study skills and other aspects of UK academic culture which may present challenges for them (e.g. academic writing conventions; dealing with course reading lists). This paper will be of value to institutions embarking on similar ventures. It will describe the rationale for the online course; refer to the pedagogic approach taken; showcase course content, and report on the first phase of its delivery which begins in late spring 2011.

Keywords: international students; transition; pre-arrival elearning; online course design; learning objects

Identifying and Locating Frames of Reference to Inform the Design of Virtual Worlds in Higher Education

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Abstract: In the changing context of higher education a series of pedagogical shifts have occurred and with them a number of interactive learning approaches have emerged. Learning in immersive worlds (simulations and virtual worlds such as Second Life) has received significant attention, but to date the impact of virtual world learning on higher education remains relatively under-researched. This paper will draw on 3 distinct but interrelated funded studies that have explored the socio political impact of virtual world learning on higher education, with a specific focus on Second Life (SL). It will argue that there are multiple frames of reference which inform the design of and response to virtual worlds as learning technologies. Such frames of reference were evident in the practices of those involved in using virtual worlds, but have largely been over-looked in the literature in terms of their impact.

Keywords: virtual worlds, Second Life, qualitative study, participatory action synthesis

Reaction Lecture: Text Messaging to Increase Student Engagement in Large-Scale Lectures

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Abstract: By helping to be active during large scale lectures, students remember better what is presented, and can better connect new knowledge to entry knowledge. In large scale lectures with more than 150 students, it is nearly impossible to manage personal, face-to-face discussions and interaction. Based upon positive experiences with enabling interaction via mobile phones a new form of interaction was tried in a second year Bachelor's course (722 students). Students could send in open comments and questions via SMS, Twitter or via mobile Internet. The lecturer built in blocks of time to respond to these questions and comments. Unanswered but relevant questions are forwarded to the forum of the electronic learning environment (Blackboard), enabling an online response. An experimental design was set up, dividing the lectures of the same lecturer between "*reactionlectures*" and traditional lectures. Three primary questions for this study were defined: Would students learn better in a *reactionlecture* than in a traditional lecture? What are the opinions of students on giving direct reactions during a lecture? What forms of providing open comments during lectures can be used? A difference in learning results (as perceived by the students) was not found. Although students indicated that by giving open comments, the lecturer could better adapt to their entry knowledge. Further, questionnaires showed that students were happy both with the options for interaction, and with the connection between the lecture and the discussion forum in Blackboard. Students indicated they would like to have more blocks of interaction during the lecture, so that responding via their mobile phone doesn't distract from listening to the lecturer. Contrary to expectations about the "Facebook generation", students did not respond or comment often. To make the *reactionlecture* more effective, blocks of interaction on key lecture topics should be scheduled.

Keywords: backchannel, audience response systems, student interaction, large-scale lectures

A Holistic Approach to Instructional Design for Blended Learning Environments

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Abstract: This paper aims at presenting an integrated framework, comprising three key components, namely, instructional design, pedagogy and learning technologies, as a holistic approach to designing technology-based blended learning environments. Each component will be reviewed commencing from the earlier developments that have served as part of the foundation to the development of new trends and emerging ideas or concepts in the field. The dynamic inter-relationships among the three components will be discussed. The design implications and challenges in creating technology-based blended learning environments in support of contemporary educational and technological trends and developments will be presented.

Keywords: Instructional design, pedagogy, learning technologies, blended learning

PhD Papers

Evaluating the Impact of an Arabic Version of an Adaptive Learning System Based on the Felder-Silverman's Learning Style Instrument

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Abstract: This paper presents an approach to integrate learning styles into adaptive e-learning hypermedia system and an approach to evaluate the impact of such a learning system. The main objective was to develop an adaptive e-learning system based on individual student's learning style, then to try and assess the effectiveness of the system on the students' learning. From a technical perspective, the system development involved the combination of SQL server 2005, SQL database and Active Server Pages were used to implement the system based on learning styles to present the appropriate subject matter, including the content, Teaching strategies and Electronic Media. The system was organized into 3 models; domain model, learner model and adaptation model. The 3 models interact together to perform adaptively. From an experiment design perspective, experiments involved applying using the system on two cohorts of students and evaluating the impact on learning achievement. Inferential statistics were applied to make inferences from the sample data to more general conditions. Descriptive statistics were applied simply to describe what's going on in the sample data. Results showed that students taught using learning style adaptive system performed significantly better in academic achievement ($p < 0.05$) than students taught the same material without adaptation to learning style. Measuring the effect of providing educational experiences individualized to the learning style of the students is an open research issue: There are many potential influences on any learning achieved other than the adaptive learning system. This paper hopes to make contribution by presenting a case study of a dedicated adaptive educational system and providing guidance and discussion on both development issues and how to evaluate the effectiveness of an adaptive learning system. First, the adaptation logic, methods and techniques employed in the system, the Teacher Assisting and Subject Adaptive Material (TASAM), are briefly

presented. Next, the validity and effectiveness of the system are assessed by means of an empirical evaluation approach, involving experiment with 53 undergraduate students of The 'Arts and Humanities' faculty at the King Abdul-Aziz University in Saudi Arabia. The results obtained (in terms of discusses the Final of the system using two different Arabic speaking groups with different use profiles of the system, performance, efficiency and satisfaction) are analyzed and discussed. This paper covers Test-Retest Reliability of student's first evaluation survey, Result of Student's First evaluation Survey and the final evaluation and assessment of the adaptive learning system by students. The findings support the use of learning styles as guideline for adaptation into the adaptive e-learning hypermedia systems. This paper provides discussion and guidance on how to evaluate the impact of adaptive learning systems. The overall results of the experimental study indicate a positive effect of adaptation to learning styles on the learning process.

Keywords: eLearning, adaptive hypermedia, learning styles, technology based education, evaluation

Negotiating Doctoral Practices and Academic Identities Through the Adoption and Use of Social and Participative Media

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Abstract: This paper describes current doctoral research into how PhD students are using social and participative media (web 2.0) in their academic studies. It examines the role these media can play in identity-formation and induction into academic scholarship and professional development. The highly contextualised and situated approach of this study challenges some of the dominant discourses and idealised concepts within the educational technology field to address the significant gap between the potential of web 2.0 and the reality of low rates of adoption and use. The study reconciles social media adoption and use with the self-efficacy and heterogeneity of doctoral practice. By taking an ecological approach, it recognises that doing a PhD requires the negotiation of multiple and interrelated academic and occasionally non-academic contexts. Such an approach legitimises doctoral practice beyond those related purely to thesis-development, and challenges models of doctoral education defined by a trajectory of increased participation and enculturation within a single, localised institutional research community. In addition, rather than focusing on one particular tool or platform, the study adopts a holistic perspective to social media that recognises the multiplicity,

interrelatedness and transiency of web 2.0. The empirical research uses a small sample of social sciences, humanities and interdisciplinary PhD students as participants. Adopting a qualitative approach and mixed-method design, data were collected through the observation of online activities across a range of social media, participant-reported accounts, and a series of in-depth participant interviews. Activity theory is used to support a grounded and recursive approach to analysing participant-produced digital artefacts, field notes and interview transcripts through open coding and thick description. From these data, an analytical framework of interrelated object-oriented activity systems was generated with which to identify and describe shifting patterns in social media practice through key phases in the participants' doctoral experiences, and across a range of academic contexts. Emerging findings indicate the role of social media in contributing to, and revealing, the tensions inherent in negotiating multiple and interrelated practice contexts through boundary crossing and interdisciplinary activities. The study reveals how participation in emergent online research networks and communities is enabling new forms of engagement with the research field, often beyond the immediate scope of thesis-related work, and examines how this contributes to the act of mapping the research field by providing additional insights into the socio-cultural infrastructure that underpins academic discourse. It also highlights how the development of doctoral social media practices and identity agendas are influenced by localised research cultures and often compromised by ambiguous or perceived audiences.

Keywords: doctoral practices, social media, web 2.0

Enabling Disruptive Technologies for Higher Education Learning and Teaching

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Abstract: Higher Education Institutions (H.E.I.s) have invested significantly in technologies for learning and teaching, with Virtual Learning Environments (V.L.E.s) being more or less universal (Britain and Liber 2004). However, technologies provided by H.E.I.s have not been universally successful in terms of adoption and usage. Meanwhile, both students and lecturers use a range of technologies not controlled by H.E.I.s to enhance their learning and teaching on one hand, their social lives on the other, and to blur the boundaries between the two. There is therefore a need to understand how non-institutional technologies influence learning and teaching, and to understand how they can be incorporated into institutional contexts. In order

to address this issue, this research investigates how H.E.I.s can engage constructively with “disruptive technologies” (Christensen 1997). Disruptive technologies in the context of this research are technologies that are not designed explicitly for learning and teaching, but which transpire to have learning and teaching potential. The research uses Activity Theory and Expansive Learning (Engestrom 1987, 2001) and the Community of Practice theory (Lave and Wenger 1991, Wenger 1998) as the primary lenses through which to analyse the impact of disruptive technologies. The research uses questionnaires and interviews in its pilot study phase to identify the technologies people use, the purposes for which they use them, and the extent to which uses of technology may be regarded as disruptive. The research is also interested in how disruptive technologies impact on activity systems (Engestrom 1987, 2001), and interested in how disruptive technologies impact on online identity formation. The findings suggest that a more bottom-up and less top-down approach to the implementation of technologies to support learning and teaching in H.E.I.s is more likely to lead to the enhanced adoption of technologies. Moreover, the findings suggest that users create their own meanings for technologies. In addition, the findings suggest that learners’ uses of technologies blur the lines between work, study and recreation, which carries implications for where learning takes place, the means by which it is delivered, and the power relations that operate within a learning and teaching situation.

Keywords: disruptive technology; expansive learning; community of practice; eLearning

Exploring the Potential of a Mobile Computer lab in a Developmental Context: The Teacher’s Perspective

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Abstract: This paper discusses the design phase of an intervention involving the integration and use of a mobile computer laboratory in South African schools. We outline a model we have developed as part of an Advanced Certificate in Education (ACE-ICT) course; a professional development course which targets in-service teachers. As part of the practical component of the ACE-ICT course, teachers are required to plan and implement an intervention involving the use of computers in their schools and or classrooms. The model we have developed is an attempt to address some of the problems teachers face in their schools when they try to use computers for teaching and learning. We used a qualitative research approach and collected data using a questionnaire with only open ended questions. With

the questionnaire, we gathered in-depth descriptions of some of the challenges teachers faced and suggestions of how they would use the mobile computer lab in their schools. Data was collected from 20 in-service teachers enrolled for the ACE-ICT course at a South African institution. Teachers who came from schools that do not have computers suggested using the mobile computer lab to create basic awareness of how a computer works first for their learners. These teachers acknowledged their role in preparing their learners for the future whereby their learners will encounter the computer in one way or the other. Most teachers proposed using the mobile computer lab for teaching and learning as they regarded these as very important areas in which computers and ICT in general can make some contribution in education. Findings from this design phase of the intervention were useful in highlighting the areas that the mobile computer lab can be used in, in a developing context. Based on these findings, the interventions will now be implemented in the various schools.

Keywords: mobile computer lab, access to ICT, marginalised schools

Collaborative eLearning in a Developing Country: A University Case Study in Uganda

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Abstract: Universities in developing countries are increasingly adopting and using eLearning in their teaching and learning processes as one of the means for leapfrogging into the knowledge driven world. However, despite the recognition eLearning has received, it has not fulfilled the expectations in terms of impact on the delivery and quality of learning, pointing to the need for improved or new approaches. This paper explores the collaborative eLearning approach as one of the strategies for effective adoption and use of eLearning. Using the first stage of development research this paper presents an empirical study that aimed to explore and understand the current practices of collaborative eLearning in a developing country context. The study was carried out with university students in Uganda and placed focus on the value derived from and challenges encountered in adopting and using collaborative eLearning. From a general perspective, it was evident that learning and teaching methods are predominantly traditional, with limited/no integration of eLearning and there were inconsistencies in understanding the integration of

technology into teaching and learning processes. The findings obtained indicated that students through collaborative eLearning were able to share and gain knowledge, understand course concepts and access various views and learning material. Factors such as inadequate bandwidth, inadequate Internet/computer access, conflict resolution, adequate ICT skills and face to face interaction challenged the adoption and use of collaborative eLearning in this context.

Keywords: collaborative eLearning; developing countries; eLearning; ICT; higher education; Uganda

Applying the Multimedia Learning Theory in the Primary School: An Experimental Study About Learning Settings Using Digital Science Contents

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Abstract: The introduction of digital technologies in educational contexts led to eLearning contents proliferation, thanks to their cost-cutting production and to the social networks that are favoring their widespread circulation. These objects are often the collaboration results between graphic designers and subject-matter experts disregarding the empirical evidence of Instructional Design research. Moreover they are frequently introduced to the classes without appropriate delivering strategies. The purpose of this paper is to describe an experimental study we ran in 2010 in Uruguay to identify effective learning object formats and adequate conditions for using multimedia contents with kids in “real world” learning contexts. Uruguay is part of the OLPC (*One Laptop Per Child*) initiative that aims to distribute low cost laptop PCs (called XOs) in developing countries schools to foster kids' learning according to the instructional principles of constructionism, learning-by-doing and social constructivism theories. This country is the only one that reached the "saturation" goal, covering the entire primary school population (teachers included). For this reason the capital Montevideo was an appropriate “en plein air” research field because most of the students haven't evident impairments using educational technologies and digital learning contents. In order to find out how to reduce cognitive load and increase learning performances using *infographics*, *animations* and *interactivity*, we arranged an experimental study that involved 360 early adolescents from 16 classes of critical context schools in Montevideo. We identified a scientific topic, the *food chain process*, and presented it in 4 different ways. We modified supports and

instructional formats according to Mayer's 'Multimedia Learning Principles' and the 'First Principles of Instruction' theory by Merrill. The first part of the research focused on *Self-Directed Learning* in real contexts and investigated the use of different instructional strategies (e.g. topic-centered vs. task-centered; linear vs game-based) handling the learner's User Experience in order to increase the engagement for the proposed formats. Considering the target of early adolescents, we introduced a likeable virtual tutor to manage explanations, feedbacks, and focus on relevant information. We used infographic techniques to combine analytical and synthetic schemas and to enhance the aesthetic perception. The second part of the study aimed to identify the best use of multimedia contents in classrooms comparing 3 learning settings: *Self-Directed Learning*, *Cooperative Learning* and *Teacher-Directed Learning*. In order to measure the impact of content design format and learning setting we identified 5 instructional objectives using a *Content/Performance Matrix*, and evaluated the outcomes by 4 kinds of tests: Retention, Comprehension, Problem Solving Transfer, Delayed Problem Solving Transfer (after one week). We also used a qualitative tool: a self-administered questionnaire for the User Experience satisfaction, to discover relationships between students performances and individual preferences matched with satisfactory learning experiences.

Keywords: multimedia learning theory, critical context, learning settings, instructional content design, user experience, graphic organizers

Designing a U-Learning Course Platform for the Identified Teacher Training Needs

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Abstract: Teacher Training has undergone major changes in recent years, with the development of digital information transfer, virtual learning environments(VLE) and simulations integrated in learning management systems having a significant effect on it. Online resources like Edu 2.0 and Second Life (SL) encourage a sense of collaboration and community which now needs to be embraced through teaching and learning practice. Researchers, as a result of 4 years research study of global e-learning training needs in 25 countries analyzed the needs of the teachers' e-education requirements and their preferred e-learner environments. Although, there were some common needs like "knowledge and skill of preparing e-quizzes", they found that there was a divide among teachers' skills and knowledge's. Hence, the necessary steps to develop proper ICT infrastructure required for e-Learning are taken. As a result of all the findings

in the literature, courses are decided to be delivered to bridge these. A global strategy is decided for moving towards and encouraging teachers towards deploying e-Learning for their courses. Syllabus is prepared, online evaluation is required and suggestions are taken from experts coming from different walks of life, from 25 countries. This process ended in 4 months. After having rewritten the syllabus, course material is prepared and carefully proof read by English teachers and e-education experts. The course environment is used by 51 experts and is redesigned by the researchers according to their suggestions. After 6 months of work, the last form of VirtualNeu (Virtual Near East University Portal) is published. Encouragement and proper incentive to English Teachers to participate in the e-training programs were provided by the ministry of education in North Cyprus. 80 Teachers have registered to the system and courses will start on 7 September 2011. Researchers mission for the next two years, 4 years and beyond is clear and unequivocal; like the last four years: Preparing a portal and making it universally accessible and useful for teachers; delivering e-courses for their specified training needs and, helping them to be more innovative and more creative individuals who change and improve the world education.

Keywords: Edu 2.0, second life, u-education, virtualneu, training needs of teachers

Work in Progress Papers

Someone to Talk to – Using Automated Characters to Support Simulated Learning Activities

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Abstract: The University of the West of England (UWE) has a large number of students who will pursue subsequent careers in a wide range of professional fields such as engineering, law, business, nursing, teaching, psychology, criminology and design. An important part of that education is the ability to relate theory to practice (Barrett 2011), and developments in technology over the past years have now created opportunities to enable students to experience simulations of events and situations that are difficult, unethical or impossible to organise in the real world, before they put their skills into practice in the real world (Newland 2008). Virtual worlds are proving to be popular and effective environments at UWE for simulations of a range of experiences, such as accident investigations, risk assessments, business ethics cases, psychotherapy practice and sociological experiments. However, as the number of students undertaking these simulations increases, so the call on tutor time will significantly increase. These simulations require to be scalable, to enable their potential for study by large cohorts of students. This year we have experimented with automated non-player characters, also known as “bots,” to enable students to undertake some dialogue during the simulated scenarios without the need for a number of tutors to be available to take particular roles. The bots are currently unsophisticated keyword recognition systems, but even these have proven to have some value in two of the simulations; the accident investigation and the risk assessment, where students were able to gather information from characters they could “talk” to, making more realistic the experience of exploring the environment where the simulations were taking place. This paper discusses the results of student feedback, evaluations of these simulations and prototype development for the next generation bots that we want to implement in future learning simulations based on the findings of the evaluations.

Keywords: learning simulations, non-player characters, professional practice, virtual worlds

Extreme Scaffolding in the Teaching and Learning of Programming Languages

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Abstract: We report on the design and implementation of an e-learning framework that can be used to produce tutoring modules with an arbitrary degree of scaffolding. Each module teaches by problem-solving; instant feedback is built in the scaffolding and provides the learner with the reinforcement (negative or positive) that conditions learning. Although the tutoring system guides the learner's actions, it does not restrict them excessively and significant number of degrees of freedom remain. This encourages the learners (as they prioritize their problem-solving steps) to become active constructors of knowledge through direct experimentation. By analogy with the principles of extreme (or agile) programming, we call the adjustable scaffolding technique used in our system "extreme" because it too can be set up in micro-increments and tunes the learners into the same behavioral pattern as they analyze, design, test, integrate and deploy their problem-solving steps.

Keywords: extreme scaffolding, agile instruction

Benefits and Barriers: Applying eLearning in the Context of Organisational Change to Improve the Learning Experience for Mature, Part-Time Students

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Abstract: This paper reports on innovations in an evening degree programme in Information Systems at Trinity College Dublin. The students are mature, experienced professionals who value the collaborative nature of their programme, yet struggle to find time for learning. The aim is to increase choice over location, time and pace of learning. Innovations include the adoption of a virtual learning environment and introduction of moderated discussion groups, helping students to feel connected and to assist one another. Online, interactive coursework modules and podcast lectures allow students to work at their own pace. Secure intranets provide useful information for students and staff. Corresponding organisational and administrative changes are also required, including eLearning support and training for staff and students, coursework scheduling to avoid bottlenecks

and reduce stress, and introduction of choice over content. Overall, the technological changes have been relatively straightforward, but changing the organisation and its entrenched work methods has proven harder. The results suggest that asynchronous eLearning can help mature students, but full benefit is likely to be felt only if required organisational and cultural adjustments can also be made.

Keywords: eLearning; mature students; part-time study; lifelong learning; higher education; information systems education; organisational change

Posters With Papers

Investigating Student Engagement With an Electronically Delivered Simulation of Professional Practice

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Abstract: Electronically delivered simulations of professional practise enable educators to place students in vocationally relevant situations or to experience events that would be impossible, or extremely difficult or costly to replicate without recent advances in technology. The Simulations in Higher Education (SHE) initiative (E-learning development unit) at the University of the West of England (UWE) is a focus for information and communication technology (ICT) supported simulations that are being developed across the university. The research presented here will focus on SIMulations in Transactional Activities (SIMITA), an online transactional learning environment (TLE) developed at UWE as part of the SHE initiative. It is widely acknowledged that an engaged student stands to attain more academically than their disengaged counterparts as student engagement has been positively related to academic outcomes in many studies. In addition to the academic benefits, an engaged student is more likely to enjoy a better quality learning experience overall. In order that students can benefit fully from the enhanced learning experience that an electronically delivered simulation can provide, they must engage with that simulation. A pilot evaluation of SIMITA revealed that students readily engaged with the simulation. The pilot considered system statistics of usage, student feedback and the willingness of students to participate in non-credit bearing activities. Following on from these preliminary findings, this poster will present the results of an investigation that utilised self-report questionnaires, a focus group and observations of participation in an attempt to explore student engagement with SIMITA. Further, the investigation considered other factors that might influence the students' engagement with the simulation. The findings presented will inform future iterations of this investigation with SIMITA and also other simulations that form part of the SHE initiative. This research will be of interest to educators who are considering or interested in blending online simulations into the curriculum or to educators who are interested in student engagement with electronic methods of teaching.

Keywords: simulation, student engagement, electronically delivered simulation

Instrumental Distance Learning in Higher Music Education

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Abstract: This brief paper presents a research proposal based on an investigation of the complex challenges and potentials of using video conferencing in connection with teaching and learning processes in the domain of higher music education. A historical outline of the research and development project is provided, followed by the preliminary findings of the initial activities. These findings have led to further research questions that would be relevant to explore in future.

Keywords: eLearning, video conferencing, multimodality, teaching, design for learning

Reflections on Academic Blogging as a Vehicle for Professional Development

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Abstract: This paper is a work-in-progress: it outlines the earliest stages of a larger inquiry into the affordances of academic blogging as a vehicle for professional development. During this time I have been immersing myself in the online environment and grappling to figure out what academic blogging means to me. To offer the reader a rich insight into this experience I present a reflective account together with an analysis of these formative experiences of social media. Higher Education (HE) in the Western world is currently grappling to position itself in a shifting landscape of economic rationalisation, too-fast-to-keep-up technological innovation, and escalating marketisation (OLTF 2011). Blended learning and social media are being explored as potential solutions to these pressures. In this paper I explore the potential opportunities and challenges afforded by academic blogging for professional development. The concepts I have used as a framework for discussion are: exposure, engagement and networking. It is argued that these features combined with the non-hierarchical structure of social media (Siemens and Weller 2011) mean that academic blogging has the potential to create a self-organising, highly responsive and digitally reflexive staff, for a relatively low cost. However, not all academics or institutions will be comfortable with the time investment or risk associated with writing in the public domain. However,

if institutions refuse to accept blogging as a form of scholarly activity then academics may struggle to position themselves as public intellectuals in the digital age (Kirkup 2010).

Keywords: academic scholarship, professional development, online identity, social media, blogging

A Framework for Understanding Online Learning Communities

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Abstract: This paper attempts to provide a deeper understanding of how a community are developed in an online learning context. This research was developed as a part of a broader research purpose that aims to deeper understand how does trust relate to the activity patterns of the online learning contexts. Results gather there from supported a survey design on relate trust with online activity patterns as well supported the development and implementation of an ontology that aims to facilitate a systematic recording of online learning community manifestations as an effort to understand their life cycle. The relevance of this paper is grounded in the changes that are taking place in today learning and teaching contexts. Among other relevant aspects a key features of this conceptualization – on “what are online learning communities” – is to provide a broader perspective and understand on possible potential effects that those changes can have in our daily relationships, in the way we seek and acquire information, or even in the way we teach and learn.

Keywords: online learning communities, concept maps, community development

Trust in Distributed Personal Learning Environments: The Case Study of LePress PLE

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Abstract: This paper reports a research effort to improve the learning process through the use of blogging. Its main rationale is built on the possibility of eliciting a set of potential trust effects in the design of a particular online learning space, called LePress. The LePress is a WordPress plug-in that

aims to bring assignment related workflow management and context specific semantic data exchange to WordPress. It describes the application of a mixing method approach, which, interconnects two research works results, and is based on the observation of online learning communities in action. One research refers to a development of a blog extension prototype called LePress. The other refers to the results gathered from a survey deployed to better understand the effects and influence of trust people's online activity and sharing patterns. The innovative nature of this research can be characterized by the elicitation of a set of potential effects of trust in the design of particular software tool which is used for enhancing learning and problem solving practices in working life contexts. Its relevance is grounded in the changes that are taking place nowadays in the education contexts. Helps bordering educators and researchers' perspectives on the possible potential effects that those changes can bring to our daily learning activities.

Keywords: trust, blogs, learning flow, WordPress, personal learning environments

Breaking Down Barriers: Development of a Wiki Based Module to Enhance the International Learning Experience

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Abstract: This paper reports on the pedagogic design and development of a module which aims to provide an international learning experience to undergraduate nursing students in a meaningful way, using a wiki as a shared learning space with international partner institutions. A shortage of healthcare professionals has led to increased demand for preparing undergraduate nursing students for global mobility, the provision of an authentic international learning experience in the undergraduate programme is therefore essential. Coupled with social and economic constraints the traditional model of overseas clinical placements has become increasingly challenging to achieve. The project team therefore sought to develop a module which offered an authentic international learning experience which overcomes such barriers and widens the accessibility of the international learning experience to all students. Wikis are increasingly being used as learning spaces in academia as they provide a student led collaborative learning experience and have been seen to promote active student engagement in learning. Wikis provide the opportunity for partner institutions to provide shared learning experiences between students thus providing the opportunity for students to engage with their overseas peers in specific learning activities. This paper will report on the process of the module design

and development, such as establishing the international partnerships necessary for the success of the module as well as the underpinning pedagogical influences of this mode of learning. In doing so particular focus will be placed on where and when to think beyond the opportunities offered by institutional VLEs, and the limitations inherent within them, when seeking to effectively engage online students who are from different institutional cohorts within an international context.

Keywords: internationalisation, wiki, web 2.0, peer learning, student experience

eLearning in German Higher Education: Technology Implementation as a Challenge for Organizational Change

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Abstract: In this research, the implementation of eLearning services is observed from an organizational viewpoint. It attempts to find out organizational and personal challenges that higher education has to overcome when eLearning is to be implemented in teaching and learning activities. The current situation shows that most higher-education institutions have established eLearning services so that eLearning services are now available for all students and teaching staff. However, only basic services are in use. The administration of universities shows that the use is often inefficient and not fully implemented in everyday teaching practice. Moreover, the full potential of the eLearning services that could make teaching more effective and interactive are neither acknowledged nor employed. This paper focuses on analyzing the main barriers that hinder teaching staff from adopting a new culture of teaching based on digital media and becoming familiarized with eLearning services. A preliminary study was carried out by interviewing experts and staff from an eLearning service unit in order to gain insight into the drivers and barriers faced during the introduction and implementation of eLearning services. A case study will be conducted focusing on higher-education institutions in Germany whose main form of teaching is on-campus and face-to-face, rather than on open and distanceLearning institutions that encounter different strategic issues in applying eLearning. A focus group comprising of members from all faculties will be formed which is intended to enable the adaptation of the learning environment to the behavior and needs of the teaching staff. However, this participatory challenge also drives the teaching staff to create a new culture of teaching by using eLearning services. Finally, this research into eLearning implementation in higher education institutions in Germany also reveals the

current organizational problems in the system. In this way, the implementation of eLearning becomes a tool for organizational development.

Keywords: eLearning, higher education, staff motivation, organization

Posters with Abstracts

The Impact of Subject Structure on Learning Management System use

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Abstract: This study uses a quasi-experimental setting to provide quantitative evidence of the different ways students utilise a University Learning Management System (LMS). Hawkins and Rudy (2009) note of almost complete diffusion of LMS in nearly 1000 academic institutions globally, and yet most it seems that in general teaching and learning processes have remained basically unchanged (i.e. Blin & Munro, 2008; Frank & Barzilai, 2004). In a study of over 1200 course websites Naveh et al. (2010) provide evidence of differing level of use and satisfaction of LMS, as well as drivers of LMS use and satisfaction. I expand on the findings of Naveh et al. (2010) by investigating how subject structure, particularly assessment structure, impacts on LMS use. From an initial sample of over 650 undergraduate accounting students at a major Australian metropolitan University I identify students who are not engaged with the subject (final exam only), who are engaged but are independent learners (final and midsemester exams) and engaged and face to face (final and midsemester exams, and class participation). The students voluntarily choose which assessment package they are to be assessed on. Disengaged students comprise over 25 percent of the students enrolled. I provide evidence that those students identified as not engaged do not utilise the University LMS in the same way as those students who are engaged. On an overall basis, engaged students access the LMS over two and a half times more than students who are not engaged. The main driver of this difference appears to be the lack of use of the discussion board function by not engaged students. Differences also exist between the face to face and independent groups, but these are not as substantial. The findings from this study are that it is not just the provision of online resources, or the types of resources which are important to how students interact with the University LMS. The resources provided online in this subject are substantial, and yet a significant number of students use them only sparsely. In the push to provide an increasing number of resources online, and allowing students to be self directed, it is important that subject structure is not forgotten.

Keywords: learning management system; assessment

Can we Learn Putonghua Online?

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Abstract: Objectives

This research attempts to review the hypotheses behind the building of a Putonghua eLearning platform and to evaluate the effectiveness of such a platform in helping students to learn Putonghua. In so doing, we also try to review critically the validity of the widely accepted advantages of eLearning in the area of language learning.

Background: a surge of interest in learning Putonghua

Advantages and disadvantages of eLearning have been widely discussed. It is generally believed that eLearning accommodates different types of learning styles. It gives learners greater flexibility in making individual study plan, allowing students to work and learn at their own pace. Students can study wherever they have access to a computer and Internet, and select learning materials that meet their level of knowledge and interest. Some believe that, with the exposure to a wide range of multimedia and non-verbal presentation of learning materials, students may find eLearning more attractive than traditional classroom learning. On the other hand, eLearning may pose difficulties for learners in subjects that require intensive social interaction, such as language learning, a subject which depends heavily on individual diagnosis and face-to-face interaction. There has been an unprecedented keen interest of understanding Chinese culture in many places of the world over the past decade or so. We have also witnessed an increasing awareness of the importance of learning Putonghua among Hong Kong students in recent years. However, students at the same time find it more and more difficult to squeeze anything other than their required subjects into their ever-tighter study schedules. This is the background of the development of Pulewang (普樂網), a Putonghua eLearning platform to meet students' specific need.

The Platform

Instead of providing piecemeal support to students and teachers, we aim at developing a comprehensive and well-planned learning platform with three levels (from elementary to advanced levels) of interactive Putonghua modules and text-to-speech tool (Illustration 1). The Elementary Level consists of 12 units which cover all the essential knowledge of Putonghua (Illustration 2).

Flashes and videos are used to illustrate the pronunciations of the initials and nasal finals (Illustration 3). The Intermediate Level deals with the more difficult parts Hong Kong students commonly find when they learn the language. Extended conversational exchanges on specific topics of social affairs and student life are demonstrated with text and pinyin for oral practice. The Advanced Level draws attention to the grammatical and structural differences between Putonghua and Cantonese, the mother tongue of most of the Hong Kong people, so as to help students speak the second language correctly. More sophisticated listening and speaking exercises are designed to help them master the language.



Figure 1: The major learning content consists of 3 levels



Figure 2: The elementary level consists of 12 units of PTH essentials



Figure 3: Pronunciation illustrations with flashes and videos

By providing a resourceful environment with easily accessible learning resources, the Platform is developed to meet the following objectives:

- Support classroom teaching;
- Consolidate and reinforce learning;
- Foster independent learning.

The most challenging part of these tasks would be the last one: to foster independent learning. It is difficult because, as mentioned earlier, language learning depends heavily on individual diagnosis and face-to-face interaction. In order to rise to the challenge, each unit of the Elementary Level is carefully designed into four integral parts:

- Have A Try: Serves as self-evaluation before students start any serious learning. Learning suggestions will be given according to students' test results.
- Learn With Fun: Interactive learning activities on a particular theme. Students are free to choose what to learn according to their needs.
- Read Out Loud: Recording of selected content is provided. Students can listen to the demonstration, do their own recording, and then compare.
- Quiz Time: A comprehensive quiz to test how well students understand a particular area.

Methodology

Since the launch of the Elementary Level in September 2008, feedbacks from individual users in and outside the University have been received. In order to further examine the hypotheses of developing the platform and to evaluate the effectiveness of it in helping students to learn Putonghua, a focus group of ten undergraduate students was formed. All of the students have some knowledge of Putonghua but most are at beginner level. They were told to

choose a topic from the Elementary Level to do self-study and finish a questionnaire before they came to the group interview.

Preliminary research findings

The four integral parts of the Elementary Level were reviewed separately with multiple choice questions and free comment space in the questionnaire. Half of the students agreed or very much agreed that the “Give A Try” helped them evaluate their understanding of the topic and aroused their interest to study further. Those who were relatively neutral about the pre-test either found it too simple, or the answers need explanations to arouse learning interest. The pre-test would be just a 5-minute introduction in a traditional classroom lesson to stimulate thinking. However, in online independent learning, students are much more demanding. They do not necessarily follow any default study plans or procedures like they do in class, nor can they wait for an explanation till the next section. This tells us that a desirable section of an online lesson should be short and self-contained to provide immediate solutions.

There has been unprecedented pressure of putting teaching contents online for independent learning in Hong Kong universities in the past few years. The number of first year university students will increase by an estimated 40 per cent in 2012 as a result of the 3-3-4 educational reform. Many in the university administration see online learning a simple and direct way to reduce face-to-face teaching load. Nonetheless, there have also been hot debates on whether eLearning is effective for language learning which depends heavily on individual diagnosis and face-to-face interaction. One of the major tasks of the focus group is to find out how effective the Platform is in supporting students’ Putonghua learning beyond classroom. Although all the students found the Platform useful or very useful in helping them to learn Putonghua, they unanimously prefer attending class and learning online independently at the same time. They considered online learning a good means to supplement classroom learning, through which they could review, consolidate and further enhance the knowledge they have learnt in class. Two of them remarked that online learning could not replace face-to-face teaching since the teacher plays a crucial role in their language learning. This reaffirms the stance of one of the two major schools of language eLearning. It is worth investigating in a more elaborate way in what ways that teachers and students think the Platform best supplement classroom teaching, which parts they consider be best taught in class, and the reasons behind.

Keywords: advantages and disadvantages of eLearning, foster independent learning, eLearning platform for Putonghua

Feedback to Feed-Forward: Is Screencasting an Effective Feedback Tool?

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Abstract: Effective student feedback is essential in enhancing the teaching and learning process. Ever increasing class sizes means that feedback is often being delivered too slowly, and lacking in the necessary quality to be effective (Glover & Brown 2006). Students must have routine access to the criteria and standards for the task they need to master; they must have feedback in their attempts to master those tasks, and they must have opportunities to use the feedback. Excellence is attained by such cycles of model-practice-feedback-perform. With the issue of retention becoming increasingly important, effective feedback is essential as a way of engaging with students and aiding the teaching and learning process. To gain a deeper insight into the possible use of screencasting as a feedback tool, a pilot project funded by the Higher Education Academy was undertaken with BSc (Hons.) Architectural Technology & Management students at the University of Ulster. The project looked at an alternative method of delivering feedback to Architectural Technology students, who were learning to use a new Computer Aided Design (CAD) drawing package. Traditionally, written feedback was provided to the students, but discussions with them found that this wasn't very effective. It became apparent that the students did not use written feedback to improve their future work, despite a relatively quick return for assignments, because the topics studied had moved on. The feedback was therefore not timely. The aim was to offer a mechanism which would provide effective, detailed and timely feedback in a manner the students could relate to and thus utilise it to feed-forward, enhancing their future work. The research was undertaken with a group of forty students who had to complete two separate assessments for a particular module. Written feedback was provided for the first submission, with screencasting software being used to create short video clips as feedback for the second submission. The project hoped to gain an insight into the students preferred feedback methods and try to determine what can be done to make feedback more effective. The findings from this study will be useful to academics in numerous disciplines that are committed to providing a quality education where effective and productive feedback is of paramount importance.

Keywords: feedback, Screencasting, technology, assessment

Mind Mapping: The Future of Student Engagement in eLearning

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Abstract: This poster will take the form of a reflective account from both staff and students trialling mind-mapping techniques within the seminar setting of a blended learning module at Coventry University. Trials have taken place during this academic year into the ways in which differing eLearning technologies can be used to improve the engagement of students partaking in a module following a blended delivery. Mind-mapping appears to be the stand out success of the year. Therefore this poster will describe and examine the successful utilisation of mind-mapping, whilst also examining potential limitations of using such a technique in the classroom setting. The poster will include frank feedback from students involved in the trial, allowing other academics to consider the thoughts of students when considering such a use of mind-mapping techniques within other universities and settings. It is hoped that this poster will demonstrate the value of utilising such a technique in other universities to improve the engagement of students on more innovative modules. Buzzan (1989) suggests that mind-mapping 'is an extremely useful technique for sharpening the thinking and learning process' something that appears to be true with our students. Students have found the mind-maps that have been put together as a seminar group extremely useful as they contain not only a record of the feedback in seminars, but that they can also be used as a starting point for revision purposes. Previous research suggests that material that is written is more likely to be remembered and acted upon, therefore the use of mind maps should provide students with a more permanent record of seminar discussions and ideas, further engaging them with the module and materials. Engaging students on a blended learning module has not been easy. Often students have found the idea of blended learning too different to that of a traditional lecture, seminar format. However this research would begin to suggest that when students are confronted with a new way of learning, such a blended learning, it is useful to go back to more traditional methods used by the students themselves, such as mind-mapping, and utilise these approaches, changing only the medium rather than the learning process. Familiarity appears key. The poster will then look to examine the uses for such a technique in the future, this is likely to include further uses of mind-mapping due to student approval and feedback, and also more innovative methods of incorporating mind-mapping into teaching and learning to improve student engagement.

Keywords: mind-mapping, blended, engagement, Buzzan, reflective

Classroom, at Physics, Part of the Sciences Curriculum

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Abstract: In the last 30 years, the Information and Communication Technology (ICT) - with all its digital devices and software - began to be used more and more in the teaching activities from all educational curriculums. The Physics Curriculum is somewhat difficult, and the new communication pathways (offered by the software programs) helped many teenagers to have a better understanding of Physics Theories. The background formation of the new generation of teenagers is different and somehow, it seems that the ICT applications for studying Physics must be improved. An overview about the advantages and disadvantages to use ICT, at Physics, in classroom activities with students or pupils, keeping connections with the other sciences educational curriculum is the subject of PhD research. There are many possibilities to teach using ICT: a computer and a video projector for presenting Microsoft Power Point, Word or Excel documents, interactive whiteboard, an advanced eLearning platform (in Romania is used AeL platform in pre-university schools), Wiki Web sites or the Moodle Platform. A study regarding the facilities of the Moodle platform utilisation as an ICT tool for improving learning/eLearning was carried with the help of teachers from the Romanian pre-university system of education who were also qualified trainers for adult persons. The Romanian teachers participated to the study, as communities of practices (CoPs), depending on their specializations, and as trainees of the course “T&T – Telework and Training”. The Romanian teacher trainees offered their expert opinions, in the eLearning environment of the MOODLE platform course. The training courses were projected for three categories of learners: university students, teachers from pre-university schools and from pre-university VET high schools. The sample of our research was of 76 e-Learners from the 118 participants initially registered. The PhD thesis final remarks are based on the results of this research connected with previous studies on interactive whiteboards and with personal observations about the implementation of the Intel Teach project in Romania. We are able to conclude that the ICT utilisation improve the education system, but have problems imported from traditional education as: bullying, copied homework or tests and the behaviour of the students who are not, always, the autonomous (independent) and responsible.

Keywords: Information and Communication Technology (ICT), Digital Natives (DNs), learning activities, online eLearning environment, interactive whiteboard, Communities of Practices (CoPs)

Mobile Knowledge Sharing for Language Learners

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Abstract: Students are increasingly expecting HE institutions to acknowledge the universality of mobile phone use and to incorporate mobile use into learning. Many institutions are taking up the challenge, with SMS notifications of cancelled lectures to mobile access to VLE's. However, the growing ubiquity of smartphones, equipped with powerful facilities including easy web access and media capture, points to more powerful educational uses besides admin message and lecture consumption on the move. These facilities make it feasible for user generated content to be captured and shared with peers, providing students with a powerful means of bridging the gap between classroom and outside world in natural and engaging ways. This should be an effective learning tool, as students see taught material reflected in the outside world and vice versa, enabling them to engage in mapping from classroom to lived reality and thereby deepen their understanding. Language teachers are particularly attuned to the need for students to transfer their learning to real life settings. With JISC and EU funding we have been developing a mobile language learning app that makes this bridging possible, with language learners capturing examples of interesting target language use to share and discuss in class. Alternatively teachers can ask for specific materials to be collected (Pemberton et al, 2010). In this paper we report on the evaluation of the system with foreign language learners in the UK, Norway and Italy.

Pemberton, L., Winter, M. & Fallahkhair, S. (2010). Collaborative Mobile Knowledge Sharing for Language Learners. *Journal of the Research Centre for Educational Technology (RCET)* Vol. 6, No. 1, Spring 2010.

Keywords: mobile learning, cloud computing, user created content, language learning

Six Years of Teaching Activity Using the Electronically Assisted Learning and Online Education, in the Pre-University and University Educational System

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Abstract: The first part of this article, shortly describes some of the platforms utilized in eLearning, along with their main characteristics. The article presents the various activities offered by portals, which naturally have many common uses, and then goes on to describe the two Romanian portals in detail. The author then presents specific teaching aspects. Some of the well known worldwide platforms include: Claroline, Moodle and LRN. Other than the Romanian system AeL, this has been in use now for a few years, and INSAMSOFTWIN – an on-line assessment system currently in the generalization phase. AEL portal excels through a library of interactive lessons made attractive, artistic and scientifically correct. The lesson packages comprise of interactive lessons on DVD, with some of them freely accessible at portal.edu.ro. The online assessment system is a very large library of items of different categories for Mathematics, Physics, Chemistry, Biology, Foreign Languages, English, French, German, etc. This system aims to objectively unify the national assessments in the Romanian educational system. The AEL system is mainly used for assisting in conducting lessons, whereas the Moodle system is used for activities outside the course lecture. The author applies the electronically assisted learning and online education as a complementary means of instruction. The Moodle system was first applied in Romania by the author six years ago in the pre-university educational system. Since then, not only has the author applied this system, but student working teams have also gained experience from using it. This has in turn enhanced this way of learning hence allowing the author to support the different concrete ways in which he uses the learning system. The teaching activities in which the Moodle system has used resources are: the lesson, the project, the seminar, the laboratory work and specifically, tests. In this article, actual activities, which were carried out with students from pre-university and university systems, are presented. The article shows examples of questions used in the tests and statistics for each type of activity in which the method was applied.

Keywords: eLearning, e-Working, education, evaluation, Moodle, AeL

Assessing for Higher Order Abilities: Reconsidering Assessment Strategies for Reflection Using an ePortfolio System

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Abstract: Although there has been an increased interest in the use of electronic portfolios in higher education over the last five years, relatively little is known about the potential of such tools to support the development of higher order abilities for students, such as reflection. This paper reports some preliminary findings from a small scale research which set out to describe the various types of reflective writing in two cohorts of participants in a Postgraduate Certificate in Professional Practice in Higher Education. Participants in the programme were asked to submit reflective accounts using an ePortfolio system as part of their formal assessment. One cohort completed the activity following a solitary constructivist approach, whereas another cohort was encouraged to share their reflections with their tutors and other colleagues in the programme for formative feedback and follow-up questioning before submission. The authors, who are also tutors in the programme, analysed the submitted reflections following open coding procedures. From the analysis two major weaknesses of the reflective approach used were identified. The first was a tendency for the reflection to be merely descriptive without progressing to speculating objectively about answers to relevant analytical questions about the process involved in the ability under scrutiny. The second was a noticeable short-cut from the reporting of the experience into generalisation, and then back into reporting a new experience, often omitting reflection and active experimentation. These preliminary findings bring some evidence to support and indeed promote a more socio-constructivist approach to reflective practice, which can prompt discussion between learners, who are reflecting on similar experiences, and who could profit in their analysis and consequent learning from the questioning and comments of peers, and even from the sharing of similar experiences.

Keywords: reflective practice, ePortfolios, assessment, criteria

Presentation Only

SharePoint as a Platform for eLearning and Assessments

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Abstract: Surveys suggest that Microsoft SharePoint is used in around 50% of large corporations and 75% of universities and colleges. The primary use of SharePoint is for document management and collaboration, not for delivering learning. But the latest version of the software, SharePoint 2010, has introduced greater capability for wikis, blogs and social networking. SharePoint's great utility is that it allows users to build collaborative Web pages and sites easily, without needing technical knowledge. It's easy to make SharePoint available to users within an organization in order for them to make their own sites and pages. Educators and trainers find SharePoint a simple and practical system for making sites that aid learning. Partly due to the feature improvements in SharePoint 2010 and partly because the software has become so prevalent as an administration and collaboration system, SharePoint is increasingly being used for formal and informal learning, both in the corporate world and in higher education.

This presentation describes how SharePoint is being used in the world of education and corporate world, giving some examples of how universities, colleges and schools are using SharePoint for learning as well as for administration, and also showing how in the corporate world, SharePoint is helping people with informal and formal learning, including the 90% of learning that is done from experience and from others, not just from formal study.

The cornerstone of developing successful educational, training and certification material is the effective use of assessments. Learning experiences are enhanced when they include the search and retrieval practice afforded by quizzes, tests and other assessments. This retrieval practice is an essential factor in determining what learners actually remember and apply. Well-crafted assessments can guide people to powerful learning experiences, reduce learning curves, extend the forgetting curve, verify skills, confirm knowledge and attitudes, and motivate people by giving them a solid sense of achievement.

The presentation describes why assessments are useful within learning in a SharePoint context, and how assessments before, during and after learning make learning more successful. Examples are given of how assessments within SharePoint can be useful, including:

- Pre-course and post-course tests
- End of module quizzes
- Diagnostic tests to identify misconceptions
- Course evaluation surveys
- Entry points for exams
- Peer and user generated quizzes
- Competency and compliance tests
- Reports on scores of tests
- Observational skills tests
- Mobile assessments

The presentation then gives a demonstration of assessments in SharePoint “in action” using the important use case of an embedded knowledge check on the same page as learning material.

Such a knowledge check gives the learner information to confirm he/she understands the material and also retrieval practice to help retain the learning, as well as giving instructors information about areas learners are weak on. And by embedding the knowledge check assessment on the SharePoint page, it’s more closely connected to the learning and more likely to impact it.

A common experience for SharePoint users is that it’s easy to add and find documents, but that people are not familiar with how to create and change pages. A strength of SharePoint is that pages and sites can be built using the browser-based user interface and do not require developers. And with a very little knowledge, ordinary users can easily amend pages, including adding learning material and assessments. The presentation will include a demonstration of embedding an assessment inside SharePoint to illustrate its simplicity to show that embedding learning and assessments inside SharePoint does not require strong technical skills, and indeed is really simple and straightforward.

The presentation concludes with an analysis of strengths and weaknesses of SharePoint as a learning platform. To quote Ray Fleming of Microsoft on the SharePoint and Assessments blog (<http://blog.sharepointlearn.com>):

“We are starting to see the end of the idea of the big monolithic learning management system where you buy one system that does everything. What we’re going to see going forward is best of breed solutions – best of breed assessment engine, best of breed

collaboration engine, best of breed content delivery system, lecture capture system, online course delivery. We've been building bigger and bigger central LMSs to do more of these things in one system. What we're going to see is a fragmentation of this, and people are going to be asking – what is the platform we can put all of these on?"

This is where SharePoint has its strengths. SharePoint can act as a portal to allow best of breed learning systems to sit and provide infrastructure for them to work well and be connected to organizations people systems. SharePoint also has very strong search capabilities, much stronger than the typical LMS or VLE, and search is a key requirement of learners.

SharePoint is not an LMS or a VLE, but it is a very powerful portal and most institutions use it. Since so many organizations have SharePoint deployed, is it worth considering for deploying learning and assessments within an organization?

Keywords: SharePoint, assessments, knowledge checks, retrieval practice, demonstration

Using Mobile Devices to Support Your Research and Teaching (or...50 Reasons why you Need an iPad)

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Abstract: There is a lot of interest and activity looking into how mobile devices, such as tablet computers and smartphones can be effectively used in Higher Education to support learning, teaching and research. Relation to learning, teaching, assessment Emerging in the field are tangible examples of where these devices have been particular effective. My own research in this area tries to cut through the hype of Apple and my self-admitted passion for shiny gadgets into identifying the advantages (and disadvantages) of these technologies for Higher Education practitioners.

Research process / methodology

For this presentation I am focussing on identifying ways in which lecturers and researchers can personally benefit from using these devices, gathering my examples from social networks, journals and personal experience. Attendees will be given the chance to try some devices for themselves and discuss their own experiences, good and bad.

Findings

Reading and annotating papers, visual recording and providing student feedback are three of the examples I will demonstrate and invite discussion on.

Implications and transferability

Mobile devices will become increasingly common and sharing and raising awareness of their strengths and limitations allows us to make the most effective use of them.

Background references

Tom Barrett - <http://edte.ch/blog/interesting-ways/>

Future of Technology in Education 2010 Conference - <http://fote-conference.com/>

Keywords: mobile, ipad, tablet, smartphone, examples

Campus-Wide Lecture Video Recording Services at Half the Cost: A Learning Journey of Good Practices

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Abstract: Introduction

The Centre for Excellence in Learning and Teaching (CELT) supports Nanyang Technological University (NTU) in the key functions of teaching, research and publication. One of CELT's key roles is to provide faculty and students with the technological tools and pedagogical advices in utilizing these tools to enhance learning and teaching.

In 2000, CELT spearheaded the university's eLearning initiative with the introduction of Blackboard Learning system for online course delivery. In a short span of three years, NTU witnessed significant growth in the adoption of eLearning and achieve critical mass adoption by its faculty.

With this rapid growth in the adoption of eLearning by faculty and students, measures were taken to "humanize" eLearning. One way this was done was the initiative to consider the use of video (rather than Flash or other platforms or tools) as early as 2002 when network bandwidth was a premium. To bridge the use of presentation slides (mainly Microsoft PowerPoint format) by majority of faculty, the design of 'talking-head' video lectures synchronized

with the slide presentations format was established. This was done with the aim to move away from web-based learning from becoming static (PowerPoint) page-turners. In our implementation process, recorded video lectures were post-published online within an hour (usually 10 minutes) for students to review.

Approaches for Lecture Recording

At the start of the initiative in 2002, the recording of a lecture typically involve one to two students on-site at the venue of the lecture to operate a video camera to capture the presenter and synchronized the video with the presentation slides.

The constraint of needing an army of student assistants to record lectures on-site at the various locations in the campus coupled with the challenges in managing the assistants' punctuality, absenteeism and quality control of recorded lectures have limited the number of lecture recordings. In this regard, we have, under this initial manual operational model, recorded only up to 25% of all lecture presentations. Total viewing time for Academic Year 2010 totaled 55 years, indicating real demand and usage of such recordings by students..

Nevertheless, such early unparalleled success of the lecture recording initiative was recognized and became a campus-wide core eLearning initiative in the three-year review on Undergraduate Education, called the Blue Ribbon Commission (BRC) by the University. In 2010, with the BRC recommendation for campus-wide lecture recording, the current Centralized Command Center for Lecture Recording (CCCLR) approach was conceived. It perceives the lecture recording initiative not as an IT project, but that of a video production/broadcast project.

The rationale for this centralized approach for lecture recording operations was 3-fold, viz:

Supervision of lecture recording to ensure video recording quality: previously, recordings were done locally at 40 locations. Quality monitoring was not possible and quality issues were received after the fact (that is, when students view the recording after the lecture is over). In the CCCLR approach, under the watchful eyes of a supervisor, the audio and video quality of the recordings were monitored and standardized. Any quality issues encountered were rectified immediately.

Management of “no recording” situation due to student absenteeism: as the lecture recording of all lectures around the campus are now done remotely at a centralized location, student operators on duty are able to cover each other readily when there are absentees or punctuality issues.

Reduction of number and the associate cost of student assistants: the system design at CCCLR enables a student operator to monitor lectures simultaneously at up to four lecture theaters (LTs). To record the lectures at all the LTs at NTU, only need 10 student operators are required versus 40 as in the past (see Table 1).

In the first year of the CCCLR implementation (2011), we have recorded 15,365 lectures. This is a 300% increase over the number of lecture recordings done in the previous year under the local LT recording mode, and at half the cost.

Table 1: Operational statistics for lecture recording at steady state

Production	No. of Lecture Recordings	No. of Student Operators-Hour	
		Centralized Approach	Manual Approach
Per Hour (40 LTs)	40	10	40
Per Day (8 hrs)	320	80	320
Per Week (5 days)	1,600	400	1,600
Per Semester (13 weeks)	20,800	5,200	20,800
Per Academic Year (2 semesters)	41,600	10,400	41,600

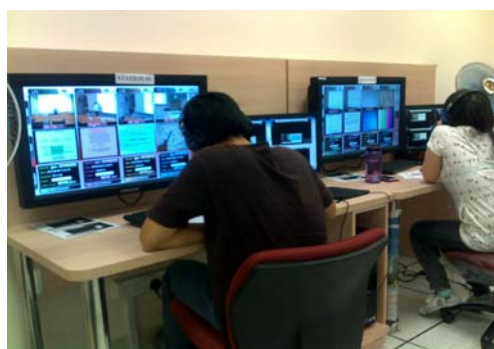


Figure 1: Student operators manning 4 lecture recordings at CCCLR

Conclusion

Over the seven years, the lecture recording project at NTU has evolved from the resource and manpower intensive operational model to a semi-automated

model whereby lectures at all common and school-based lecture theatres are recorded at a Centralized Command Center for Lecture Recording (CCCLR) and Scheduled Recording System. The centralized lecture recording approach not only addresses quality and accountability issues in the lecture recording service but also enable us to scale up the recording service by about 300% at half the cost (at 25% full capacity) as compare to the manual on-site recording model. This enables the university to provide access to video lectures of 75% of the subjects offered in a cost effective manner so as to improve academic performance and help faculty gain time efficiencies to balance research and teaching.

Keywords: video lecture recording, centralized lecture recording system
