Programme and Book of Abstracts

May 21st and 22nd 2009

National College of Ireland

Dublin, Ireland
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Welcome to National College of Ireland

National College of Ireland is delighted to welcome you to the 10th Annual EdTech Conference and congratulate ILTA on their 10th anniversary. The conference theme of 20/20 Vision: Changing Learning Futures through Technology emphasizes our mission to widen participation in higher education and unlock each student’s potential. We offer students the opportunity to acquire the skills and self-confidence to change their lives, contribute to a knowledge based economy and become responsible, active citizens.

For over 50 years, National College of Ireland has been a leading provider of graduates with the skills and knowledge to meet the existing and emerging needs of the Irish economy. Evolving with the changing employment landscape, the college has built an enviable reputation for excellence in education and for designing programmes that are relevant to the workplace.

Today, National College of Ireland is a third-level education provider committed to advancing knowledge in its specialist areas of business, human resource management, accountancy, finance, computing and community studies. Full and part-time courses in these areas are offered through the college’s three Schools; the School of Business, the School of Computing and the School of Community Studies.

Reflecting the Jesuit value of social justice on which it was founded, National College of Ireland focuses on widening participation in higher education and on providing a student experience that allows individual potential to be fully realised. With a state-of-the-art campus in Dublin’s International Financial Services Centre, the college has a unique student demographic; 80% of students are part time evening students, while 30% attend at one of over 30 off-campus locations around the country. This reflects the college’s commitment to delivering education in a flexible and accessible manner that prioritises the needs of the student.

Congratulations to the Irish Learning Technology Association on your 10th anniversary - I hope you all enjoy the Conference.

Dr. Paul Mooney,
President,
National College of Ireland
Welcome from the Irish Learning Technology Association (ILTA)

Dear Delegate,

ILTA warmly welcomes you to EdTech 2009, the tenth annual Irish Educational Technology Users’ conference.

Over the coming days you can expect to share information and expertise; gain research, practitioner and industry insights; and to avail of the many informal networking opportunities in a lively, dynamic and friendly environment.

We are delighted that this year’s event is hosted by our colleagues at National College of Ireland (NCI), whose excellent facilities will ensure that you have an exciting, productive and enjoyable experience over the coming days.

Conference Theme and Events

The EdTech 2009 theme 2020 Vision: Changing learning futures affords us the opportunity to reflect and celebrate the first ten exciting years of ILTA and the wonderful achievements of the Irish learning technologies community, while offering insights into technology-enhanced learning spaces over the coming years.

Participants can look forward to being informed, entertained and challenged by our wonderful keynote speakers: Richard Katz, Vice-President of Educause; Niall Sclater, Director of Learning Innovation at the Open University; and Fiona O’Carroll, Senior Vice-President of Houghton Mifflin Harcourt (HMH, formerly Riverdeep)

With over 40 research, practitioner and post-graduate presentations to choose from, colleagues can participate in Irish and international talks under four strands: new learning spaces; knowledge creation, capture and exchange; flexible learning in challenging times; and informing policy and strategy.

Dr. Richard Thorn (IoTI) will chair the concluding international panel session to draw together the 2020 Vision: Changing learning futures conference theme via questions submitted by ILTA members. If you would like to submit question for the panel please email paul.gormley@nuigalway.ie

Jennifer Burke Award for Innovation in Teaching and Learning

The closing highlight of the conference will be the presentation of the inaugural Jennifer Burke Award for Innovation in Teaching and Learning. On 11th May seven shortlisted nominations presented their ideas to a panel of judges including Bobby Kerr from the RTE series Dragon’s Den. The winner will be presented with a piece of specially commissioned artwork created by Majella O’Neill Collins of Sherkin Island, Co. Cork.

Our Sponsors and Exhibitors

We have been overwhelmed by our industry partners’ continued support and commitment to EdTech in these challenging economic times. They are an important part of our community and we sincerely welcome their participation in this year’s conference. Please visit our sponsors and exhibitors throughout the coming days – they are all very friendly and love to chat with interesting people!

We hope you have a productive and enjoyable conference.

Jen Harvey and Paul Gormley

Co-Chairs,
Irish Learning Technology Association (ILTA)
http://ilta.net
List of Sponsors & Exhibitors

ILTMA wish to kindly thank the following sponsors and exhibitors for their support:

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Elluminate Inc. - Exhibitor

IMEX Interactive - Exhibitor

Wimba - Exhibitor

Nlearning - Exhibitor

GDK - Exhibitor

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Enovation Solutions Ltd. is a business and information technology company specialising in professional services and managed solutions. Our highly experienced senior management team and 90+ IT consultants have successfully implemented bespoke, third-party and open source solutions to a wide client base in the finance, government, health and education sectors.

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**Contact Details**

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www.enovation.ie

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Dublin City University  
University College Dublin  
NUI Galway

National College of Art and Design  
IT Blanchardstown  
IT Sligo  
Athlone IT  
Limerick IT  
Senior College Dun Laoghaire  
Portobello College  
Europodians  
Junior Science Support Service  
Learning Pool  
City of Dublin VEC  
National Digital Learning Repository Service
We're all about education.

They live their lives online, in the car, at work and of course, in school. At Echo360, our dream is to see a day when the college experience intersects with the life experience of students. Using lecture capture technology, students gain unbounded access to their educational content and the opportunity to relive their classroom experience for improved comprehension and satisfaction.

Our team includes current and former university administration, staff, teachers, faculty and technologists with deep experience in lecture capture at colleges around the globe. Echo360 was born as a subsidiary of Anystream, the world leader in digital media production and workflow management solutions for major media companies. In 2007, we acquired Lectopia – the lecture capture leader in Australia and New Zealand. We blended our deep experience in video, information technology and higher education to create the EchoSystem platform for campus-wide lecture capture. The result is a repeatable, on-demand educational experience that is easy for institutions to deploy and support while providing students exceptional playback quality and options in line with their mobile lifestyles.

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With so many classes and so much content, campus-wide capture and delivery of class lectures has been prohibitive, even for schools with the most robust budgets. Now, institutions of all sizes have transformed online learning into a strategic asset with the EchoSystem — the first automated, fully integrated, and affordable system for lecture capture.

Contact Details:

Linda Storey,
UK & Ireland Regional Manager
WWW: www.echo360.com
Phone: +44 (0) 7776 216110
Email: Lstorey@echo360.tv
Learning Objects, Inc. is the leader in enterprise-scale social software for learning. Learning Objects’ Campus Pack software seamlessly integrates Web 2.0 technologies into any e-learning environment. Campus Pack promotes collaboration and communication by giving every user at your institution the ability to create and manage blogs, wikis, podcasts, and more. Learning Objects software is developed in conjunction with our user community and is implemented by over 450 educational institutions worldwide.

Contact Details:
Peter Shipley
Learning Objects, Inc.
1850 K Street NW, Suite 850
Washington, DC 20006
Email: sales@learningobjects.com
Phone: +1-202.350.9983
WWW: www.learningobjects.com
Exhibitor Descriptions

**Elluminate Inc.**  
WWW: [www.elluminate.com](http://www.elluminate.com)  
Email: paulinef@elluminate.com  
Phone: 44 (0) 1483 685008

Elluminate provides proven, best-in-class solutions for real-time online learning, web conferencing and collaboration. Elluminate delivers exceptional results across the enterprise, including engaged participants, enhanced learning experiences, increased retention and completion rates, and higher ROI. The Elluminate Learning Suite enables instructors and students to interact and collaborate in real time to add synchronous content to asynchronous learning activities. Engage more people in more ways to promote active learning and improve student performance. Elluminate has served hundreds of millions of web-collaboration minutes to millions of people located in over 185 different countries and has achieved seven industry award during the last year.

**Wimba Ltd**  
Jeremy Bradley, Regional Sales Manager.  
WWW: [http://www.wimba.com](http://www.wimba.com)  
Email: jbradley@wimba.com  
Phone: +44 (0) 777 55 111 41

The Wimba Collaboration Suite T 6.0 enables institutions to bridge the gap between technology and pedagogy by supplementing course management systems with the proven disciplines of in-person learning environments. By combining interactive technologies students and teachers are empowered with a unique collaborative environment that enhances learning, improves outcomes, and increases student retention. Wimba Collaboration Suite, Best Education Solution, CODIE Awards 2009.

**nLearning Ltd**  
James Thorley  
WWW: [www.nlearning.co.uk](http://www.nlearning.co.uk)  
Email: info@nlearning.co.uk  
Phone: +44 (0) 845 643 0105

Product: nLearning is a spin out company of Northumbria University. Maintaining its solid academic roots, nLearning specialises in providing plagiarism prevention and detection products to a range of academic bodies throughout the UK and Europe. As well as managing the PlagiarismAdvice.org service nLearning provides Turnitin to the education sector across Europe.

**Toomey Audio Visual**  
Ivan Smyth  
Unit A3, Baldonnell Business Park, Baldonnell, Dublin 22.  
WWW: [www.toomeyav.ie](http://www.toomeyav.ie)  
E-Mail: ivan@toomeyav.ie  
Phone +353 (0)1 4660515

Toomey Audio Visual is the largest supplier of SMARTboards in Ireland. This year Toomey AV celebrates 40 years as the leading AV supplier to Irish schools. Our products include SMART Board Interactive Whiteboard technologies, Coomber Classroom Audio & CD Recorders, Digital signage Solutions, EPSON, MITSUBISHI & NEC Data / Video projectors, AV Accessories and Large School Hall display & Audio systems. Visit [www.toomeyav.ie](http://www.toomeyav.ie) or call 01-4660515 for further information.

**GOinteractive Ltd**  
Alan Wright  
WWW: [www.gointeractive.ie](http://www.gointeractive.ie)  
Email: alan@gointeractive.ie  
Phone: 014704028 / 087 2593448

GOinteractive is Ireland’s only Interactive Whiteboard specialist. We supply a complete range of Interactive Whiteboards and Educational Resources to Schools and Colleges. When you buy an Interactive Whiteboard from GOinteractive you are dealing with a professional, completely Irish, company who will provide you with an unrivalled level of service, training and ongoing support. For GOinteractive, supplying Interactive Whiteboards is not a sideline – it’s our business.
**Channel Content**  
Dermot Rogers  
WWW: [http://www.channelcontent.com](http://www.channelcontent.com) and [http://www.learningmotion.com](http://www.learningmotion.com)  
Email: info@channelcontent.com  
Phone: (+353-1-) 4498719  

Channel Content optimizes learning and communications with web and mobile content and delivery solutions. Learning Motion, our business skills training solution offers short topic-specific video learning online, on mobile devices, on DVD and downloads; all supported by assessment and management tools. Our Custom Content Solutions meet clients’ specific requirements. Our Custom eLearning Delivery Solutions build and support communities of practice.

**GDK**  
Una Langton/David Watson  
WWW: [http://www.gdk.ie/](http://www.gdk.ie/)  
Email: ul@gdk.ie  
Phone: 01-2166970  
Company Name: GDK  

Established in 1998, Dublin Based GDK has been a provider of high quality IT products and services to many Irish Schools over the last ten years and has an extremely good reputation in the Irish Educational Marketplace. The company has successfully supplied Interactive Whiteboards to over 100 Irish schools in that period of time. GDK is a leading supplier of Promethean Interactive Whiteboards.

**IMEX Interactive**  
Mr Patrick Hazley  
WWW: [http://www.imex.ie](http://www.imex.ie)  
Email: sales@imex.ie phazley@imex.ie  
Phone: 042-9372300 (office)  
087-2594850 (mobile)  
IMEX are the foremost supplier of Interactive technology in Ireland today. We have successfully completed over 3000 Interactive Whiteboard Systems in Schools, Colleges, Universities and Companies throughout Ireland. Imex offers a dynamic and robust portfolio of Audio Visual and Computer Software solutions. Our core focus is on the customers needs and how we can tailor make that solution to suit.

**HEAnet**  
Naomi Carroll  
WWW: [www.heanet.ie](http://www.heanet.ie)  
Email: info@heanet.ie  
Phone: +353 1 660 9040  

Company/Product : HEAnet is Ireland’s National Education and Research Network, providing high quality Internet Services to Irish Universities, Institutes of Technology and the research and educational community, including all Irish primary and secondary schools. HEAnet provides a high-speed national network with direct connectivity for its community to other networks in Ireland, Europe, the USA and the rest of the world as well as the general Internet.

**National Digital Learning Repository (NDLR)**  
Ms Catherine Bruen  
University of Dublin Trinity College  
WWW: [www.ndlr.ie](http://www.ndlr.ie)  
Email: cbruen@tcd.ie  

The National Digital Learning Repository (NDLR) is a sectoral initiative, providing services and support to enable the sharing of digital learning content and teaching experience across Universities, Institutes of Technologies and associated Colleges funded by the HEA. The NDLR mission is “to promote and support Higher Education sector staff in the collaboration, development and sharing of learning resources and associate teaching practices”. The NDLR provides an online repository to support collaboration and sharing of teaching and learning resources within the Irish Third Level Education sector.
Keynote Speakers

Richard Katz - *Vice-President of Educause*

Richard N. Katz has been vice president of EDUCAUSE since 1996 and in 2001, he founded the EDUCAUSE Center for Applied Research (ECAR). Before joining EDUCAUSE, Katz held a variety of management and executive positions spanning 14 years at the University of California (UC). At UC, Katz was awarded the Gurevich Prize, the Olsten Award, and was the 2nd recipient of that University’s Award for Innovative Management and Leadership.

Katz is the author, co-author or editor of seven books, four research studies, and more than 50 articles and monographs on a variety of management and technology topics. His book *Dancing with the Devil* was deemed one of the 10 most important education-related books of 1999 by *Lingua Franca*. He received his B.A. from the University of Pittsburgh, and his MBA from UCLA. For further information see Richard’s profile on Educause (http://www.educause.edu/Community/MemDir/Profiles/RichardNKatz/39756).

Niall Sclater - *Director of Learning Innovation at the Open University*

Niall Sclater is Director of Learning Innovation at the UK Open University, which, with around 200,000 distance learners, is Europe’s largest university. He is responsible for the development and adoption of elearning by staff and students across the institution. Previously he directed the university’s virtual learning environment programme which developed a learning management system based on the open source system, Moodle.

Before October 2005, Niall was Head of eLearning at the University of Strathclyde in Glasgow, Scotland.

Niall has been involved in the research, development and implementation of learning technology since 1990. He co-founded and managed Clyde Virtual University and the Scottish Computer Assisted Assessment Network. He set up the CETIS Assessment Special Interest Group, directed the Technologies for Online Interoperable Assessment (TOIA) project and ran the Web-Supported Learning initiative of the European Consortium of Innovative Universities. He was also founder and Director of the €4m EU-funded Mediterranean Virtual University. For a list of publications and further information see Niall’s blog (http://sclater.com/blog/)

Fiona O’Carroll - *Senior Vice-President of HMH*

Fiona O’Carroll is Senior Vice President, Digital Products Research & Development & Digital Strategy Advisor for Houghton Mifflin Harcourt since January 2007. Riverdeep Inc, acquired Houghton Mifflin in December 2006 and subsequently acquired Harcourt Education Publishing in December 2007. The combined entities have formed the largest US K-12 Education Publisher. She was a member of the leadership team that grew Riverdeep to a $300m company and led these reverse takeovers. This is the second largest takeover in Irish Corporate History.

In her role with Houghton Mifflin Harcourt, she is responsible for the formulation and execution of the company’s K-12 Digital Strategy and its future product portfolio planning. She directs the company’s 250 product development and R&D staff and leads an open innovation partner network. She is the company spokesperson for digital strategy and vision. She has led development teams that have won numerous Codie Awards for educational products. Further information is available on the HMH (Houghton Mifflin Harcourt Learning Technology) website http://hmlt.hmco.com/
**EdTech 2009**

**Programme**

**Wednesday, 20th May**

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<tr>
<th>Time</th>
<th>Pre-Conference Activities</th>
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<tbody>
<tr>
<td>10.30am – 12.30pm</td>
<td>National Digital Learning Repository Planning</td>
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<tr>
<td>2.00pm – 4.00pm</td>
<td>Turnitin Workshop</td>
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<tr>
<td>6:00 pm – 8:30 pm</td>
<td>Reception (Centre for Research and Innovation in Learning and teaching – CRILT)</td>
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<tr>
<td>6:00 pm – 6.15 pm</td>
<td>Introduction to the National e-Learning Laboratory</td>
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<td>(Leo Casey and Stephan Weibelzahl)</td>
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<tr>
<td>6:00 pm – 6.15 pm</td>
<td>Workshop – NELL Usability Lab</td>
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or follow us on twitter on ILTAtweets

*Turn to page 60 for wifi info*
### Thursday, 21st May – Morning

<table>
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<tr>
<th>8:00 am – 9:00 am</th>
<th>Registration and Coffee</th>
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</table>
| 9:00 am – 9:15 am | Welcome and Opening Address  
**Dr. Paul Mooney,**  
President, National College of Ireland  
(Kelly Theatre) |
| 9:15 am – 10:15 am | Keynote Address:  
**Niall Sclater,**  
Director of Learning Innovation at the Open University  
(Kelly Theatre) |
| 10:15 am – 10:35 am | Practitioners 1  
(20 mins)  
**Practitioner 1**  
(Theatre 2)  
Sinead Hahessy  
NUI Galway  
A Rainy Summer’s Work-Reflections and Lessons Learned in the World of Blended Learning. (p.17) |
| 10:15 am – 10:35 am | Practitioner 1  
(Theatre 3)  
Gavin Henrick, Liam Ryan  
Enovation Solutions  
How e-Portfolio’s can provide users with the tools to demonstrate their life-long learning, skills and development to selected audiences. (p.17) |
| 10:15 am – 10:35 am | Practitioner 1  
(Room 2.03)  
Aidan O’Dwyer  
Dublin Institute of Technology  
Engineering students opinions on the use of PowerPoint presentations in a lecture (p.17) |
| 10:15 am – 10:35 am | Practitioner 1  
(Room 1.03)  
Elaine Wallace, Paul Gormley, NUI Galway  
Creating Brand Managers using Group Wikis: Student Engagement through Collaboration (p.18) |
| 10:35 am – 11:00 am | Research 1  
(25 mins)  
**Research 1**  
(Theatre 2)  
Markus Hofmann, Matt Smith  
Institute of Technology Blanchardstown  
Compatibility Challenges for Mobile Learning Objects (p.19) |
| 10:35 am – 11:00 am | Research 1  
(Theatre 3)  
Robert J. Cosgrave, Theresa Logan-Phelan, Claire McAvinia, Angelica Risquez, Tom Farrelly, Nuala Harding, Rosemary Coopper, Noreen Vaughan  
UCC, TCD, NUIM, UL, IT Tralee, AIT, ITT Dublin  
Usage and uptake of Virtual Learning Environments and Technology Assisted Learning Tools: Findings from a multi institutional, multi year comparative study. (p.20) |
| 10:35 am – 11:00 am | Research 1  
(Room 2.03)  
Catherine Bruen, Noel Fitzpatrick, Paul Gormley, Jen Harvey, Claire McAvinia  
TCD, DIT, NUIG, NUIM  
The management and creation of knowledge, do wikis help? (p.20) |
| 10:35 am – 11:00 am | Research 1  
(Room 1.03)  
Arghir-Nicolae Moldovan, Cristina Hava Muntean  
National College of Ireland  
Increasing Learner’s Experience through Power-Based Adaptation of Educational Content Selection and Delivery (p.21) |
<p>| 11:00 am – 11:15 am | Coffee/Tea Break |</p>
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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| 11:15 am – 11:35 am | Practitioner 2  
Michael Campion, Paul Gormley  
NUi Galway  
Skills for Work Life: Evaluating the use of wiki tool as an ePortfolio solution for large groups in Commerce. (p.21) |
| 11:35 am – 12:00 pm | Research  
Dermot P Brabazon  
Dublin College University  
The use of virtual learning environments to aid teaching of heat transfer and Artificial Neural Network modelling in Bioprocess Engineering. (p.24) |
| 12:00 pm – 12:20 pm | Postgraduate 1  
Damian T Gordon, Bajuna R Salehe  
Dublin Institute of Technology  
Elimu 2.0 – Investigating the Use of Web 2.0 Tools for Facilitating Collaboration in Computer Science Education. (p.25) |
| 12:20 – 12:40 | Practitioner 3  
Paul Gormley, Michelle Tooher, Fiona Concannon, NUI Galway  
Sustainability through Staff Engagement: Applying a Community of Practice Model to Academic Staff Development Programmes (p.28) |
| 12:40 – 1 pm | Practitioner 4  
Eitain Kielty, Oliver Joyce  
IT Sligo  
Using Interactive Clickers to Capture and Exchange Learning Feedback (p.31) |
| 1:00 pm – 2:15 pm | Lunch |
| 2:15 pm – 2:45 pm | Practitioner 2  
Mary Dempsey, Paul Gormley, Liam McDwyer  
NUi Galway  
An analysis of third level multi-cultural interdisciplinary student learning outcomes using Wiki technology. (p.22) |
| 2:15 pm – 2:35 pm | Research  
Orla Mojeil Murphy  
University College Cork  
Laser Scanning to create reusable learning objects: An interdisciplinary case study. (p.24) |
| 2:35 pm – 2:55 pm | Postgraduate 1  
Cathal McCosker  
DERI, NUI Galway  
Operation Conjugation! A Game Based Learning approach to Language Studies. (p.26) |
| 2:55 pm – 3:15 pm | Practitioner 2  
Terry Maguire, Claire McAvinia  
ITT-Dublin, NUI Maynooth  
Evaluating the National Digital Learning Repository Project: evolving models for Communities of Practice. (p.23) |
| 3:15 pm – 3:35 pm | Research  
Gerry Grogan  
Institute of Public Administration  
How cognitive tools mechanisms produce critical thinking effects. (p.25) |
| 3:35 pm – 3:55 pm | Research  
Sinead Devery  
Dublin Institute of Technology  
A Classroom Investigation of Software Design Requirements for Special Needs Learners (p.27) |
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<th>Time</th>
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<tr>
<td>2:15 pm – 2:35 pm</td>
<td>Practitioner 5 (20 mins)</td>
<td>Angelica Risquez, University of Limerick</td>
<td>(Theatre 2)</td>
<td>Anti-plagiarism software in an Irish University: three years later (p.34)</td>
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<td>Eugene O’Loughlin, National College of Ireland</td>
<td>(Theatre 3)</td>
<td>Lipstick on a pig? – Lecture notes as video podcasts on the iPhone. (p.34)</td>
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<td>Gavin Cooney, Learnosity</td>
<td>(Room 2.03)</td>
<td>Use of Mobile Phones for Spoken Language Learning (p.35)</td>
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<td>Thomas Mac Mahon, Séamus MacSubhine, Allys Guerandel, Kevin Malone</td>
<td>(Room 1.03)</td>
<td>University College Dublin Application and learner perception of blogs in undergraduate psychiatry teaching - a qualitative assessment. (p.36)</td>
</tr>
<tr>
<td>2:35 pm – 2:55 pm</td>
<td>Practitioner 6 (20 mins)</td>
<td>Kevin C. O’Rourke, Dublin Institute of Technology</td>
<td>(Theatre 2)</td>
<td>The king is dead: long live the king (p.36)</td>
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<td>Sean Connell, Athlone IT</td>
<td>(Theatre 3)</td>
<td>Enhancing the learning experience of the electronic spreadsheet using collaborative software and interactive whiteboard technology. (p.37)</td>
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<td>Eimear Kelly, Athlone IT</td>
<td>(Room 2.03)</td>
<td>Using a new dog to teach an old trick. Can an interactive whiteboard enhance the teaching and learning of German? (p.38)</td>
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<td>2:55 pm – 3:15 pm</td>
<td>Postgraduate 2 (20 mins)</td>
<td>Stephen Kirby, Benjaminn Toland, IT Blanchardstown</td>
<td>(Theatre 2)</td>
<td>Program Visualisation tool for teaching Programming in C. (p.40)</td>
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<td>Mary Hooker, Dublin City University</td>
<td>(Theatre 3)</td>
<td>Using Responsive Evaluation Techniques to “mirror” the Teacher Professional Development Landscape in Rwanda. (p.40)</td>
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<td>Enda Donlon, Mater Dei Institute of Education</td>
<td>(Theatre 3)</td>
<td>Better Needles, Fewer Haystacks: Applications of a Custom Search Engine to improve the Quality of Information retrieved by Students using the WWW (p.43)</td>
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<tr>
<td>3:35 pm – 4:00 pm</td>
<td>Coffee</td>
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<tr>
<td>4:00 pm – 5:00 pm</td>
<td>Keynote Address:</td>
<td>Fiona O’Carroll, Senior Vice-President of HMH (formerly Riverdeep)</td>
<td>(Kelly Theatre)</td>
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<tr>
<td>5:00 pm - 6:00 pm</td>
<td>Irish Learning Technology Association AGM (Kelly Theatre)</td>
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<td>Conference Dinner (Venue The Vaults)</td>
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**Friday, 22nd May**

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<tr>
<td>10:00am - 10:30am</td>
<td>Research 3 (Theatre 2) Liam Brown, Vincent Wade, Eamonn Murphy, TCD, UL From eLearning to ULearning - A Novel Framework for effective Organisational Change and Continuous Improvement Programmes (p.45)</td>
<td>Theatre 2</td>
</tr>
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<td>Research 3 (Room 1.02) Terry Smith Pepperdine University Project-Based Learning: Changing the Face of Traditional Education (p.46)</td>
<td>Room 1.02</td>
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<td>Practitioner 10 (Room 1.03) Kristin Brogan, Riana Walsh (p.57) IT Tralee, ITT Dublin On-line language learning and cultural preparation for residence abroad</td>
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<td>1:15 pm – 1:30pm</td>
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A Rainy Summer's Work-Reflections and Lessons Learned in the World of Blended Learning.

Sinead Hahessy  
National University of Ireland, Galway

The School of Nursing & Midwifery at the National University of Ireland, Galway converted 10 Post Graduate Specialist Nursing Programmes from a traditional format to blended learning (combination of traditional teaching and online teaching) in 7 months in 2008. This was a challenging task and throughout this process reflection became central to the development, implementation and evaluation phases of the project.

This presentation brings together the lessons learned in the conversion from traditional based lectures to blended learning. It will delineate the practical steps toward effective design and delivery of blended learning approaches. Topics discussed will include how to convert the curriculum, adapt assessment procedures and how to maximise student engagement.

How e-Portfolio's can provide users with the tools to demonstrate their life-long learning, skills and development to selected audiences.

Gavin Henrick, Liam Ryan  
Enovation Solutions

During their studies students will create huge quantities of materials: assignments, forum posts, quiz attempts, presentations, papers, reflective journals and blog entries. By capturing, storing and managing these materials, e-Portfolio’s allow students to showcase their outputs and reflect on their learning and experiences, while at the same time meeting the needs of established and emerging approaches to learning. E-Portfolio’s play increasingly important part of any institution’s e-learning strategy.

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Engineering students opinions on the use of PowerPoint presentations in a lecture

Aidan O'Dwyer  
Dublin Institute of Technology

There is increasing emphasis placed on the electronic delivery of lecture material, typically by means of PowerPoint presentations. This is driven by investment in the required IT equipment (data projectors and computers), the use of online environments (such as WebCT from Blackboard Inc.) and the reduction, in engineering, in class contact hours. Despite these driving factors, the educational benefits (or otherwise) of using PowerPoint in lectures has not been analysed in detail in the engineering education literature; many authors in this literature are content with providing tips for effective PowerPoint presentations, avoiding ‘death by PowerPoint’ (e.g. Winn (2003), Felder and Bent (2005)). In particular, surveys of engineering student perceptions of the advantages and disadvantages of a lecturing approach that uses PowerPoint for a substantial part of the lecture material, compared to a more traditional lecturing approach using a blackboard or an overhead projector, are absent. There exists some analysis in the wider educational literature of the perceptions of (typically) liberal arts students obtained using structured surveys (Szabo and Hastings (2000); Susskind (2005); Apperson et al. (2006), (2008)).
The research question addressed in this contribution is whether the use of PowerPoint presentations (and associated on-line material), in a lecture environment, improves the educational experience for engineering students, as reported by the students themselves. The data collection tool used is a questionnaire, influenced by the work of the latter authors above. The questionnaire uses a 5-point Likert scale and is constructed with alternating positive and negative questions to avoid directional bias. The engineering student groups surveyed were at Level 7, Year 1, Level 8, Year 4 and Level 9, over two academic years. In all cases, PowerPoint presentations were predominantly used in the lecture environment; students were provided with a paper copy of the presentation prior to the material being covered, and the presentation itself was also simultaneously placed on-line.

Presentation and analysis of the questionnaire data from the groups will be summarised in the full contribution. The contribution will conclude that, on average, students value PowerPoint based lectures both as a means of better understanding the material and for the medium’s structural and organisational advantages. In particular, visual elements are favoured in the presentations, reflecting the strongly visual learning style of engineering students. Students also strongly favour the PowerPoint lectures being available online and that a paper copy of the PowerPoint presentation be distributed at the lecture.

References


Creating Brand Managers using Group Wikis: Student Engagement through Collaboration

Elaine Wallace, Paul Gormley
National University of Ireland, Galway

This paper outlines the process and outcomes of using Wikis as a tool for assignment work with final year marketing students. The technology was used for an elective course, Brand Management, which is a one-semester module within the Bachelor of Commerce Degree. The module is traditionally delivered in two-hour lectures across a twelve-week period.

The course was previously examined using continuous assessment in the form of four written individual assignments. Typically, sixty-five students selected the subject from a suite of electives. In 2009, the course adopted the use of Wikis as the substantive component of continuous assessment. The aim of this change was to foster increased engagement, to give students an opportunity to use new technologies, and to apply enquiry based learning methods online.

Students worked in self-selected groups. Each group were assigned a brand and a wiki template from which to work. The students became ‘brand managers’ for their assigned brand for the duration of the semester. During lectures, the students were given issues to relate to their brand, and were required to submit each response on a new page of their wiki. In all, five assignments were provided, resulting in five wiki pages for each group.
This technology offered a number of advantages. First, students were required to work in groups, which facilitated interaction and supported collaboration. Second, the Wiki format allowed students to collaborate while based in diverse locations. Third, it provided students with experience in creating wiki pages, updating content, and including links to relevant items. Fourth, it allowed the lecturer to provide constructive comments on each wiki, which contributed to subsequent pages. Fifth, it offered each group privacy, as access was limited to each group and the course lecturer. In addition, as the participation of each group member was visible and measurable, students had reassurance that group evaluation and the allocation of marks was fair. Sixth, it supported the learning objectives of the course, as students applied theoretical concepts to their assigned brands in a new way.

Prior to explaining the assignment to the class, the lecturer surveyed the group to determine their awareness of wikis, and their perceptions about their benefits and challenges. Although the average time spent online was 3 hours per day, 63% of those surveyed did not know what a Wiki was. The group highlighted concerns about the use of the technology, and its application for assignment purposes. This paper outlines the learnings arising from the use of group Wikis as a learning and assessment tool, and the feedback from students on completion of the Wiki assignments.

Compatibility Challenges for Mobile Learning Objects
Markus Hofmann, Matt Smith
Institute of Technology, Blanchardstown

This paper outlines the process and outcomes of using Wikis as a tool for assignment work with final year marketing students. The technology was used for an elective course, Brand Management, which is a one-semester module within the Bachelor of Commerce Degree. The module is traditionally delivered in two-hour lectures across a twelve-week period.

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Robert J. Cosgrave, Theresa Logan-Phelan, Claire McAvinia, Angelica Risquez, Tom Farrelly, Nuala Harding, Rosemary Coooper, Noreen Vaughan

UCC, NAIRTL, TCD, UL, NUI Maynooth, IT Tralee, LIT, AIT, IT Tallaght

In early 2008 five Irish tertiary institutions conducted an online survey of their students usage of Virtual Learning Environments in their respective institutions. In 2009, the survey was run again with an expanded set of institutions, and supplemented by a staff survey and detailed institutional case histories. The survey instruments used a common set of questions, and on condition of anonymity, the institutions pooled their results to allow us to compare and contract the results. While many institutions routinely conduct in house surveys or studies from time to time, this study is relatively unique in that it draws on data from multi institutions, across multiple years, and diverse VLE platforms.

The institutions who participated represented a diversity of organizational histories and VLE systems. The study identifies some of the key drivers and barriers to uptake and usage of an institutional VLE and identified that it is organizational factors, such as system maturity, rather than technical ones around system choice, that are the most significant factors in the uptake, usage and utility of the VLE systems.

The paper also notes issues around the conduct of the survey, confidentiality and data sharing, and lessons from the first two years for the 2010 round.

The management and creation of knowledge, do wikis help?

Catherine Bruen, Noel Fitzpatrick, Paul Gormley, Jen Harvey, Claire McAvinia

TCD, DIT, NUIG, NUI Maynooth

Web 2.0 technologies such as podcasts, blogs and wikis are increasingly being used in higher education. A wiki is defined as ‘a freely expandable collection of interlinked Web pages, a hypertext system for storing and modifying information – a database where each page is easily editable by any user with a forms-capable Web Browser client’ (Leuf, B. and Cunningham, W. 2001). Due to their flexibility, adaptability and potential for increased functionality via Web 2.0 plug-and-play features wikis are currently being adopted across a wide range of contexts and settings (e.g. social, business and educational). Wikis are easy to create, use and employ.

In pedagogical terms, a key attraction of using wikis is that their structure is shaped from within (rather than being imposed from above by proprietary institutional systems). Therefore ‘users do not have to adapt their practice to ‘dictates of a system’ but can allow their practice to define the structure (Lamb, 2004). Wikis are increasingly being cited in Higher Education research as appropriate and powerful web spaces which provide opportunities to capture, discuss, and review individual, group, project or organisational activities. These activities, in turn, offer possibilities for knowledge development by utilising wiki collaborative active spaces.

The adaptive and ‘constructivist’ nature of wikis make them an interesting and topic technology to investigate, particularly as research indicates what wikis may provide the potential to adapt and support a range of teaching, learning, research and organisational activities in higher education.

Use selected case study examples, this paper will illustrate the use of wikis to support online community based tasks, project development/process, collaborative materials development and various student and peer supported activities. A key focus of the paper will centre on evaluating the effectiveness (or otherwise) of
wikis to create online communities to support knowledge management (development, retention and transfer). See for example Choy & Ng (2007), Lamb (2004), Elgort (2008), Raman et al. (2005).

The paper will conclude with a review of the emergent themes arising and lessons learned from the case studies. This will lead into a series of recommendations relating to the effective establishment, design, management and support and use of wikis to support knowledge creation and collaborative enterprise.

References
Raman, M. Ryan, T and Olfman, L (2005) Designing Knowledge Management Systems for Teaching and Learning with Wiki Technology Journal of Information Systems Education; Fall 2005; 16, 3; ProQuest Education Journals pg. 311

Increasing Learner’s Experience through Power-Based Adaptation of Educational Content Selection and Delivery
Arghir-Nicolae Moldovan, Cristina Hava Muntea
School of Computing, National College of Ireland

Since battery still represent a constraint resource for mobile devices, mobile learning users are often forced to interrupt their learning activity because of low power situations. This paper analyses for the first time the need for a power saving solution in adaptive m-learning systems. Testing results show that battery life can be extended by varying some of the parameters of a video clip such as encoding scheme, resolution, frame rate and bitrate. Preliminary subjective tests assess the effect of these variations on learner’s Quality of Experience.

Skills for Work Life: Evaluating the use of wiki tool as an ePortfolio solution for large groups in Commerce.
Michael Campion, Paul Gormley
National University of Ireland, Galway

This practical paper reviews the planning, implementation and evaluation process associated with employing the Learning Objects building block wiki tool as an ePortfolio solution for a large group of second year Commerce students using the Blackboard VLE. The 'Skills for Work Life' course is assessed using continuous assessment, with an individual Student Skills Development ePortfolio comprising 50% of the overall marks. The student ePortfolios facilitate skills planning and development, self assessment and personal reflection.

'Skills for Life' is a second year Commerce course taken by 230 students. The course objective is to improve student employability and preparation for the workplace by developing a set of practical skills that form the basis for effective working life. Delivered using a blended-learning approach the course combines; on-line activity, small group workshops and large group lectures to focus on areas such as; self-awareness, communication, teamwork, presentation and career management skills.

The course is assessed through continuous assessment, with a Student Skills Development ePortfolio comprising 50% of the overall marks. The course coordinator, with assistance from an academic development learning technologist, designed and implemented an ePortfolio system using the Blackboard Learning Objects wiki building-block to enable individual student portfolio development, skills planning, self assessment and
personal reflection. This paper details the approach taken; identifies associated challenges and opportunities for both the students and instructor; results of the student evaluation; and lessons learnt from the experience.

This paper highlights the planning, implementation and evaluation process associated with using individual wikis as an ePortfolio solution for a large group of second year Commerce students in Blackboard. The results of the student evaluation coupled with the lessons learnt by the instructor will be of relevance to the audience.

The presentation will offer practical planning, technical and organisational hints and tips for practitioners considering utilisation of wiki tools for large groups using any VLE platform (Moodle, Sakai, WebCT, Blackboard). As the technical overhead using wikis is low, this paper will be of use to VLE instructors (experienced and new) course designers, course directors; staff developers; training and development officers; and instructional designers.

An analysis of third level multi-cultural interdisciplinary student learning outcomes using Wiki technology.
Mary Dempsey, Paul Gormley, Liam McDwyer
National University of Ireland, Galway

The increasing need for effective collaboration among interdisciplinary groups suggests the necessity of developing teaching pedagogy that infuses teaching techniques with technologies. Combining Business and Engineering graduate expertise is paramount in developing skills set for high end product and service innovation. Opportunities also arise if groups have experience and familiarity with other cultures. A collaborative teaching tool that can combine business, engineering and cultural opportunities is Wiki. Wiki provides an environment that enables students to contribute to a web page in a collaborative manner. The Internet based Wiki provides a many advantages including a platform for connecting students from around the world who can work together in a virtual way.

This paper showcases planning, implementation and pedagogical outcomes from the integration of Wikis into an interdisciplinary target module called Operations Strategy. This module attracts approximately 40 students each year including International and European students from both a Business and Engineering discipline. Incorporating the Wiki ingredient to multi cultural interdisciplinary module groups was an interesting concept, which aimed to investigate the impact of collaborative technologies to enhance the learning environment for the students and, to evaluate student engagement with the module content.

The objective of the teamwork approach was discussed with the students, while supplementary documents were uploaded to the Blackboard VLE. Learning through case study method involved three levels (individual, group and whole-class). The conceptual framework presented in lectures and readings enhanced preparation of each case and the students were given a roadmap to the Learning Structure.

Students were expected to (1) create a Wiki page containing the title of the Case they are working on and the names of the group members and (2) edit the Wiki page and include the following information:

1. Briefly summarise the facts of the case
2. State the decision situation, present the alternative options and conclude with recommendations

Discussions were subsequently opened to the rest of the class presenting opportunities for groups to present their findings and recommendations and for peer-review and analysis.

This paper reports the preliminary results of a Wiki-based trial in which undergraduate business and engineering students from Europe, the United States and the Far East learned together using Wiki technology. The results suggest that whilst there is additional administration burden in the set-up and management of the
exercise the learning outcomes are met more effectively. Additionally some constraints that restrict the set up can be overcome. The success of Wiki technology use in multi-cultural interdisciplinary environment however requires clearly defined objectives and specific instructor training. Spin offs from the academic exercise include the students ability to export a Wiki and to demonstrate group work to potential employers or others as a practical example of their involvement and contribution to group work. One of the main advantages of using Wiki technology is that all groups have access to view each others work. This allows for increased collaboration in class amongst students and a richer learning environment for all concerned.

Evaluating the National Digital Learning Repository Project: evolving models for Communities of Practice.
Terry Maguire, Claire McAvinia
Institute of Technology, Tallaght, NUI Maynooth

The National Digital Learning Repository project (NDLR), now in its fifth year, provides a national resource bank of digital materials for learning and teaching in Ireland. The authors undertook two parts of a three-phase internal evaluation of this project in 2008. They focused particularly on describing and analysing the experiences of Communities of Practice established as part of the project, and made recommendations for these communities in terms of their further development.

In this paper, we describe the methods used to evaluate a national project involving all HEA-funded institutions, and the thirteen Communities of Practice currently aligned with the NDLR. We present the findings of this evaluation, and discuss the interaction between the communities and the repository itself. O’Keeffe et al (2008) have previously examined the ‘formal’ and ‘informal’ nature of communities of practice, and we seek to extend this research by presenting four models to describe the communities as they currently function.

The paper will review Communities of Practice theory (Lave & Wenger, 2002) to analyse the evaluation data, and propose the four models. Specifically, it will examine the structure of the communities, and the ways in which individuals and special interests have been accommodated in ways that might not previously have been considered part of a Communities of Practice framework. The paper will conclude with discussion of questions surrounding the future development of the NDLR Communities of Practice, and proposals for how ‘smart’ communities can expand in the context of a full NDLR service.

References

Online Video Resources to Enable & Enhance Experiential Learning
Dermot P Brabazon
Dublin City University

This paper describes the implementation and development of an online video resource for both postgraduate and undergraduate students with the aim to improve the learning of presentation skills. As part of the final year project in engineering programmes at Dublin City University, students had to present an interim and final presentation on their work. The presentation skills of the student account for up to 30% of their final project mark. A video system was developed to record and enable automatic provision of results, commentary as well as the recorded video to the student. This system consisting of batch file conversion, server data-basing and a results and commentary Graphical User Interface (GUI) is presented in this paper. The presentations and GUI
were then made available to the students midway during the 12 week semester via student specific portal pages. The student’s marks and feedback from the lecturer assessors on the presentations were also made available via the GUI. The students were also recorded during their final presentations at the end of the semester. The difference in student grades between the initial presentation examination and the final presentation in week 12 were examined and compared to those obtained over the previous six years when such feedback was not available. Over 200 hundred students have used this new feedback system over the last two years. The developed system proved to be a useful aid to student presentation skill learning. Feedback from lecturers and students was very positive. Lecturers were able to review presentations with the second marker to agree awarded marks and comments for their allocated students while students appreciated the ability to get video feedback and more detailed commentary which was not previously available.

The use of virtual learning environments to aid teaching of heat transfer and Artificial Neural Network modelling in Bioprocess Engineering

Dermot P Brabazon
Dublin City University

High quality laboratory practical’s for undergraduate students require extensive demonstrator resources to implement on a week to week basis. This can be difficult to maintain over the course of a semester. This paper presents work in which an alternative technique to the traditional approach was developed. A virtual learning environment was employed to implement the entire lab, reducing demonstrator involvement and ensuring a constant quality of explanation and demonstration of concepts was provided to each group of students. This new laboratory practical was developed to demonstrate heat transfer and artificial neural network modelling to bio process engineering students. The use of this virtual environment approach allowed the inclusion of the application of industrial process monitoring and data acquisition in the teaching process. A full user interface was constructed that the students navigate through; this interface guided students through the entire lab, teaching heat transfer and artificial neural network concepts along with the general data collection and machine setup procedures. The virtual environment was constructed, with students learning styles in mind, providing information in both a global and sequential manner. This approach was seen to useful in terms of enabling student engagement.

National Instruments LabView software was selected as the programming environment as it allowed easy integration with data acquisition and analysis with high quality graphical user interfaces. This work shows how it is possible to attain low cost multifunctional data acquisition and device control to develop educational resources. Safety features were inbuilt into the program to ensure students could not damage the heat transfer rig, or injure themselves from the rig overheating, or malfunctioning. Trajan was used to simulate the artificial neural network models. The lab practical has been run quite efficiently over the course of the semester and it was seen that the use of a virtual learning environment engages the students more than traditional techniques, reduced the demonstrator workload, and provided increased student interactivity with industrial equipment. Evidence of this is presented in student and staff surveys as well as student learning outcome results.

Laser Scanning to create reusable learning objects: An interdisciplinary case study.

Orla Majella Murphy
University College Cork

The aim of this paper is to critically evaluate the Polhemus FastSCAN handheld laser scanner as a method of creating reusable learning objects (RLOs) from laser scans of medieval stone monuments. It is an interdisciplinary, inter institution approach. The effectiveness of the methodology will be measured by focusing on a monument in Munster and the generation of a RLO from the data. Initially the equipment and method will be discussed and the process described.
The paper will highlight a single site. The outputs of the data, in this case the models, are such that they may be presented in many forms: two-dimensional, three-dimensional, hard copy, electronic and virtual. Thus they can be accessed by many levels of viewer / interrogator; they may be enjoyed simply as pretty pictures, or in the spirit of this paper promote a meaningful way for all levels of interested stakeholders to access and participate in this interdisciplinary approach. Finally the conclusion will analyse the results and evaluate the method’s usefulness in generating RLOs for a range of end users, not simply a range within the field of education but for conservation, preservation, and illumination of sculptural decoration, texts and images lost for centuries.

How cognitive tools mechanisms produce critical thinking effects.
Gerry Grogan
Institute of Public Administration

This paper is derived from the author’s research into critical thinking and cognitive tools. The paper is based on empirical evidence in higher education. It attempts to show at very high level of detail the mechanisms by which electronic cognitive tools achieve their critical thinking effects. The paper goes on to show how when technology is used as cognitive tools it can produce transformation of learning. It uses this emergent theory as a way of explaining why for instance the pedagogic impact of learning technologies has been so disappointing and how these technologies have tended to replicate rather than transform.

Improving the Quality of Flexible Learning.
Daire Ó Broin, Siobhan Clarke
Trinity College Dublin

Flexible learning is concerned with giving learners a flexible approach to learning. More specifically, flexible learning enables learners to choose where, when, and how they learn. In order to improve the quality of flexible learning, we must meet an increasing number of learners’ (increasingly demanding) requirements. One example of such a requirement is increased motivation and enjoyment. By demonstrating how this requirement may be fulfilled, this paper will show how the quality of flexible learning may be improved. This paper briefly describes the flow model, the key to fulfilling this requirement, and outlines an approach to create the necessary conditions. It also gives a description of an evaluation of the approach.

Elimu 2.0 – Investigating the Use of Web 2.0 Tools for Facilitating Collaboration in Computer Science Education.
Damian T Gordon, Bajuna R Salehe
Dublin Institute of Technology

The latest web innovations and technologies which have made the Web into a ‘Platform’, are increasingly being applied in the higher education arena. Tools such as Google docs, Google groups, Wikis, Blogs, RSS and Podcasting are gradually becoming more popular for teaching and learning within higher education. Yet their huge potentials have not been fully explored. Collaboration and knowledge sharing are common terms in higher education, as well as in the corporate world of the today’s knowledge economy. However better infrastructure and facilities to enable these important activities have yet to be set and fully utilised in higher education context. Within higher education complex ideas of Computer Science subjects are still crucial in today’s technology-driven world. Hence teaching expertise of various Computer Science subjects needs to be visible, accessible, and shared among practitioners.

The purpose of this paper is to investigate the usefulness of the latest web technologies and tools conventionally known as Web 2.0 in supporting the sharing of computer science teaching expertise in higher education. A survey was conducted to analyse and examine the type and usage of Web 2.0 tools within computer science education and examine how useful such tools could be to support the sharing of computing
teaching expertise. The survey findings revealed that some Web 2.0 tools have potential in enhancing the sharing of computer science teaching knowledge. A framework for knowledge sharing incorporating Web 2.0 tools was then developed and evaluated by computer science teaching experts. The results showed that the proposed framework can be applied in the current higher education environment.

**Operation Conjugation! A Game Based Learning approach to Language Studies.**

Cathal McCosker  
*National University of Ireland, Galway*

The use of multimedia games presented in a fun and engaging environment can satisfy important learning principles such as attention, motivation, reflection, assessment and feedback. This learning environment can be used to assist in the teaching of language studies which can lead to an improvement in academic performance (attention and recall).

The current education system utilises traditional teaching techniques such as trial and error, rote teaching and the “take once and succeed” model. Although these techniques worked, they did so in a limited fashion as they used passive teaching rather than engaging the students with the subject. New teaching techniques have evolved which focus more on the nature of human thinking and learning. Students that do not respond well to the traditional teaching techniques require alternative education practices to engage them with learning.

Teachers have taught subjects through practical games to make the subject more engaging, competitive and fun for the classroom. This would relieve the class from the boredom of “skill and drill” and “chalk and talk” and engage them with learning the subject. Games serve a range of educational principles and create a positive psychological impact, while getting the information across (Mitchell, Savill-Smith (2004)). Commercial video games use techniques (e.g. coaching, accommodation, reflection, instant feedback, zone of proximal development, black boxing, flow, time compression, productive failure) that match up very well with the latest in cognitive research on how people think and learn. (Squire (2005)).

However, not much progress has been made in creating an educational video game which incorporates these learning principles and teaches academic subjects. Instead early e-learning ventures became digitised “chalk and talk” ignoring the potential of games to present subjects in interesting abstract ways. I have developed a prototype game which allows students to practice regular French verb conjugation, harnessing the motivational power of games in order to make learning fun, in an exciting and engaging environment.

The overall project is an exploration of teaching and learning techniques, integrated into a prototype program. This program will test the claims behind game based learning by testing its capability on students. The guidelines for the game’s development could be adapted to other learning programs.

The latest cognitive techniques would be difficult to implement in traditional schools without the need to train the teacher. Game based learning offers a portable, viable solution to re-training staff. Given the interactivity and multimedia aspect of computer games, they hold attention for longer than traditional techniques, and can give the student the motivation they need to complete the learning process. The learning theories that have been researched (Watson (1913), Vygotsky (1978), Malone (1980), Csikszentmihalyi (1990), Di Vesta (1987)), show requirements for learning, which proper design of game based learning programs can satisfy (Gagne (1985), Herrington and Oliver (1995), McKenna and Laycock (2004), DeCorte (1990))
Colouring in the Violin: A graphically-mediated approach to the reconstruction of heard melodies.

Susan Sweeney
Institute of Technology, Tallaght

“Colouring in the Violin” is a graphic user interface that enables the student to construct melodies using an alternative notation system which matches the musical instrument itself. This study traces the progress of five novice musicians in a primary school environment. This innovative learning system takes the mystery out of instrument learning by providing students with a sound player and coloured representations of notes. Musical interactions enable the student to rely on their own musical ear in making musical decisions and note choices.

Can a system for musical reconstruction and virtual/physical pattern matching enable the early stage violin student to recreate heard melodies on the violin? This qualitative and quantitative study endeavours to investigate some of the key problems that exist when embarking on the preliminary stages of learning to play the violin. It seeks to understand the extent to which engagement with musical composition and problem solving activities via a graphic user interface will enhance performing skills. The accompanying artefact facilitates a constructivist approach to learning with technology (Jonassen, 2000).

This paper adopts the premise that people are born with schemes and tendencies to organize their thinking processes (Piaget, 1990) and that the physical and technical demands in learning a musical instrument involve problem solving skills (Odam, 2001). Some students have a difficulty with understanding the concept of standard notation (Bamberger, 1991); however, the process of learning to play a musical instrument requires skill and the ability of the user to find a pattern and structure to what he reads or interprets (Sloboda, 1994).

Based on these premises, the accompanying artefact provides a ‘hands on’ approach to composition that will assist the novice musician in the preliminary stages of learning to play the violin.

This paper describes “Colouring in the Violin” a graphic user interface which enables the student to construct melodies using an alternative notation system that matches the musical instrument itself. The study traces the progress of five novice musicians in a primary school environment. It describes the implementation of the artefact, and data includes participant created melody patterns, researcher observation notes and interviews with participants. The analyses of the collected data was coded and themed in order to discover emergent trends in the experiences of the participants.

A comparative study of note pattern matching is undertaken in the findings of the paper. Key observations were encouraging as they indicate that engagement with the learning artefact enhanced the performing skills of the participants. Findings also suggest that constraints on the user interface and participant engagement with the soundplayer element of the interface facilitated learning. Pitch recognition, critical listening skills, and melodic and visual pattern matching are some of the key elements in the findings of the paper.

A Classroom Investigation of Software Design Requirements for Special Needs Learners

Leanne Walsh, Mary Barry
Waterford Institute of Technology

Our study investigates the establishment of a design framework for multimedia software design for young learners with autism. The researcher, in partnership with local special needs and autism schools, has developed a social skills multimedia-based lesson. The Discrete Trial Instruction (DTI) teaching approach has been adopted within the framework of the prototype. DTI is a teaching method used to teach children with learning difficulties. DTI aims to positively improve a social behaviour or teach a task to a child within the classroom environment. The researcher has completed an in-depth study in the field in order to build a specific user model for these young learners. A series of interviews, classroom observations, parent/tutor
reviews and sequential prototype design evaluations have been performed. Non-obtrusive observation techniques have been followed throughout the user profile building stage, as suggested by Druin, a children’s technology and interaction design expert. This approach enables learners to feel at ease in their own environment.

Findings from these early investigations and user profiling have shown that ease of access to technology and software is a key criterion for these young users. A variety of multimodal technologies such as touchscreens and switches must also be integrated into the design of software. These technologies alleviate the motor and input difficulties which many young learners find when using the more common hardware devices such as a keyboard or mouse.

Further recommendations have also indicated the importance of audio to be included within the prototype construction. From the perspective of this project, voiceovers have been recorded to assist children with reading and understanding of lesson content. Results from initial evaluations state that current software on the market is strongly targeted at an American audience. Our project consists of an Irish tone in order to make the lesson more comprehensible for the young learner. In accordance with the DTI approach an animated social scenario lesson has been created using web animation tools. Accompanying the animation is a sample quiz and short animated rewards to assist with motivation and the transfer of knowledge of the lesson content.

A nationwide survey is currently in progress to further consolidate the design structure of the prototype. A random sample of Irish national special needs schools has been chosen to participate in the survey. An online questionnaire documenting both interface design and software usability questions has been developed to evaluate the software design framework. It is anticipated that results from this survey should further help the progression of educational computer-based programmes for young learners with autism, and contribute to a clearer understanding of multimedia and software development approaches that have good learning and teaching potential.

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**Sustainability through Staff Engagement: Applying a Community of Practice Model to Academic Staff Development Programmes**

Paul Gormley, Michelle Tooher, Fiona Concannon

*National University of Ireland, Galway*

NUI Galway integrated the Learning Objects building block in September 2008 to extend the functionality of the Blackboard 7.2 platform through blogs, wikis and podcasting features. A challenge lay in considering how to create awareness of the potential opportunity presented by these Web 2.0 technologies to academic staff, within their own context, and to envisage moving beyond the Virtual Learning Environment as a mechanism solely for disseminating content from lecturer to student.

The potential significance of blogs and wikis lies in how these tools can organise people and activities, and not simply the manner in which they create and distribute information on the screen. Successfully adopting these technologies involves motivating learners to co-produce knowledge and information through collaborative social organisation. Hence, any initiative to consider the appropriation of this technology also needed to fundamentally consider the learning activity it aimed to support.

Towards this end, a staff development model was developed by the Learning Technologies Team at NUI Galway, utilising a Community of Practice approach to extend participant collaboration beyond the traditional face-to-face workshop experience. The Learning Technologies team established an 'NUIG Collaboration Special Interest Group (SIG)' to support participants of a new training workshop entitled 'Using Blackboard to Support Groupwork, Collaboration and Reflection'. The aim of the workshop was to support academic staff in considering how to develop blog and wiki-based activities in innovative and engaging ways.
The primary aim of establishing the SIG was to develop a peer-support network to facilitate information and resource sharing; dissemination of best practice, peer-support activities, and the development of research outputs. The secondary aim of this model was to develop a number of local case studies at NUI Galway which would serve as exemplars of good practice for local, national and international audiences.

The group itself was supported by the activities it aimed to promote. It adopted a shared blog and a wiki, enabling participants to organise and distribute their own practices, and to comment with suggestions for improvements.

This model has subsequently been applied to teaching and learning contexts within NUI Galway, and to the SIF Learning Technologies: From Pilot to Mainstream project with our partner institutions, Trinity College Dublin, and University College Cork. Practical outputs from the application include: a SIG-constructed bank of useful tools and resources (e.g. planning sheets, web links, instructional videos etc.); a collection of local and international case studies; and a number of research outputs (e.g. Blackboard World09 paper and poster; EdTech09 Conference papers).

This model approach extends the traditional 'talking-head' trainer-led instructional model to a more collaborative and rich experience for the participants; and provides a mechanism to facilitate learning beyond the initial face-to-face training experience towards a peer-driven Community of Practice learning environment, supported by collaborative technology. All resources (including handouts, presentations, web links and case studies) will be available to the audience through a publicly accessible PBWiki site.

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**Using Google Docs to support Project-based learning**

Damien Raftery, Daire O’Broin

Institute of Technology Carlow

Project-based learning is a wide-ranging approach that uses authentic problems to engage students. Projects have two essential components: a question that organises and motivates activities, and a series of artefacts culminating in a final product, that addresses the question.

Some benefits of project-based learning include: it leads to increased student interest and perceived value, students acquire a deep understanding of key principles, and it enables ideas in the classroom to be linked with real-life. Among its limitations: it is difficult for students to collaborate on artefacts outside of class time, and it is problematic for the teacher to monitor the progress of the project, and to assess the individual contribution of each student.

These limitations are overcome by Google Docs (http://docs.google.com), a suite of free online software applications including word-processing, spreadsheet, presentation and survey applications. Firstly, it uses a merge model for collaboration, enabling students in different locations to work simultaneously but independently on the same artefact. Thus, both synchronous and asynchronous collaboration are possible. Secondly, we, as teachers, can be included as observers on each project group and thus track the development of the work. This is achieved using the history feature, which records each saved version of the document, allowing changes to be tracked to particular individuals.

This year, various groups of students across the Science and Business departments used Google Docs to work both collaboratively and individually on a diverse range of projects. Google Docs was introduced to the students with a short demonstration, and students were supplied with online support materials to learn about additional features. Evaluation is ongoing, and initial evaluations have produced promising results. However, some problems arose that will moderate our approach with future student groups.

Our presentation will briefly describe using Google Docs to support student projects, discuss the advantages for students and lecturers, present some feedback from students, and indicate possible problems.
Translating an in-class module to an online environment: design, implementation and reflection

Michael K Seery
Dublin Institute of Technology

This presentation describes the development of an online module teaching computer applications that was previously taught face-to-face. Design principles underlying the development of the module are outlined, including a consideration of the added value of the online environment. The module was approached from a social constructivist perspective aiming to maximise tutor-peer and peer-peer interactions in completing activities and tasks. The added value of this was to mimic a professional environment whereby the students could apply skills and knowledge gained to context-based scenarios, incorporating support from tutor and peers in their work.

The development of resources, including podcasts, screencasts and notes is outlined. These resources focused on maximising student interaction by relating the material to available practice files, and then onto assessment files. Flexible options and different learner styles were considered by presenting information in audio, video and written format. Students had an opportunity to expand their knowledge base by conducting additional tasks which were scaffolded by means of seeding resources and providing support. This also allowed for students to showcase their work and new knowledge, and allowed them to develop the skill of learning how to learn in a supportive environment.

Student support mechanisms, primarily facilitated by discussion boards and (to a lesser extent chat rooms), were incorporated into the module. Discussion boards were actively used by both students and tutors, with a good degree of peer-peer support. From a design perspective, discussion board mentoring was actively considered to ensure that students were tested and allowed to develop their own knowledge, again based on prompts from tutor and suggestions from peers. A guest expert was invited to join for part of the module.

Student interaction and engagement of the module was surveyed and it was found that video resources were highly popular, as was the discussion board. The subsequent development of resources will be considered. A reflection on practice, based on experiences of running the module for two years and with consideration of best principles will be discussed.

Using Module Manager Technology to Promote Collaboration in Programme and Module Development

Etain Kiely, Michael Barrett
Institute of Technology, Sligo, Galway Mayo Institute of Technology

IT Sligo embarked on the transition to a Modularised System in June 2007. This presented many challenges for practitioners in implementing a consistent approach when developing and reviewing programmes between schools. This paper discusses the innovative use of technology in developing solutions to address this. This involved the evolution from writing module descriptors using word templates and transcribing into Banner manually to a fully integrated automated system. The system is an in-house development which has been adopted by practitioners with the support of the Head of Modularisation and the Learning and Teaching Coordinator. The implementation became an integral component of the School of Science programmatic review.

Applications of the software include:

- Programme and module outputs which are aligned to National Framework of Qualifications and HETAC award standards
- Generation of assessment matrices across all years
- Library resource data to cross-reference relevant book stock
Centralised timetabling data on teaching room requirements
Student handbooks generation for courses
Embeds alignment with ECTS credits and student workload
Existing modules can be built into new and exciting offerings

One of the most significant developments of using this software has been in the increased levels of collaboration at all levels within programme and module design across departments and schools. As this is a web-based tool, lecturers can input data at a time that suits and can assign co-authoring rights to colleagues and management during the process. This new approach is transparent and encourages collaboration.

It is anticipated that this technology will further promote cross school collaboration as elective modules can be reused flexibly across the institute. Concise and standardised format facilitates student access to information. It also enables ongoing management of module updates and histories. This paper uses screenshot illustrations and examples to give an overview of this novel approach. This ensures consistency of data and provides a common platform for practitioners. The paper concludes with future developments such as mapping Recognition of Prior Learning (RPL) activities. This collaborative tool has led to a more sustainable approach for academic and administrative staff and the vision for the system is to ensure a more agile and responsive approach to the needs of IT Sligo’s stakeholders.

Using Interactive Clickers to Capture and Exchange Learning Feedback

Etain Kiely, Oliver Joyce
Institute of Technology, Sligo

Interaction and feedback can be particularly challenging in large lecture environments, where class size limits lecturer-student interaction. Engagement can also be limited by human dynamics when a few students dominate the dialogue. Research shows that learners may avoid interaction in large groups as they can feel intimidated and embarrassed if they get an answer wrong. Interaction and engagement is readily facilitated with clickers as learners can answer questions anonymously, this allows the learner to respond to questions without the fear of getting the answer wrong (Joyce, 2008). Clickers facilitate discipline-specific discussions, small group work cooperation and peer interactions. This interactive technology can be used to ensure students understand fundamental concepts and helps to identify knowledge gaps or misconception. Lecturers across all disciplines use these devices to help keep their students motivated and engaged. Although clickers are particularly valuable in large lecture classes, they can also be useful in small classes. Some lecturers use clicker technology to capture small group discussions and disseminate in large lecture classes.

The study presented in this paper details practitioners experiences of using interactive clickers to capture formative feedback and summative assessment data from learners at levels 6, 7, and 8 National Framework of Qualifications. The paper explores how Science students engage and exchange in answering conceptual questions individually and in groups at the end of a lecture. The collective learners answers are anonymously presented back to the group at the start of the next lecture to give feedback and to identify learner’s misconceptions. Data is compared on class participation and the variation in performance across the Framework levels in variety of Science courses. Suggestions are offered on how these tools can be used in other disciplines and the benefits and challenges of using interactive technology in large group teaching to achieve science learning outcomes.

The paper also describes the novel application of clickers in closing the student feedback loop on course evaluation to give feedback to the lecturer on learning experiences. Resource implications and alternative technologies which encourage active participation and anonymous capturing and exchanging of learning feedback are also explored.
Exploring wikis through an assessment task – reflections and resistance from practice
Marion Palmer, Hannah Barton, Grainne Kirwan
Dun Laoghaire Institute of Art, Design & Technology (IADT)

Web 2.0 tools, such as wikis (ASTD), are freely available and the subject of considerable discussion (Lamb, 2004, Wang & Beasley, 2008). A wiki assignment was set in a second year module of a Master of Science in Cyberpsychology, a two year part-time programme. Each year the assignments are set in advance and agreed with by the external examiners. The programme faces the challenge of developing academically valid assignments that reflect the cyberworld. This year a wiki was used as an assessment assignment in an Applied Cyberpsychology module for a variety of reasons, including ensuring that students use a wiki, to encourage lecturers to use wikis and possibly to enable students develop a resource for use in other situations. The assignment required students to develop wikis, find an audience and then report on the process.

The paper begins with a review of the nature and use of wikis (Lever, 2007), particularly in teaching, learning and assessment. It outlines the parameters of the assignment which is based on a successful virtual learning environment assignment at level 8. Although wikis are commonly identified as a useful tool for collaborative work (Richardson, 2006) their use in assessing learning is not evident in the literature. The design of the assignment is discussed (Bloxham and Boyd, 2007) as are the assessment criteria (Dunn et al., 2004). The impact of the assignment on the teaching and learning strategies used in the module is considered. As a wiki was required of the learners, one lecturer developed a wiki on the module content and used the wiki during class. The paper outlines the response, indeed resistance, of the students during the assignment, particularly student fears about trust, collaboration and competition. The outcomes of the assignment are considered. These include the range of wikis developed, the reports, the impact of the assignment on the learners and other wiki participants. Feedback from students is considered. Practical issues are considered – the variability of the wikis, the access to the wikis by the externs, the level of work required of students and the level of collaboration developed. The assignment is evaluated based on the student wikis, the themes from the reports and the student and lecturer responses. The paper is supported by examples of the wikis developed.

A number of themes emerged from the student reports on the assignment. First of all the technical demands of different wikis, the use of the term audience, the determination and selection of participants, how to keep participants engaged and contributing and the role of trust in wikis. Essentially the assignment indicated the need to develop a community around a wiki. The paper concludes with plans for development of the assignment.

References
The Impact of Interactive Whiteboard Technology on Teaching and Learning in Biochemistry.
Sinead Devery
Athlone Institute of Technology

Athlone Institute of Technology has long been committed to furthering its capacity and expertise in the area of learning technology in order to enhance the learning environment and student experience. Hence the main aim of this NDLR-funded project is to firstly design and implement novel approaches for the teaching and learning of biochemistry to second year Veterinary Nursing students via interactive whiteboard technology and secondly to evaluate the effectiveness of such approaches on student understanding and performance. Traditionally, third-level teaching of undergraduate biochemistry theory and practice has relied upon formal lectures and laboratory classes. Traditionally, students tend to perceive biochemistry as challenging and encounter learning difficulties with certain aspects of this subject. Typical problems include difficulties in grasping core biochemical concepts, including acid-base balance and enzyme kinetics, understanding quantitative/analytical-based calculations and the subsequent integration of theory and practice. However recent, concurrent, advancements in information technology and pedagogical approaches facilitate the use of ‘in class’ multi-media teaching strategies and unrestricted student access to web-based teaching resources. Indeed such teaching and learning approaches have been shown to adopt the diversity of the student group by accommodating differences in both learning styles (graphics, narration, text) and pace.

Hence in this pilot study the interactive whiteboard is used in conjunction with a screen and voice recorder to create short, multimedia lessons/movies that relay the pen strokes and associated explanations of quantitative, mathematical data to the student at a later stage via web-based access. Furthermore, and in contrast to viewing powerpoint-based lectures with still images, the learner is exposed to certain biochemistry topics via virtual animation-type lectures which are also uploaded as movie clips. Such teaching mechanisms are evaluated via student questionnaire responses, with preliminary results suggesting the most effective teaching methods are also the most visual and interactive.

Care must be taken when evaluating the examination performance of students who took the course before and after the inclusion of whiteboard technology, as high-scoring students generally attend a greater number of lectures than low-scoring students. Overall, and in response to student feed-back, further developments of the program will involve extending more visual and interactive-based lectures to a wider range of topics within biochemistry and biological science in general. Also the impact of ‘virtual’ laboratory experiments on the students’ ability to integrate theory and practice and improve their skills and confidence during ‘actual’ laboratory classes will be explored. Moreover, the potential for using whiteboard technology in the teaching of graph and statistical analysis software will also be investigated.

Reflecting on Models for Online Learning in Theory & Practice
Niall Watts
University College Dublin

This paper describes the lessons learnt during the design and delivery of a blended workshop on online learning. The applicability of several well-known pedagogical models to such a workshop is investigated.

The workshop was aimed at academics and teaching librarians in a campus-based university. Its objective was to introduce them to some of the pedagogies and technologies forming blended learning. Some of the participants were interested in delivering library and information skills classes online while others wanted to learn how to enhance the online elements of their existing courses. The workshop was delivered in hourly sessions over six weeks and made use of the Blackboard discussion forum and virtual classroom. The online sessions were designed based on learning activities or e-tivities (Salmon, 2002). The course designer was the tutor/moderator. Some sessions also had guest moderators.
During the course Salmon’s Five Stage Model (Salmon, 2000) was examined and its applicability to such a blended course investigated. Issues raised included socialisation, technology and the role of the moderator. For example, some of the participants knew each other before the course started. What effect did this have on communication patterns online and in the class? All participants were familiar with Blackboard though most had not used the discussion forum or virtual classroom. These features were demonstrated in the classroom sessions where the participants had the opportunity to contribute to a trial discussion and text chat. How should this be handled on a larger scale? Did students have the necessary technical skills or the ability to work collaboratively? Student expectations of feedback from the moderator and the management of these expectations were discussed. The steps in Salmon’s model were compared with the ladder in Moule’s (2007) e-Learning Ladder which focuses on continuity throughout a course and on the mix of instructivist and constructivist learning.

Could a Community of Practice as described by Wenger (1998) be developed in such a short course? Was their sufficient time to develop a set of relationships, a ‘shared repertoire’ or a sense of ‘joint enterprise’?

The presentation looks back on the workshop and the many issues raised in theory and practice. It concludes with some guidelines for future events.

References

Anti-plagiarism software in an Irish University: three years later
Angelica Risquez
University of Limerick

Anti-plagiarism software comes as a time efficient and relatively objective method to assist faculty dealing with this issue, although its pedagogical and institutional practices remain largely unexplored. This research paper explores the integration of anti-plagiarism software in an Irish university since early 2006, the progress made to date and the lessons learned on the way. Statistical records collected through the software tool are complemented with student responses about their perception of the system and its impact in their perceptions of plagiarism, in order to get a whole picture of the impact of the introduction of the system in the institution.

Lipstick on a pig? – Lecture notes as video podcasts on the iPhone.
Eugene O'Loughlin
National College of Ireland

Apple’s suite of hand-held devices, the iPod, iTouch, and iPhone, offer plenty of opportunities to educators to provide educational material in several media formats. These devices represent the leading edge in touch screen hand-held devices. Already, many third level institutions world-wide have introduced such devices in many different ways to both engage learners and teachers, as well as provide administration support. Some software vendors that create authoring tools, e.g. Toolbook, have versions for creating content for the iPhone. The iPhone 3G has recently become the top selling mobile phone in the United States (source - NDP Group). In a recent “All About iPhone Report”, Wu (2008) reported that for the first time the iPhone has become a lower cost alternative to expensive multiple digital devices and services, transforming it from a “luxury item to a practical communication and entertainment tool”. According to the report, growth rates of iPhone penetration are three times higher in lower income groups when compared to high income groups. Clearly, the iPhone, and
its many competitors, are putting immense technical power into people’s hands – consequently creating more opportunity for mobile learning.

You don’t need expensive tools to create content for the iPhone. In this proposed presentation for the Practitioner’s Track at EdTech 2009, the author will demonstrate how to create content in the format of video podcasts for the iPhone using common office tools and open source software. In a step-by-step procedure the author will summarize the techniques used as follows:

- Begin with a standard PowerPoint presentation
- Narration options (within PowerPoint or using Audacity)
- Saving slides and narration in appropriate format
- Adding video from a Webcam
- Editing content
- Using Windows Movie Maker to create a Windows Media Video (WMV)
- Converting WMVs to MP4 format for the iPhone
- Using iTunes to create and sync a video podcast library

While some material used will be created beforehand, the author intends to create content “live” as much as possible in the time allocated. The objective will be to take a standard PowerPoint presentation and show it on an iPhone with narration in 15 minutes.

The presentation will finish up with a short discussion on the use of video podcasts in mobile learning. Many educators regard video podcasts as a substitute for attending lectures in the minds of students. Some educators feel they are a valuable add-on to the learning process, while others think they are simply a “fancy” way of presenting the same lecture notes as in class (hence the “Lipstick on a Pig” title).

References

Use of Mobile Phones for Spoken Language Learning
Gavin Cooney
Learnosity

In 2007, in an attempt to promote the use of oral Irish language, the Irish Minister for Education and Science announced a significant change to the proportion of marks awarded for oral (spoken) Irish in the State examinations. Further to this, Learnosity worked as technology partner in a project initiated by the National Council for Curriculum and Assessment (NCCA), the National Centre for Technology in Education (NCTE) and the governing body for the Irish language (Foras na Gaeilge) in an exciting mobile learning project. One of the aims of the mobile learning pilot project was to ascertain whether ICT, including mobile technology, could facilitate school-based oral assessment. This project was very successful, and continues in the 2008/2009 academic year.

The assessment of oracy in the state examinations of various languages is done through interview by a visiting examiner, the latter generally being a teacher from another school. This practice is already posing significant logistical challenges for schools. This is not only true in Ireland, but in almost every educational system worldwide.

In 2008 Learnosity worked with The Learning Federation (a collaborative initiative of all Australian and New Zealand governments) on a mobile learning project which embraces the ubiquity of mobile phone usage by
students, and delivered Indonesian language learning by means of voice technology. This trial was undertaken by The Learning Federation with teachers and students from thirteen schools in three Australian states: South Australia, Tasmania and Victoria. With oral language fluency of the utmost importance to secondary language acquisition, these projects focus on verbal abilities, allowing students to use any phone to dial into a voice application, and answer a series of voice-based questions. It also allows students communicate 1-2-1 in real time (using voice or text), allowing them to use the target language in role-plays based on real life scenarios.

This author believes that this project is solving a real problem, is significantly more scalable than the mobile learning projects that came before, and the “mobile” element brings a huge benefit over other alternatives. Current uptake of mobile phones is astounding by any standard. The mobile phone is an excellent device to deliver any e-learning content as it is simple, reliable and mobile networks have far greater penetration than broadband Internet.

This session will outline the very impressive results of the Learning Federation project, and show how these findings can be applied to Irish students learning various languages. For more information on these projects, please see the following website: http://www.learnosity.com/blog/index.cfm/Mobile-Applications-for-Language-Learning

Application and learner perception of blogs in undergraduate psychiatry teaching - a qualitative assessment.
Thomas Mac Mahon, Séamus MacSuibhne, Allys Guerandel, Kevin Malone
St Vincent's University Hospital / University College Dublin

Blogs have achieved immense popularity in recent years. The interactive nature of blogs and other web-based tools seem consonant with contemporary pedagogical theories regarding student engagement, learner-centred teaching and deep learning. The literature on the use of blogs in education and in particular medical education has focused largely on their potential use rather than the practical experience of medical educators.

We designed a series of teaching sessions designed to explore the interface between psychiatry, mental health, and wider social issues. To complement this course, a blog specifically designed to provide extra information on the material covered was produced, and to act as a forum for discussion. A widely available, free-to-access web based tool was used to create and design the blog. One of the course tutors was the administrator, and invited the other tutors and lecturers from the course to write on the blog. The blog was publicised at the students' lectures, at which all the students were present, and via the students' eLearning platform.

To fully assess the effectiveness of the blog in helping students achieve the learning objectives, quantitative measurements are required. A focus group of students was formed to explore medical students' use of blogs for educational purposes in general, and the use of this blog in particular. These findings, and reflections on the use of the blog from the lecturer's point of view, are presented.

The king is dead: long live the king
Kevin C. O'Rourke
Dublin Institute of Technology

“Content is king” was a familiar mantra among the internet business community in the first part of the present decade. Education was no exception: eLearning was going to be the next big thing, with organizations such as Columbia University, Yale and Harvard rushing to be the prime-mover in authoritative web content. Following the traditional model of distance education, eLearning was about content development and online delivery. Learning Management Systems such as WebCT, Blackboard and Moodle were designed to facilitate the move from traditional classrooms to an online “virtual learning environment” where bespoke content could be uploaded and student progress could be closely monitored. For lecturers, the focus was on training to use
software packages which would bring their content to life: web-authoring tools for multimedia, assessment and so on, as well as the use of the VLE itself. And while the talk was always about focusing on pedagogy rather than technology, in the classroom for the most part it has remained business as usual. Basic teaching and learning methodologies remain unchanged, although now with some technological add-ons: presentations are made (usually with PowerPoint, which may be made available online), an assessment follows and the education loop is complete in much the same way as before. A syllabus and curriculum has to be followed, knowledge transfer has to take place and, with modularisation, there is less time into which to squeeze the content to be delivered. It is not clear that student learning is improving as a result.

This paper suggests that technology and eLearning as we are currently using it has not lived up to its promise. And perhaps that is not surprising. At eLearning conferences we talk about the latest tools and gadgets and how we believe they might enhance the learning experience of the students: wikis, blogs, podcasts, reusable learning objects and web 2.0 have become part of the general parlance. Less so is the radical change in teaching and learning methodologies which must accompany their use in order to make these technologies truly effective. In fact, despite much talk of putting pedagogy before technology, we seem to have done the opposite. It’s time to move away from a content-centric model of eLearning to one which focuses on learning and teaching methodologies. This will involve a radical rethinking of support, moving from the current training space which focuses on software skills and content development, to a space which addresses the way in which our curricula and assessment are designed, and harnesses the near-infinite volumes of content on the web to create a better experience in and out of the classroom. Only in this way, I believe, will we begin to truly exploit the possibilities which technologies can offer to the learning and teaching environment, for student and lecturer alike.

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Enhancing the learning experience of the electronic spreadsheet using collaborative software and interactive whiteboard technology

Sean Connell
Athlone Institute of Technology

Having experienced the closing address at Ed Tech08 the author explored the possibilities presented by Google Docs technology as an alternative to teaching spreadsheets in a traditional manner. The collaborative capabilities afforded by Google Docs spreadsheets, coupled with the use of interactive whiteboard technology as a teaching and learning tool, is explored in this study.

The author delivers comparable modules to learners at the same stage of their hospitality and tourism related programmes, i.e., final year level 7 learners for whom Information Technology is a mandatory subject. Both cohorts of learners study spreadsheets as an element of this module. This research aims to measure student responses to the experience and any improvement in learning achieved by the learners from using a spreadsheet application which incorporates a collaborative facility versus that learning achieved using traditional means.

Learners are given instruction in the software using a didactic approach with the use of an interactive whiteboard and supporting video created using screen recording software and distributed using a VLE. Group and independent learning is facilitated for the purposes of the research. The student based outcomes of the learning achieved are assessed based on learners’ responses to questionnaires and focus groups over the period of the study which is a 15 week semester.

It is envisaged that feedback will be presented on:

- The learning achieved by learners using the collaborative features of the Google Docs software;
- The learning achieved by learners directly as a result of using an interactive whiteboard during timetabled learning hours;
The learners’ experience of using the new technologies employed versus traditional spreadsheet software.

Future research may focus on quantifying the learning experience achieved by using these learning and teaching technologies. It may narrow the terms of reference of the project, focusing on the use of collaborative software and evaluating its potential for higher education and in particular assisting group problem solving in this environment.

Using a new dog to teach an old trick. Can an interactive whiteboard enhance the teaching and learning of German?

Eimear Kelly
Athlone Institute of Technology

Writing in 1880, Mark Twain described “the awful German language” as being slipshod, systemless and perplexing, its grammar confusing and its sentences sublime and impressive curiosities. Little seems to have changed in students’ attitudes to learning German grammar since Twain’s time, yet teachers and lecturers continue to attempt to teach it and students continue to attempt to learn it. A goal for most teachers, however, is to make the process a little less painful for all concerned. Studies and experience have shown that technology enhanced instruction can facilitate this.

This paper describes on-going small-scale action research on the integration of the interactive whiteboard [IWB] into the language classroom. With software that is largely intuitive and relatively easy to use, a range of task-based activities was developed with a view to ascertaining whether the use of an IWB to present and practise linguistic structures would

a) promote active, collaborative learning,
b) enhance the learners’ experience, and
c) have a positive impact on their output.

It is too early to say whether using the interactive whiteboard has had a perceptible impact on the accuracy of the students’ implicit knowledge as measured by their performance in spontaneous language use. However, preliminary qualitative analysis of the data to date supports views reflected in recent publications that the use of technology in general can motivate and engage both students and lecturers, while the IWB in particular can enhance the lecturer’s capacity to reinforce concepts visually in a way that is more tangible, literally, than more traditional approaches. While the lecturer has to invest more time, at least initially, to plan and prepare classes using the IWB, this is compensated for by the sense of satisfaction gained at the end of a successful session. Students who may previously have resisted attempts to involve them actively in the lesson now volunteer to participate in IWB-based activities. There is less isolated learning both because the students are now part of a learning community, and also because they are completing real, communicative tasks which have a purpose so that the language structures are grounded in a context. Without overestimating the transformative potential of technology, it is expected that further research will support the intuition that the IWB is a valuable addition to the language lecturer’s toolkit.
New Learning Spaces: First Year Fine Art site-specific project work using online mapping tools for reflection and critique; and the creation of a visual dynamic archive of project work completed off campus.

Laurence Riddell, Lynda Devenney
Dun Laoghaire Institute of Art Design & Technology (IADT)

OVERVIEW OF PROJECT

As part of the BA Visual Art Practice programme, the 1st Year of the programme is primarily concerned with the application/implementation of research strategies and methodologies. As part of the course design students engage in a site specific project using the location as a starting point for the investigation and creation of a body of research work.

Site –Specific Project- Irish Museum of Modern Art

IMMA is a key cultural and national resource for the visual arts. The benefits in utilising such a resource was having direct access to a rich and varied programme of events hosted by the museum and an opportunity to collaborate with the museum’s educational programme. Equally beneficial were the provision of working studios spaces on site to process and develop research material.

Key locations were identified within the grounds of the museum as starting points for the gathering of research material. Students were encouraged to explore and develop their research work through a diverse range of approaches and treatments and through the manipulation of traditional and non-traditional materials. They were then asked to publish online all video, audio, photographs, drawings and site-specific research and artwork.

LEARNING STRATEGY

The relocation of the learning experience through student participation on a site-specific project. The resulting working in response to this change and the adoption of an interdisciplinary approach to the use of new technologies as a tool for gathering, processing and publishing research material. The key areas are:

- Social Networks
- Collaborative learning
- Digital Literacy
- Student-created content

TECHNOLOGY

One of the most important aspect of this project is linking the artwork back to the site, Google Maps enabled the students to mark the exact location and attach images uploaded through Piccsa Web and video uploaded through You Tube to that location. The Google Map was then inserted into group blogspots and each student could then update their research online independently. The blogs offered the students a place to publish a record of their projects and a venue to share their artwork and receive feedback on their work from a local/national/international community. The blogs also enabled the lecturers to have an accessible portal to view the research for continuous assessment and feedback.

CONCLUSION

This presentation will show how online mapping tools and online publishing enriched the learning experience through sharing knowledge and creating dialogue and feedback with a wider audience. It proved a motivating tool for self-management, and a means by which students could develop their critical awareness through self-
assessment. It removed the boundaries and limitations on how one resources, shares, evaluates, discussses, interacts and involves others in the learning experience and creative act.

Url of project: http://www.1styeariadt.blogspot.com/

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**Program Visualisation tool for teaching Programming in C.**

Stephen Kirby, Benjamin Toland
Institutes of Technology Blanchardstown

Program Visualisation involves presenting the learner with a visual representation of an executing computer program. It has been found that many students struggle with programming as they do not have a coherent mental model of how a computer works. By allowing beginner programmers to observe a graphical representation of their program in execution they are greatly helped in developing this computational mental model and thus the learning of programming is simplified. It has been found that Program Visualisation tools help in the teaching of the Java programming language but there is no commercially available such tool for the C language which is the main language used in Computer Engineering education.

With the introduction of C++ and Java to the Programming world, much of industry has moved away from the C language. C, however remains an important language in Engineering, embedded systems and system level programming. The few available visualisation tools for the C language deal with abstract algorithmic concepts and do not focus on Program Visualisation – visualisation of the program executing on the basic computational mental model of the language.

Jeliot 3 is a program visualisation tool developed in the University of Joensuu, Finland, which visualises Java code at a fine grained level aimed at beginner programmers. The developers are actively seeking others to extend the tool to provide alternate visualisations of Java and the integration of interpreters for new languages such as C/C++. Jeliot 3 uses an intermediated language called MCode which links the Java interpreter of the program to the animation engine of Jeliot 3.

VIP is another program visualisation tool being developed in the Tampere University of Technology, in Finland. It is a tool that aims to visualise a subset of C++ called C++. This tool is still in development and while it has a command line interface it does not support a rich Graphical User Interface (GUI) like Jeliot 3.

This project aims to create a new visualisation tool for the C language by integrating the interpreter from the VIP project into the Jeliot 3 framework. This requires modifying the VIP interpreter such that it can produce MCode that can be read by the Jeliot 3 animation engine and modifying Jeliot 3 such that it can animate C-specific concepts.

It is hoped that a tool that provides a rich graphical visualisation of a C program in execution will improve the educational experience of novice C programmers as it has for novice programmers in other languages such as Java.

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**Using Responsive Evaluation Techniques to 'Mirror' the Teacher Professional Development Landscape in Rwanda.**

Mary Hooker
Dublin City University

The professional development landscape for ICT integration in Rwanda is complex and typical of experiences in a number of African countries. Fundamental to the complexity is the myriad of initiatives and schemes for new technology integration that have emerged over the last decade. Many such ICT initiatives in Education and Development have been externally driven and have failed to live up to the ambitious aspirations of their proponents because they have not been demand-led historically and because they give insufficient attention
to the involvement of stakeholders in defining the need and purpose of the development process. An absence of conceptual clarity on the objectives of teacher professional development for ICT initiatives in the region adds to the confusion and undermines the quality of provision.

In this research the author seeks to explore the potential of responsive evaluation techniques incorporating a hybrid of dialogical and story-based frameworks and tools to ‘mirror’ the TPD for ICT landscape in Rwanda. The study will have an action research orientation. The aim will be to encourage reflection on the appropriateness of a responsive evaluation technique utilizing an evolving toolbox of hybrid problem-solving frameworks and tools to address stakeholder needs in Rwanda, and whether principles and elements of this blended technique could be applied to other developing country contexts.

Taking on a responsive evaluator role of facilitator, interpreter, educator and Socratic guide, the author will test the potential of the hybrid tools and frameworks to facilitate participatory processes of analysis and reflection of TPD using ICT in Rwanda. The author will initiate the responsive evaluation process by conducting in-depth interviews using an ‘activity theory’ interview protocol for probing issues and exploring the perspectives of different stakeholder groups - managers, teacher educators, teachers - affiliated to national and local TPD for ICT programmes and initiatives. The author will integrate a ‘Most Significant Change’ narrative technique into the interview protocol to engage participants in telling their stories of significant change since the integration of technology in their practices.

The author’s role throughout the responsive evaluation process will be to concentrate on the emerging contradictions and controversies and to create the conditions for the interaction between stakeholders on the issues identified. While unveiling contradictions can be problematic, if they are handled constructively they can invoke development through expansive learning. The collaborative reflection on the emerging issues can provide stakeholders with a ‘mirror’ of the work of implementation at different levels. As a facilitator to the dialogue process the author’s research report should constitute a vehicle – a ‘working document’ for the next level of stakeholder dialogue – that of ‘negotiating’ solutions that are appropriate to local needs and context.

Autonomous Access to Graphics for Visually Impaired Learners.
Declan McMullen, Donal Fitzpatrick
Dublin City University

Learning material that relies heavily on the use of diagrammatical data or other visually intensive material remains predominantly inaccessible for visually impaired learners. If a learner is operating in a distance-learning environment, or cannot read Braille, there is limited access to graphical material. This provides a barrier preventing those with a visual impairment from enjoying the autonomy of learning that is becoming commonplace in the modern E-learning climate. The ability to understand graphics, known as graphicacy, is becoming expected of all educated adults [1]. The aim of this ongoing research is to investigate techniques that will allow for the independent learning of graphical material by visually impaired learners. There are two important areas in this work, independent access to graphics and user interaction with graphics.

The first area to be investigated was independent access to graphics. It was decided to take an existing technology used for delivering graphics to the visually impaired and assess its suitability as a distance learning tool. This work was carried out as part of the AHVITED [2] project. The technology in question is known as Talking Tactiles [3][4]. Raised (tactile) graphics are placed on top of a touch sensitive screen which is in turn connected to a computer. When a learner presses on regions of the graphic, information relating to that region is spoken. If the user continues to press the same region, more detailed information is spoken. Upon assessing the use of this technology in a classroom setting it became clear that it did not meet some important requirements in order to be viable as a distance learning tool. These requirements were; the ability to identify a diagram without placing it on the screen, simple loading of diagram content, intuitive localisation of diagram
content and an intuitive method of diagram authoring [5]. A new system was created containing solutions to the above requirements. The system is currently being evaluated in various institutions across Europe.

The second area to be investigated was user interaction with graphics. Work on this area has just begun. It has become apparent that the static nature of tactile diagrams provides a barrier to full independent learning. A learner must possess the physical tactile diagram in order to place it on the touchscreen. Work is taking place to replicate tactile interaction using haptics, a technology that has already been shown to aid the learning of visually impaired students [6]. Haptics refers to a method of communicating information to a user by applying a variety of forces and vibrations. This can be used to convey the shape and texture of virtual objects. In this work 2D images are being used along with haptic textures in order to investigate whether they can replicate the interaction strategy of tactile diagrams. The cutaneous feedback of tactiles can not be replicated using the kinaesthetic feedback of haptics, however as users have been shown to dislike the sensation of certain textures [7], and as the shape of the diagram is of primary importance, haptics are being investigated as a possible solution.

This work will provide new methods and practices for visually impaired learners to interact with graphical material. It will be especially useful in making technical subjects that rely heavily on graphical material, available to visually impaired learners in an autonomous fashion.


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**Is Social Software Enough to Support the Creation of Skills Development Programmes that Work?**

Alan Murphy & Dermot Rodgers

*Channel Content Limited*

Effective skills development programmes are dependent on:

- Creating virtual environments that supporting multi-modal learning and skills development
- Encouraging proactive participation
- Building communities of practice the produce demonstrable outcomes

A mixture of open source and no-cost software can be quickly and quite easily used to build the supporting platform but without clearly defined communications, participation and instructional methodologies they will fail.

This paper presents a comparative analysis of two programmes run by a national organisation that was designed to facilitate the development and formal accreditation of a professional skill.

Each programme had 50 or more participants. They were run over a four-month period and involved a mixture of:

- Tutor/expert led classes
- Online learning and collaboration
- Practical skills development sessions

Participants across both programmes aged from their early 20s to 60s though one was skewed towards the former, the other towards the latter. A range of social and collaborative software was used to support each. These included:

- Moodle
• Google Apps
• Facebook, and
• Multi-media content development tools such as Audacity

Though each programme focused on a similar area, each adopted different content, communication and instructional methodologies:

• The range and amount of preparation/support provided to participants as they used the skills development tools varied.
• The amount and nature of the self-paced materials was different.
• The types of knowledge and skills assessment tools used were different.
• Different collaborative and skills development models were employed.

The paper presents findings from the comparative study of the two programmes. It focuses on identifying the barriers to successful implementation and the critical success factors that will lead to the creation of skills development programmes that work.

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**Learning Styles or Not? A Classroom Experience.**
Brid Kilbane, Sabine Annegret Moebs, Jennifer McManis
*Dublin City University*

Secondary Teacher Assistant Researchers (STARs) is an SFI program that supports research collaboration between secondary school teachers and SFI funded scientists and engineers. The main idea of the program is to disseminate new skills and knowledge to teachers, which can be passed on to their students, by providing them an opportunity to work in a research laboratory. The STAR in our project is from a co-educational second level school outside of Dublin.

The goal of the project “Social Media to Support Learning Styles of Secondary Students in the Junior Cycle” was to explore whether the optimization of online learning materials to learning styles as addition to a face-to-face class results in a significant impact on the learning results.

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**Better Needles, Fewer Haystacks: Applications of a custom search engine to improve the quality of information retrieved by students using the WWW**
Enda Donlon
*Mater Dei Institute of Education*

The World Wide Web continues to expand at a phenomenal pace. While the amount of information available on the web has been a voluminous entity for some time now (when Google removed it’s ‘number of pages being searched’ facility almost 4 years ago, it claimed to be searching over 8 billion pages), the relatively recent uptake and continually increasing usage of Web 2.0 technologies has further accelerated this growth.

The fact that we have more information available to us now than ever before is of course a positive development, yet it brings with it a number of problems, mainly (but not only) those of accuracy, quality and relevance of information, results and searches. These problems are of particular relevance when using the World Wide Web for research and learning activities, and can often manifest themselves in the work completed by our students.

A Custom Search Engine (CSE) allows one to create their own personalised version of larger, more powerful global search engines, facilitating users to search websites and web resources which have been chosen in advance by an individual or group of individuals. CSEs are easy to set up and use, can be modified to specific needs, can be expanded through collaboration with others and can search across a range of web technologies.
This presentation argues that a Custom Search Engine can be used to help address the afore mentioned problems. It aims to demonstrate how to set one up, how to use it and how to include it in your own web resources (VLEs, blogs, departmental websites, etc...). In addition, advantages and disadvantages to this approach for teaching and learning, and practical applications of it, will be discussed while making reference to the use of this approach in one specific third-level instance.

Using Wikis to enhance communications in a collaborative environment
Martin Anthony O’Hanlon, Lejla Rovcanin, Kevin O’Farrell
Dublin Institute of Technology

The aim of Collaborative Engineering is to provide concepts and technologies to allow products to be developed by disperse groups. Emerging Internet technologies are facilitating groups to cooperate from remote sites resulting in savings on travel and shortening design cycles. It also assists the integration of knowledge across disciplines. During the last two years a number of collaborative projects have been run or are currently running in the Engineering faculty of The DIT as part of research into the teaching and development of interdisciplinary team skills. The projects run across programmes and aim to introduce some of the elements of collaborative engineering that would be encountered in industry.

An example of a collaborative project run in September 2008 involved students taking modules in Computer Programming, Industrial Automation and Project Management from three separate programmes working in teams to produce a Programmable Logic Unit and Graphical User Interface to measure heart rate. Students worked in groups of three, one from each programme. The individual members bring a different range of skills to the group that promotes both peer and independent learning.

Working within groups will better prepare the student for work in the real world where cross-functional teams and group decision making is common. Group work should improve their ability to use, Katzenbach’s (1997) “four C’s” of effective teamwork: communication, collaboration, cooperation and compromise. Indeed it is the interpersonal skills developed during the course of the project that may be the most important for future career success.

A difficulty that has shown up in the running of the projects is one of communication within the group. The students have different timetables and work in different areas of the Faculty and hence scheduling and attending meetings is problematic. We have tried a variety of communication methods, mobile phones (SMS), email and the institute’s virtual learning environment, but these were not successful and did not allow for enough monitoring by the lecturer. Hence we will run a trial using a Wiki as a vehicle for collaboration and communication. Participating students will have access to their own Wiki that they will use as a repository for all the documentation of their project. They will also use the Wiki to communicate with each other and as tool for project management. Importantly the level of expertise required to start to use the Wiki is not high.

We intend to use Pbwiki (pbwiki.com) which is an on demand externally hosted Wiki that is very easy to configure. It is free for educational use and has good online help facilities. Authorised users can edit pages on the Wiki, download files and create folders. All edits to pages are logged by date and time, this is important for both users and the project supervisor in determining what work is being done and by whom. At the conclusion of the trial we will survey the students to access the effectiveness of the Wiki and report the conclusions.

Learning Motion – A new step in video-based learning online and mobile
Dermot Rodgers
Channel Content Limited

Mobile learning or m-learning has been proposed since the 1980s as part of the future of a wireless multimedia world. Its definition and possibilities were vague. In the 90s the term sometimes simply described saving of offline user tracking data for later delivery to corporate leaner management systems. For most
though it meant the delivery of learning material or support on mobile devices such as phones, handheld computers etc. The time is now where content delivery, learning, collaboration and exploration are possible on a range of mobile devices. While some successful applications have been created, education and industry is still generally struggling to integrate mobile devices into existing delivery models.

This presentation will review some mobile learning concepts, successful applications, and trends to illustrate how education and training practitioners can use current and emerging mobile devices to deliver compelling and effective learning experiences.

The presentation will reference the following with examples and demonstrations:

- integration of mobile learning as part of a wide ranging vocational training initiatives featuring SMS and video
- integration of video-based mobile learning as part of an internal commercial blended training initiative
- integration of video-rich mobile content and web based activity using the iPhone
- summaries of real current mobile learning issues in industry
- how mobile learning relates to elearning and other uses of technology

Recognising that good learning not simply a technology issue the presentation will give some direction on design, development and delivery issues for the range of mobile platforms currently available. This will summarise development and delivery models and practices. A range of tool and platform issues will also be addressed.

The presentation will also present recent market data from consumer, broadcast and other sources to help predict where the use of mobile devices are headed in learning and performance support contexts.

Finally the presentation will speculate on future phases of mobile learning including the assumption that the “mobile” and “m” will fade away as the technologies become accepted as routine in day to day learning activity.

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From eLearning to ULearning - A Novel Framework for effective Organisational Change and Continuous Improvement Programmes

Liam Brown, Vincent Wade, Eamonn Murphy

Trinity College Dublin, University of Limerick

A framework is proposed as to how Technology Enhanced Learning (eLearning) can be deployed as an effective mechanism to facilitate and support continuous improvement and change management programmes within organisations. The framework supports the current drive in education to move from tutor centred approaches to learner centred approaches. The framework also takes the relevant pedagogical and technological
considerations into account and implications for the design of future programmes are posited based on feedback from the current programmes.

The framework has been deployed through an initiative known as ULearning at the University of Limerick. This an innovative connector of industry and academia, addressing individual and corporate skills gaps through professional flexible learning. ULearning courses allow progression from Specialist Diplomas (SD), to Masters (MSc) and on to Professional PhD at your own pace. The guiding principles are that individuals can earn professional industry certifications and academic qualifications while at work and that courses can be Designed with contextual content based on individual’s needs.

Delivery includes on campus, distance education, physical labs, tutorials & workshops, and technology enabled peer learning all supported by learning facilitators, and course coordinators.

The framework has been extensively evaluated through 4 consecutive cohorts of students from industry over a 2 year period. Evaluation results have been incorporated into the framework and design guidelines for future iterations of programmes to be deployed through the framework are presented.

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**Project-Based Learning: Changing the Face of Traditional Education**

*Terry Smith*

*Pepperdine University, U.S.A*

Project-based learning in a technology rich environment can be effective in K-12 classrooms allowing students to negotiate understanding and construct knowledge in social situations. Benefits include connecting students in communities in and outside of their cultures, and meeting learning goals in non-institutional fashion, while educators share practices and resources using technology tools. When projects endure over time, characteristics of communities of practice begin to emerge in which shared content grows and is amended by participants, generating historical artifacts. Once instantiated, the project philosophy provides an ongoing basis for immersive learning, using wikis, blogs, and other social networking applications. A project-based classroom philosophy sets an engaging, attractive environment for students by meeting their needs to be socially involved, as opposed to being passive receivers. An example long term Internet learning event called the Monster Project is examined in this paper. Widespread use of project-based learning has been curtailed by a strong focus on traditional instruction to meet testing goals. Research shows that active participation in project-based education results in students being more intrinsically motivated, more likely to show conceptual understanding, and more well adjusted than students in traditional education modes. These characteristics are those of a community of practice, where members are informally connected by their accomplishments and by what they learn together. The range of academic content that can be integrated into project-based learning as the main approach in a classroom is bounded only by a teacher’s energy and creativity.

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**Enhancing Domain Model with Performance Oriented Metadata for Adaptive E-learning Systems**

*Andreea Maria Molnar, Cristina Hava Muntean*

*National College of Ireland*

Due to the increasing complexity of web site navigation, but also as a response to the “one size fits all” approach, adaptation mechanisms have emerged and have started to be used by a large number of on-line educational systems. As educational content may be delivered through various types of networks that differ in characteristics and vary with the time, the quality of the transmitted information is affected. PAMAH (Performance-Aware Multimedia-based Adaptive Hypermedia) proposes to overcome this barrier by taking into consideration the personalisation process not only the classic learner profile but also the performance of the network connection used by the learner, when rich media content is delivered. This paper focuses on presenting performance oriented metadata required for modelling the educational content and for enhancing
the adaptation process. The goal is to provide a personalised media rich content suitable for the learner network connection.

Maths attainment at primary level using curriculum based multimedia in a VLE

Brenda Walsh
Institute of Technology, Tralee

Social networking is an integral part of children’s lives today. A pilot project on the use of a VLE at primary level was run in partnership with The Education Centre, Tralee. The centre hosted the maths module Digimaths on their Moodle learning management system. The growth of virtual learning environments (VLE) and learning management systems (LMS) in the European and British educational sector is a trend which is continuing to grow. There are indications that education in Ireland will follow a similar trend. Moodle VLE was of interest as it is open source software and therefore affordable to Irish schools.

The Digimaths product was developed based on the Irish primary school mathematics’ curriculum. The research investigated whether a curriculum aligned multimedia application in a Moodle VLE encouraged students to improve their scores in the standardized tests, in particular the primary school SIGMA-T test. Participants’ attitude and self-efficacy in relation to maths were also included in the study.

Technology enhanced learning and testing of mathematics

Frank Doheny
Athlone Institute of Technology

The objective of this study is to develop students’ capacity for self-directed learning by adopting and integrating three separate technologies. The study encourages students to take greater responsibility for their own learning by challenging them to take control of their own continuous assessment marks.

This study takes place in semester 2. I have produced a series of short tutorials on a digital whiteboard covering three major sections of the mathematics course. These were recorded and later edited using Camtasia, a screen recording software package. I also developed a set of quizzes in Moodle, the V.L.E. used in Athlone I.T., one quiz for each section. The questions were arranged in ten or more categories, with a minimum of five questions per category. The quiz selects one question at random from each category to produce a personalised test. I uploaded the video tutorials onto Moodle and advised students to watch the videos before attempting the relevant quiz.

Students are allowed to take the quiz as often as they wish although penalties accumulate with each attempt. The combined highest marks scored by a student in the three tests forms their continuous assessment mark for the semester. The students may attempt the tests whenever and wherever they like as the tests are unsupervised open-book tests. If a student is unhappy with the C.A. mark they have achieved, they can opt to sit a traditional end of term test. I chose first year students for this study because it promotes independent learning, a skill that is lacking in many school leavers, and as it is not an award year, it will not affect their final mark. The results will be fully gathered by the last week of March and will be analysed with regard to finding answers to the following questions:

- How often was each quiz taken?
- Did results improve on repeated attempts?
- Did the students watch the videos between successive attempts?
- What is the students’ view of a satisfactory result?
- Within what range of C.A. percentages were students more likely to sit the traditional end of semester test?
Interactive Learning Exercises for Teaching Computer Graphics
Hugh McCabe
Institute of Technology, Blanchardstown

We present a set of interactive learning exercises developed for a Level 7 Computer Graphics module. There were two main motivations for this work. The first one was the necessity of devising a means of helping students with relatively limited mathematical ability and experience to achieve an understanding of some of the core mathematical concepts underpinning computer graphics. The second was the desire to find a means of communicating these concepts in such a way that a wider variety of learning styles were catered for. An interactive learning exercise, in this context, is a graphical application that is designed to illuminate a particular concept in a visual manner, and that aims to help the students achieve an understanding of this concept by allowing them to directly interact with it and receive instant feedback. For example, one of our learning exercises deals with the well-known Phong lighting formula. This is a mathematical equation which takes a number of parameters, each of which controls subtle aspects of how light and colour are computed on the surface of a 3D graphics object. Typically this is taught by presenting the students with the equation and giving some examples of the effects of altering parameter values. Our learning exercise allows the students to directly manipulate the parameters of the equation on screen and to view the results immediately in real time.

A total of five such interactive exercises were developed, each of which deals with a core aspect of the graphics pipeline. The learning exercises are goal-directed in that they ask the learner to complete some tasks and submit the results. All of the development was done using Processing - a graphical programming environment aimed at visual designers and artists. We present the motivation, development process, and end-results of this sequence of interactive learning exercises, and draw some conclusions from our experiences introducing their use to a class of students.

Guerrilla video: helping teachers to reflect and learners to rewind
Imogen Bertin, Robert Cosgrave, Jennifer Murphy, Uwe Schiller, Lawrence White, Paul Denby
NAIRTL, UCC Brookfield Health Science, Cork Opera House

Learners report preference ratings of up to 82%[1] for viewing the results of lecture capture systems. To date, obstacles to the uptake of such systems have included cost, return on investment, lecturer time commitments, IT network bandwidth constraints, demands placed on student time outside of the classroom, and concerns about equality of access and decreased learner attendance.

Against a background of budgetary battlefields restricting the installation of fixed lecture capture systems, the National Academy for the Integration of Research and Teaching and Learning (NAIRTL) has piloted an inexpensive, portable system of lecture capture technology with a low in-class footprint, operable by one technician with basic ICT skills.

This paper gives details of the cost and configuration of a system improvised and refined in use over a period of six months by theatre, AV and learning technology practitioners, with software tips and operating tricks. Conflicting pedagogical arguments about lecture capture were taken into account such as:

- It can enable learners to access educational opportunities they are unable to attend in person
- It can provide opportunities for learners to try an “erase and rewind” approach to complex or confusing material
- It can provide teachers with opportunities to reflect on their practice
- Some capture systems are unsuited to interactive and mobile styles of teaching
- There are fears that the use of lecture capture will reduce learner attendance in person

The laptop-based equipment selected provides rapid production for same-day web distribution, while retaining good quality video content, for four different scenarios:
• Non-intrusive hand-held filming of workshops and forums
• Portable system capable of 10-minute setup in standard classrooms where background noise may be a problem
• Recording of formal lecture-room presentations by visiting lecturers, including radio mics and lighting.
• Full conference and event recording, including light and sound equipment, PA, and backdrop, which can be installed in any venue, while fitting into a small car van for transportation.

The NAIRTL system can produce screencasts showing audio, speaker video and slides side-by-side, as well as other formats ranging from iPod mp3 to VLE resources. Content is accompanied by an irregular forum inviting feedback and suggestions for improvement. Subtle and flexible improvements are envisaged, involving SMS, Twitter and Facebook.

To evaluate the system in use and encourage critical review[2] and popular support, NAIRTL intends to compare the views of attendees at teaching and learning lectures with the opinions of those viewing the screencasts, and a further group viewing the content together and discussing it, using the Classroom Assessment Technique (CAT).


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**Blogs - a study into current uses and perceptions in Irish society**  
Sinead Cochrane  
*Dun Laoghaire Institute of Art, Design & Technology (IADT)*

Blogs are described as “frequently updated websites where content (text, pictures, sound files, etc.) is posted on a regular basis and displayed in reverse chronological order” (Schmidt, 2007, p1) and are primarily used for “personally oriented written communication” (Kirchhoff et al, 2007, p3) where the author publishes information about themselves or about topics of interest to them (Baker & Moore, 2008). Blogs have also been described as “the cyberspace version of the soapbox” (Kaye, 2007, p138), which the estimated 3,000 to 4,000 Irish bloggers (Kennedy, 2008) have especially seemed to have embraced. Blogging has potential to increase social capital and provides a means for knowledge sharing, which contributes to the creation of a public good in the form of shared intellectual capital (Nahapiet & Ghoshal, 1998) and in an international survey it was found that blogging is both personally satisfying and has a positive impact on its writer’s lives (Technorati.com, 2008). This paper examines if the same is true for Irish bloggers and describes a study that examined the attitudes and behaviour of blog readers, and the motivations, behaviours, identity issues and levels of socialisation in blog writers, within an Irish context.

Irish bloggers (N=244) were surveyed online, using a combination of qualitative and quantitative questions, 37 in total. 23% indicated that their primary motivation for blogging was “To articulate ideas through writing” and 50% indicated that their other motivations included “To provide commentary and opinions” and “To share my knowledge and experience”. This has had some positive effect on the academic lives of Irish bloggers with 30% of Irish blog writers indicating that blogging has had a positive impact on their academic life, and 15% indicated it has had a very positive impact. Research suggests that blogging could be beneficial as a learning tool because bloggers cognitively engage with their blogs, placing themselves in a position of self-importance as a content creator (Sundar et al. 2007). Bloggers also have the benefit of the comments system, which facilitates peer review (Johnson & Kaye, 2004). Blogging has yet to be embraced by the education sector in Ireland, with only a handful of schools and colleges currently blogging and in recent survey of Irish teachers only 20.1% indicated that they posted on blogs (Anseo.net, 2009). However, this research suggests that students and teachers blogging has the potential to increase social and intellectual capital, and students could benefit from synthesising their learning through writing and peer review.
CoPIT: A Community of Practice creating a Learning and Research Environment for Educators.
Seamus Ryan, Eimear Kelly, Sean Connell, Barry O'Loughlin, Assumpta Byrne, Sinead Devery
Athlone Institute of Technology

This paper describes the insights that arise when educational research is approached as a Community of Practice (CoP). Wengler et al. (2002) defined CoPs as groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.

Within AIT, a Community of Practice in Instructional Technology (CoPIT) was established 18 months ago with the twin objectives of:

- Fostering a research mindset within the institute towards instructional technology.
- Deploying classroom technology in pedagogically appropriate situations.

CoPIT consisted of seven members: six lecturers from across the schools and a systems librarian. Within this group, there were those with technical skills who had an interest in advancing their research agenda and those with a history of domain specific research activity interested in learning about instructional technology.

Each member went through the process of identifying a research topic with support from the community. There was a budget for equipment much of which was shared across projects. A bi-weekly meeting provided a forum for exploration of technical and pedagogy issues.

In terms of outcomes, CoPIT has been a success:

- A body of expertise in the appropriate use of the technology will help with deployment across the institute.
- A research mindset has developed within the community.
The technology used in the research remains in place.

In terms of the future, the key question is how to nurture this concept and expand it into the broader academic community. The Community of Practice and the individual projects which flowed from it were part funded by NDLR.

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**Assisting FE College Managements in Assessing ILT Development Status**

Mike Moran  
*Regional Support Centre of Northern Ireland (RSCni)*

Since 2004, the JISC Regional Support Centre of Northern Ireland has been offering an ILT Health Check service to FE college senior management in Northern Ireland. The methodology involves a mix of online surveys of teaching staff and students; examination of college strategy and policy documentation; and college site visits in which focus groups and key individuals are interviewed.

College status in respect of ILT developments is reported on and is benchmarked against the Demonstrating Transformation grid used by the government inspectors of FE. This presentation will describe the methodologies and methods of analysis used and will report on some of the cross-sector findings and trends.

The methodologies are set to be revised and improved and the reasons for this and the prospects for future strategic support to colleges will be discussed.

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**An Investigation into the Use of Short Screen Recordings as a Means of Instruction in a Practical Computer Module**

Barry O’ Loughlin  
*Athlone Institute of Technology*

This paper describes the use of short screen recordings with accompanying audio as a means of enhancing the learning opportunities of students on practical computer modules. While the use of video streaming as an education tool has had a place in the academic world over the past number of years, to date most of this has involved the use of online videos replacing the requirement for the physical presence of a lecturer.

This research suggests that in a practical environment any videos should only act as a replacement for the lecturer as a demonstrator. The role of the lecturer in this environment should now be a more productive one in assisting with the application of what was demonstrated rather than the time-consuming act of demonstrating. The additional benefit is of course the fact that the student can now rerun the demonstration as often as they require and when they require in order to facilitate their application of a practical aspect of the course. This helps to facilitate a better balance between students with different capabilities as better students can work at their own pace while the lecturer can spend more time with weaker students.

This research has been conducted using an action research approach. Students in the first year of a Business Computing course have been the key subjects in the research. The module used to deliver this technology-enhanced instruction is an application module (Database Applications) delivered in an information technology laboratory. Access to the video files are provided to the students using college network resources. Students are required to listen to the audio aspects of the video via headphones, therefore not interrupting their classmates.

Student feedback at this stage has been very positive. Students like the novelty of the approach and in particular feel that they now have more control in being able to watch the videos and rewind or replay as often as they require until they understand how to do what is required. Class attendance is still key as “how to” in an isolated environment is of little use to a student without being able to apply their new-found knowledge to a practical problem as posed in the classroom. While the students can resort back to the video
demonstration the presence of the lecturer can help them “problem solve” etc. To date there has been no negative impact of student attendance.

Questions that still remain to be answered include:

1. What impact, if any that this new approach will have on student’s marks in exams?
2. What is the most appropriate format to provide the short video files in?

Transatlantic videoconferencing with VLE support: Innovative e-learning technologies enhancing undergraduate skill acquisition.

Carrie Griffin, Orla Murphy
University College Cork

This paper discusses and evaluates a new course design using videoconferencing as a new learning space supported by a VLE, using the central theme of heroic narrative to explore an awareness of the multivalent text as an aesthetic presence in early and contemporary material, within the discipline of English literature.

Engaging with a colleague at a university in New York we set up a knowledge engagement and exchange program focussing on key objectives for students that involved communicating ideas and concepts, engaging in scholarly debate, developing effective questioning and responding, and recognising that communication and textual transmission are interactive and collaborative events through the ages. A central focus of the course was to promote e-literacy amongst humanities undergraduates and to encourage them to engage with e-learning and the digital humanities in a radical new approach for our School.

Critical reading and thinking in all media is a core skill. Students were encouraged to think about and practice textual transmission in a number of ways. We drew a direct parallel between the medieval manuscript and the digital text in terms of authorial or editorial intent and reader response. Everyone read texts made available online and having read them a discussion paper was posted on Blackboard encouraging an online debate. These outcomes were further discussed during the videoconferences which were held throughout the spring semester between second year undergraduates and a freshman/sophomore group in New York. Students working in smaller groups designed a course website with each group having a specified role in design, layout, content, editing, images, and issues of IP and introducing the concept of tagging.

Each individual student was assigned a research and writing project on which they presented in class, and which was their individual contribution to the class web site. The learning outcome in this part of the seminar involved students thinking on how readers and researchers receive, process and interpret information, particularly on the Web. The web page is now available on the university site.

Naturally with a project of this nature there were issues encountered on both sides that needed to be addressed and overcome: time delays, time differences, environmental issues & cultural differences, amongst others. We asked students to theorise some of these as part of the learning experience.

This blended learning approach encouraged an active engagement with the central course material on both sides. It was a matter of national pride to have something relevant to say to their American colleagues and vice versa. Publishing students’ course material online also radically altered the student/teacher dynamic as work was not now submitted solely to the teacher, but to the whole peer group – on both sides of the Atlantic.
Teaching mathematical modelling: a research based approach.
Greg Foley
Dublin City University

The teaching of mathematical modelling within conventional laboratories is a feature of many engineering and science-based degree programs. A typical modelling ‘experiment’ involves coding a mathematical model of a system in the required language, running the model for range of scenarios and generating a number of graphs and tables to represent system behaviour. However, unless the system chosen is exceptionally interesting, showing unanticipated or non-intuitive behaviour, the student response at the end of this type of exercise is often one of indifference. The key to a good modelling exercise is that the problem is new to the student, open-ended, that it yields non-obvious results which stimulate thinking and that it is sufficiently complex to develop the students’ technical skills.

To instil a sense of the creativity involved in mathematical modelling, we design numerical experiments for undergraduate biotechnology students around real research problems in bioprocess engineering. This year, students are presented with a mathematical model of a novel diafiltration process which is currently the subject of international research and are required to code it in the simulation language Berkeley Madonna. This is an easy-to-use simulation package for solving systems of ordinary differential equations. It is user-friendly and accessible to students who have only a small amount of experience of programming.

In our approach, the class is divided into groups of three students. Each group is then given a specific aspect of the model to investigate. One group works on the model in any given laboratory session. Inter-group transfer of results (via email) is required to ensure that the class as a whole undertakes a coherent research project. At the end of the module, students receive a document containing a complete set of results. A short written examination is held in which students are examined on the entire class project and not just their own specific tasks.

The potential to discover something new proves to be an excellent incentive for students to engage with the mathematical modelling exercise. They are excited by the opportunity to contribute to the body of knowledge in the area of the simulations and they get a feel for the excitement of the discovery process.

Getting past the Google search box: employing screencasts in library
Assumpta Byrne
Athlone Institute of Technology

Issues facing students whether writing assignments or researching a thesis topic include the discovery of reliable and valid information sources and the extraction of relevant information from these sources.

At Athlone Institute of Technology, information sessions are given to student groups and individuals by library staff. These sessions include guided searching of relevant databases and information sources. In an attempt to reinforce the content of these sessions, screencasts were created using Camtasia. The screencasts, with voiceover and text, display:

- all information sources available via the library website;
- creation of a search strategy; and
- database searching using multiple keywords.

A short questionnaire was given to student groups at information sessions before the screencasts were created and then to those students who saw the screencasts as a supplement to the usual information session. Questions on the students’ information sources and their search strategies were included.
This presentation outlines the creation of the screencasts and the results of the questionnaires. Did the screencasts succeed in reinforcing the value of databases as information sources? Did the screencasts guide the students’ thinking towards searching alternate keywords and not just the assignment title?

Preliminary findings suggest few differences. Students continued to rely on the Internet as their primary information source, however differences emerged in answers from students at different course stages.

Technology enabled students? Engineering students use of web-based resources
Aidan O'Dwyer
Dublin Institute of Technology

This contribution will discuss the evaluation of a learning approach assisted by the use of web-based resources within the WebCT/Webcourses (from Blackboard Inc.) virtual learning environment (VLE). The paper will focus on student usage of the web-based resources and on whether the resources improved student learning.

The background to this work is the increased emphasis on IT and web-based learning applications in engineering education, with an increasing number of publications discussing aspects of this issue [1-14]. This increased emphasis is driven by the twin pressures of the need for students to learn a wider variety of concepts (ideally in a self-learning mode), and the reduction in class contact time.

DIT has invested heavily in the e-learning facility mentioned above, and has set up a learning technology team to assist lecturers in the development of e-learning approaches. Detailed information is available at http://ltt.dit.ie/. Because of the time taken to develop e-learning materials, the author decided, as a first iteration, to compile lecture notes in PowerPoint (for a number of modules), and make the relevant presentation available to students on the VLE the week before the topic is covered in the lectures. Thus, the online environment is used in a simple way to store lecture material that users can access at their own convenience; this material is also covered in a more traditional way in lectures (where a paper copy of the PowerPoint presentation is used as the basis of the lecture).

The contribution will report on, and evaluate, the student learning experience including:

- Student usage of the web material for programmes at Level 7 (Year 1), Level 8 (Year 4) and Level 9, over two academic years; the Level 7, Year 1 programmes, and the Level 9 programmes, have a significant cohort of part-time students, who would be expected to benefit most from this blended learning approach;
- Student feedback about their experiences of using the VLE and whether and how it facilitated enhanced learning. Such feedback is obtained through the use of questionnaires;
- Correlation of assessment results with student access to material on the VLE.

The contribution forms part of the author’s commitment to the progressive implementation, in an e-learning environment, of the modules for which he is responsible.

References:
Using Technology to Improve the Student Experience

Mark Glynn
Institutes of Technology Ireland (IOTI)

The last 40 years have seen higher education transformed from an elite pursuit for the few to a mass activity for the many and now, some argue, to a universal entitlement for all. This massification has been accompanied internationally and nationally by a significant expansion in the range of institutions offering higher education; private, public, technical, liberal arts, specialist, big and small. Through the 1970’s, 80’s and 90’s the expansion was seldom questioned and new institutions were created on a regular basis. This decade, however, has seen a change. Whilst the argument that an increased proportion of the population should have access to and hold third level qualifications remains intact the system is being challenged. Students, policy makers and funders increasingly question the way in which access is gained, the choices and manner of delivery methods available once in the system and the cost associated with the whole endeavour.

It is arguable that much of the change that has occurred as a consequence of the increased pressures noted above has been intra rather than inter institutional. Within institutions the introduction, inter alia, of modular and semester systems and the increased use of virtual learning environments such as Moodle, WebCT and Blackboard has occurred in an attempt to meet students’ demands for greater choice and more flexible delivery methods. At a systems level the inter institution change that has taken place, until recently, has usually been in the form of ‘shot gun’ or ‘arranged marriages’ of individual institutions rather than autonomous institutions voluntarily coming together to cooperate. The, generally, negative experience associated with such non voluntary forms of cooperation has hastened the search for new ways of increasing student access and choice and reducing costs while allowing institutions to retain their independence and identity.

Higher education institutions do not generally cooperate but this decade has seen significant developments in voluntary inter-institutional cooperation to increase access and choice and reduce costs. A common feature of the cooperation has been the establishment of technology moderated systems that can allow students to search for and compare course offerings across a range of institutions, make applications online, register in one institution yet take flexible course offerings in another and access centrally hosted but shared digital resources. Examples of such systems include BCCampus (involves the higher education institutions of British Columbia), the Finnish Online University of Applied Sciences, studera.nu (a consortium of Swedish universities)
and Open Universities Australia. Each of these systems relies heavily on web based technology that was not available 10 years ago and which is vital to efficient functioning of the cooperation.

This paper describes a recent and significant initiative in Ireland that relies on such web based technology and which aims to increase student choice, increase flexible learning opportunities and enhance cooperation amongst the participating institutions.

**Visualisation of multi-dimensional learning objects in moodle**

Markus Hofmann  
_Institute of Technology Blanchardstown_

Elearning, blended learning and flexible learning are only some concepts that heavily rely on, or at least benefit from, a variety of learning objects that are provided through a Virtual Learning Environment (VLE). This paper focuses on how Moodle can facilitate this requirement and outlines its shortcomings in terms of structure, flexibility and visualisation of learning objects.

Although being at the forefront of VLEs Moodle has shown little improvement with regard to enhancing and catering for differing learning objects in particular with regard to visualisation and flexible structure. The Moodle page that visualises the content of a module is static and cannot be changed by students to reflect different learning styles, importance of material, type of learning object, etc. This often leads to information confusion and overload which in turn can have an adverse affect on student learning.

This paper reports on difficulties experienced using moodle to delivery the module Data Mining at NQAI level 7 (Bachelor - Ordinary). It further outlines students’ opinions after various alternatives were presented by recoding some of the moodle pages to introduce more innovative and flexible approaches enhancing the visualisation of learning objects.

**An evaluation of online teaching tools in a virtual learning environment.**

Michael O’Rourke  
_Athlone Institute of Technology_

This project examines the integration of a number of technology enhanced teaching and learning systems with a view to determining their effectiveness for synchronous and asynchronous teaching.

Athlone Institute of Technology now has a well established base of Moodle users. It is the preferred VLE/LMS for both lecturers and students. The rollout of Smart Board interactive whiteboards within the Institute continues apace. The Institute has recently adopted Wimba Classroom, which is a live virtual classroom environment with features that includes audio, video, application sharing, content display and archiving. Other freely available virtual classroom software, including WiZiQ and DimDim, is being examined also. Bridgit conferencing software from Smart is another option.

With these systems available, the objective of the project is to examine how they can be integrated to provide a suitable teaching and learning experience; whether the learner is present in the room where the teaching is being delivered (live delivery), or elsewhere at the time (remote delivery), or not available at the time of delivery to partake in the session (archive). A blended learning solution can be easily achieved using this technology.

Mathematical and engineering subjects provide particular a particular challenge as much writing on the Smart Board is required e.g. solving equations. Using Wimba Classroom, the content of the Smart Board can be pushed out to a remote participant in real time by means of application sharing. For learners who cannot participate, the session is archived and easily accessible at a later date. Topics on PowerPoint slides or other formats can be easily delivered in real time by any of the systems mentioned above. The Moodle VLE is
integral to this system as it binds it all together and provides many useful facilities such as forums and communications.

In conclusion, the project aims to examine these systems to determine the possibilities for teaching and learning in a 3rd level environment where there is a diverse range of courses, lecturers and learners, both on and off the campus.

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**On-line language learning and cultural preparation for residence abroad.**

Kristin Brogan, Riana Walsh  
*Institute of Technology Tallaght - Dublin*

Research in the area of Study and Work Placement abroad (Byram, M. and Feng, A. 2006; DuFon, M. and Churchill, E. 2006; Pellegrino Aveni, P. 2005; Ward, C. et al, 2003; Freed, B. 1995; Coleman, J. 1995;) has consistently concluded that pre-departure preparation is essential to the success of a Residence Abroad Period. The VOCAL project is a practical and innovative pedagogic response to this need for language and cultural preparation in advance of placement abroad. It aims to provide mobility beneficiaries with a practical and useful preparation tool for their placements and contribute to a successful integration process whereby learners can maximise linguistically and culturally.

The VOCAL project (Vocationally Oriented Culture and Language - www.vocalproject.eu) is a two year Leonardo da Vinci Transfer of Innovation project and part of the Lifelong Learning Programme. It is a follow-on project to Problem SOLVE (www.problemsolve.org), an earlier EU project awarded the EU Language Label 2006. The VOCAL project partnership consists of 10 European countries, a combination of 12 partner countries and 11 languages including Irish. This multilingual collaboration entails the designing of language materials by project partners, a subsequent testing and feedback process involving language learners. The end product serves as an on-line pre-departure preparation tool for students embarking on a mobility programme, with specific reference to mobility placement in vocational settings and work placement contexts.

These web-based language learning materials present the general topics of Travel, Accommodation, Socialising, Emergencies, At Work. The LSP (Language for Specific Purposes) component presents materials relating to the topics of Business, Tourism, Banking & Services and Engineering. The structure of each topic area includes a General Information section; Cultural Information relevant to the target language culture; Useful Words; Useful Phrases; Virtual Tours with audio and dialogue plus a selection of self-test exercises; Practical advice Do’s & Don’ts. All materials are designed by language specialists in consultation with subject area specialists.

These interactive on-line materials are bilingual (i.e. in the target language of each partner country and also in English). Learning styles and autonomous learning environments are considered in the design, and authentic situations are incorporated in likely non-classroom environments which the student may encounter. Linguistic and cultural preparation is achieved by means of these virtual journeys through various scenarios, whereby students are actively encouraged to troubleshoot potential challenges they may encounter in the host country.

Keywords: innovative teaching and learning methods, application of technologically enhanced learning, international placements, on-line learning, multilingual, multicultural.

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**Changing Latency, Changing Perception: User-Oriented Approach**

Olokunle Olowe, Gheorghita Ghinea  
*University of Brunel*

This paper focuses on the users’ perception of audio quality, by adapting relevant technical-perspective and user-perspective parameters at all quality abstractions: network-level, media-level and content-level. Although the problem of packetized audio application performance is closely linked to both the user perspective as well
as the service provided by the underlying network, it is rarely studied from an integrated view point. Hence, this paper investigates the low-level Quality of Service (QoS) latency parameters considered to be perceptual influence indicators of audio quality and its impact on user Quality of Perception (QoP). This enhances the interaction between the traditional technical view of QoS and user-level defined QoP. Our results show that latency neither affects the entertainment derived from an audio stream nor the informational content absorbed from it but impacts perceived audio quality. This implies that the impact of latency on audio entertainment and assimilated information becomes insignificant to users perceptual judgement.

**eLearning Project Posters**

**DHREA eLearning network**
Presenter Kevin O’Rourke
Dublin Regional Higher Education Area eLearning network.

**Learning Innovation Network (LIN)**
Presenter: Noel Fitzpatrick
The Learning Innovation Network (LIN) project is a three year collaborative project between the 13 Irish IoTs and DIT. Funded by the Strategic Innovation Fund (cycle 1) LIN is one of five stands within the project “The Institutes of Technology Sector Learning Network – Delivering Systemic Change”.

**National Academy for Integration of Research & Teaching & Learning (NAIRTL)**
Presenter: Imogen Bertin
WWW: [http://www.nairtl.ie/](http://www.nairtl.ie/)
NAIRTL is a SIF-funded collaborative initiative between University College Cork (lead partner), Cork Institute of Technology, National University of Ireland Galway, Trinity College Dublin and Waterford Institute of Technology. The objectives of the National Academy include the creation of tools and strategies to enable teaching staff to use and improve good practice in research-informed teaching and learning in Higher Education.

**National Digital Learning Repository (NDLR)**
Presenter: Community of Practice Coordinators
WWW: [http://www.ndlr.ie/](http://www.ndlr.ie/)
The National Digital Learning Repository (NDLR) is a sectoral initiative, providing services and support to enable the sharing of digital learning content and teaching experience across Universities, Institutes of Technologies and associated Colleges funded by the HEA.

**SIF Continue**
Presenter: – Rose Cooper, Institute of Technology, Tallaght
The SIF CONTINUE Project (Collaborative Network for Innovation in Education and Inclusive Education) is a collaboration with the Institute of Technology Blanchardstown, Institute of Technology Carlow and the Institute of Art and Design, Dun Laoghaire funded by Cycle 1 of the Higher Education Authority’s Strategic Innovation Fund.

**All Ireland Society for Higher Education (AISHE)**
Presenter- Linda King.
AISHE is a professional society whose goal is to bring together and support those people who are concerned to advance higher education in the island of Ireland. It promotes the professional recognition and enhancement of teaching and learning in Higher Education through a range of activities including seminars, conferences, publications, and provision of online community forums and services.
Wireless Access- Option 1

eduroam - Introduction

National College of Ireland are running a pilot project providing access to eduroam (Educational Roaming) the roaming infrastructure used by the international research and education community.

Being part of the eduroam community allows users access to the internet at any visited institution who are also members of eduroam, using the same set of credentials the users would use if they were at their home institution. The user is authenticated against a server located on their home campus. This service originated in Europe. Currently there are two main eduroam confederations:

The European eduroam confederation
The Asia-Pacific (APAN) eduroam confederation.

For more information visit the following sites: http://www.eduroam.ie or http://www.eduroam.org

NCI Wireless eduroam Access

NCI broadcast the eduroam WLAN SSID so user should be able to view the network which uses 802.1x authentication. Only validated users will be allowed to authenticate and connect to the WLAN.

- Uses 802.1x authentication
- Wireless network name (SSID): eduroam
- Encryption levels supported: AES and Network Authentication WPA2
- Authentication: PEAP

Technical Details

- Blocked ports / protocols: Currently the minimum recommend by eduroam are available however this list has not yet been finalized.
- IPv6 Support - Not Available.
- Transparent proxying of your traffic – No. Users will need to change the browsers proxy settings to 10.1.2.150: 8080
- Network Address Translation (NAT) of your wireless device – Yes

NCI have some URL filtering in place and these policies extends to eduroam

eduroam Users Visiting NCI

In advance of visiting NCI Campus please ensure you can access eduroam from your home site.

- NCI cannot provide support with authentication problems due to security mechanisms within the eduroam configuration. As this is controlled by the user home institution.
- Your credentials must be valid.
- Ensure your wireless device has been configured as per NCI Wireless eduroam Access
- If you have any queries in relation to eduroam service in NCI in advance of your visit please contact itdept@ncirl.ie
Visitor Wireless Access – Option 2

In addition to eduroam WiFi access, a Visitor LAN is available for EdTech delegates to use. These are the required logon details for "Visitor WLAN" during EdTech:

- Username: edtech2009
- Password: t3chnoligy (Note this password is case-sensitive).

Also, to connect, users must change their proxy server settings to 10.1.2.4 (port 8080), as follows:

1. Open Internet Explorer and go to the **Tools** menu, **Internet options**, **Connections**.
2. Click on **LAN Settings**, Click Proxy server and enter **10.1.2.4 port 8080**
3. Press **OK**

4. Click **OK**

5. When you open Internet Explorer the following screen appears. Enter username and password as supplied

6. Once authenticated, you will have access to the internet. Please be aware that NCI security restrictions apply.
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