



NAIRTL

National Academy for Integration of
Research, Teaching and Learning

Acadamh Náisiúnta um Chomhthráthú
Taighde, Teagaisc agus Foghlama

ENGAGING MINDS

PROCEEDINGS OF THE NATIONAL ACADEMY'S
FIFTH ANNUAL CONFERENCE



Designed and collated by Catherine O'Mahony with
assistance from Avril Buchanan

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This conference was organised in collaboration with the
Centre for Excellence in Learning and Teaching, NUI Galway

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Designed and collated by Catherine O'Mahony, NAIRTL, with assistance from Avril Buchanan, UCC

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Foreword

You are all most welcome to Galway for this joint event marking the 5th Annual Conference of NAIRTL and the 9th Galway Symposium. We always hope that these events provide a real opportunity for those of us within higher education to rejuvenate our sense of purpose and in particular ensure that the broader picture of an academic practice that combines teaching, research and working with wider society is rightly celebrated. Presenters from across Ireland and overseas are invited to share their perspectives with us and vice versa.



In the Galway Symposium tradition we will also be recognising those who have been nominated (largely by their students) for Teaching Excellence Awards at the Conference Dinner and NAIRTL too has its own national award scheme in which we participate. We also try to be a little innovative in our programming and this year in particular we have been so overwhelmed with brave people volunteering to try out Pecha Kucha type presentations that we have to run a single parallel stream for such throughout the two days. That's a real sign of both courage and creativity amongst all those valiant souls. Well done to you!

The theme of engagement touches on the very heart of what a 'higher' education should be about. It's about engaging the mind, struggling to understand new concepts and perspectives, experimenting with new ideas and developing skills, about critically engaging with the world around us and societal structures, about laying the foundations upon which to build a better future, about nurturing individual creativity and collective responsibility and hopefully also about having some fun along the way!

We are delighted to have so many presenters this year all of whom have much of interest to share with us as experienced practitioners as well as those able to put a theoretical structure on concepts of engagement, collaboration and learning.

So remember, we want you to be engaged too, to speak with each other, to challenge, to ask questions and make bold suggestions. But most of all enjoy the atmosphere in this small but vibrant city of ideas.

Best wishes,



Dr Iain Mac Labhrainn

Director of the Centre for Excellence in Learning and Teaching (CELT), NUI Galway
Member of NAIRTL Management Board

Part 1: Keynote Presentations

The wisdom of the crowds: clickers, crowdsourcing and educational technology

Derek Bruff, Assistant Director, Center for Teaching, Vanderbilt University, USA

Biographical Note

An educational developer and mathematics instructor, Derek Bruff consults regularly with faculty in a variety of disciplines about educational technology and other teaching and learning topics. Bruff's research interests include classroom response systems ("clickers"), social pedagogies, student motivation, and visual thinking. He blogs on these topics at derekbruff.com, and his book, "Teaching with Classroom Response Systems: Creating Active Learning Environments", was published by Jossey-Bass in 2009. Bruff has taught at Harvard University and has a PhD in mathematics from Vanderbilt University.



Abstract

Social media are used by ordinary citizens across the Mideast to tell the world about protests, crackdowns, and revolutions. Free and open source software like Linux is developed, debugged, and enhanced by computer programmers around the world donating their time. Wikipedia's English version contains over 3.6 million articles that are edited and expanded by over 150,000 active contributors. What makes these kinds of technology-powered "crowdsourcing" work so well? In this talk, we'll explore the principles behind successful crowdsourcing activities, see how those principles can help us use classroom response systems ("clickers") more effectively in our classroom and discuss other educational technologies, such as backchannels and prediction markets, that complement clickers and leverage some of these same principles.

[Link to Presentation \(Prezi\)](#)

[Link to Video of Presentation](#)

Higher Education as epistemic apprenticeship

Guy Claxton, Co-Director of the Centre for Real-World Listening and Professor of Learning Sciences, University of Winchester

Biographical Note

Guy Claxton is a world renowned authority on expandable intelligence; what it is, why it matters, and how to grow it. He is the author of many books and articles, including “Hare Brain, Tortoise Mind: Why Intelligence Increases When You Think Less”, “Wise Up: The Challenge of Lifelong Learning” and “New Kinds of Smart: How the Science of Learnable Intelligence is Changing Education”, written jointly with Bill Lucas. Guy’s bestseller “What’s the Point of School?” was highly praised by Professor Howard Gardner, Sir Ken Robinson and Baroness Susan Greenfield. His practical Building Learning Power approach to creating learning cultures in schools has influenced youngsters’ lives throughout the UK as well as in Sweden, Malaysia, Dubai, Argentina, Australia, New Zealand and the USA.



Guy has a first in Natural Sciences from Cambridge and a DPhil from Oxford. He is a Fellow of the British Psychological Society and the Royal Society of Arts, and an Academician of the Academy of the Social Sciences. He is currently Professor of the Learning Sciences and Co-Director of the Centre for Real-World Learning at the University of Winchester. He lives in Sussex.

Abstract

Conventionally, Higher Education is seen as a process of knowledge transmission and domain-specific skill generation. But it can also be seen as a more general epistemic apprenticeship, socialising young adults into particular ways of looking at learning, particular identities as learners, particular views of knowledge, and as exercising the development of particular habits of mind. As career stability reduces, so the idea that Higher Education should attend to cultivating epistemic identities and mentalities that are as broad and valid, in the 21st century, as possible, is gaining ground. For example, the development of imagination and intuition are often neglected, or even disdained, in Higher Education, yet they are crucial in professional and real-world problem-solving. Only with a coherent and comprehensive view of what 'real-world learning' involves can each discipline consider how it might adapt its pedagogy so that aim can be met. Sometimes universities mistake the specialised 'craft of scholarship' for general intelligence, and this can distract them from the difficult but worthwhile task of unearthing and adapting their existing epistemic assumptions.

[Link to Presentation \(slides\)](#)

[Link to Video of Presentation](#)

Students as Change Agents: collaborative engagement in improving the learning environment at the University of Exeter

Elisabeth Dunne, Head of Project Development, University of Exeter

Biographical Note

Elisabeth Dunne's career has been devoted to the promotion of innovation, change and strategic development in education. She has coordinated and directed many major research, development and evaluation projects as well as promoting a range of central initiatives across the University of Exeter. Having recently moved from Head of Academic Development to Head of Project Development within Education Enhancement, Elisabeth has been directing projects in areas such as video-conferencing, audio-feedback, Augmented Reality, reciprocal shadowing, and a major JISC-funded curriculum delivery project on Integrating Technology across the Exeter Business School. One of her most exciting initiatives has been Students as Change Agents.



Abstract

Recent arguments on the role of students in Higher Education suggest that we should be considering a move away from considering students as customers, to practices where students take on the role of 'engaged collaborators' (Ramsden 2008) and work in 'collaborative partnership' with their institutions (NUS 2011). To support this approach, the University of Exeter has developed an innovative student-led action research initiative with students and staff working as partners in improving learning and teaching experiences. Over the past two years, twenty five small 'Students as Change Agents' projects have been run, with students taking responsibility for promoting evidence-based change.

Students, in collaboration with the Students' Guild, select aspects of teaching and learning that are of concern to them, develop a research question, and plan their own methods of data collection. Research methodologies have included focus groups, informal interviews and questionnaire surveys. Projects have now involved students in almost all subject areas from across all three of the University's campuses, and have investigated topics such as responding to assessment and feedback, seminar provision, personal and peer-tutoring, employability, technology and academic writing. Outcomes have included research reports and student-led conferences, as well as students running writing skills sessions, a buddy system, and peer-tutoring; students have also produced study guides on what to expect from high quality seminars and on academic writing skills. Overall, many hundreds of students will have participated in the various projects and will be gaining from the outcomes. However, the projects - though influencing provision for students - are about improvement and enhancement rather than about deep-rooted and fundamental change in the culture of the institution. This session will provide an overview of the initiative and the ways in which the University is working to embed students as change agents into the broader student engagement agenda.

[Link to Presentation \(slides\)](#)

[Link to Video of Presentation](#)

The tyranny of participation? Critically exploring notions of student engagement

Lesley Gourlay, Director of the Centre for Academic & Professional Literacies, University of London

Biographical Note

Lesley Gourlay's background is in Applied Linguistics, and her research interests include academic literacies, trajectories of staff and students, internationalisation and widening participation in Higher Education, and the implications of digital mediation for the contemporary university. She is also interested in developing pedagogic models of writing development in Higher Education, and in uses of writing in the curriculum. She currently is the director of the centre for academic & professional literacies in the University of London.



Abstract

Notions of student engagement, activity, participation and collaboration have become key concepts in higher education, and are rightly regarded as vital indicators of success and markers of progressive and democratic forms of pedagogy. They have also become closely related with the emergent notion of the 'student experience', both in the educational literature and also in policy discourses.

In this talk I will critically interrogate these concepts and terms, arguing that although these may be couched in benign terms and are undeniably useful, if used uncritically they can become meaningless, vague and tokenistic, propagating taken-for-granted ideas about teaching and learning. Arguably, this can be seen in widespread exhortations to increase 'student engagement', where the term is frequently ill-defined and not derived from a clear theoretical base, research evidence or experience in disciplinary contexts. Its use is (at times) almost entirely ideological, and I will suggest if not considered and used with care, it could descend into a cliché with which to stereotype students and, and a mechanism for staff governance.

I will argue for a 'constructively critical' stance towards the concept of student engagement, to allow us to gain genuine insights into the many and varied forms of student engagement. This perspective takes into account the highly diverse motivations and backgrounds of our student cohorts, who are experiencing university in increasingly complex social and economic contexts. In this reading, the university is seen as not one singular entity, but as a system of interlocking - and at times contradictory - social practices focused on knowledge and identities. This standpoint demands a move towards the qualitative, theorised and longitudinal in higher education research, and also asks us to accept a 'messy', pluralised view of what student engagement might look like, and how we might foster it in meaningful and inclusive ways.

[Link to Presentation \(slides\)](#)

[Link to References](#)

[Link to Video of Presentation](#)

Student voices, student lives: a reality check on engagement

Paul Kleiman, Deputy Director of PALATINE and Senior Research Fellow, Lancaster University

Biographical Note

Paul trained as a theatre designer and worked – as a freelance designer, director, performer and writer – for twenty years before teaching in higher education. He was a founding tutor of the Liverpool Institute for Performing Arts (LIPA), where he was responsible for developing LIPA’s unique interdisciplinary curriculum and its negotiated approach to assessment. Since 2000 he has been Deputy Director of PALATINE, the UK Subject Centre for Dance, Drama and Music based at Lancaster University, leading its work on enhancing the student learning experience. Paul’s research focuses on assessment, creativity and curriculum design, and he undertakes consultancies and conference keynotes and presentations in those areas. Last summer he was a keynote speaker at the AISHE Annual Conference in Dublin.



Abstract

Student Engagement has become a 'must do, must account for' feature of higher education, and it has become inextricably linked with the consumerist, customer-focused ethos that is now prevalent in higher education. As the burden of the cost of higher education shifts increasingly from the state to the student there are escalating tensions and strains in the relationship between students, institutions, and those who provide and support learning and teaching.

This presentation offers a critique of some of the issues around student engagement. In particular, it describes the outcomes of ENGAGE!, an intensive two-day 'away-day' for 30 student representatives that was organised by the UK's Higher Education Academy Subject Centres for Archaeology and Classics, Materials Science, and Performing Arts in partnership with the National Union of Students. ENGAGE! explored the perceptions, practices and policies of student engagement within and across a range of disciplines and institutions. It demonstrated that the 'student as consumer' label fails in many respects to describe the complex motivations and experiences that students have with respect to higher education. Students themselves tend to resent and reject the 'consumer' label, particularly in regard to the pedagogic aspects of their higher education experience, preferring notions of partnership or participation in which their learning experiences are 'done with' rather than 'done to' them.

[Link to Presentation \(slides\)](#)

[Link to Video of Presentation](#)

Students as Producer – Reinventing the Undergraduate Curriculum

Mike Neary, Dean of Teaching and Learning, University of Lincoln

Biographical Note

Professor Mike Neary is the Dean of Teaching and Learning at Lincoln. His duties include being the Director of the Graduate School as well as Director of the Centre for Educational Research and Development. Before coming to Lincoln in 2007 Mike taught Sociology at the University of Warwick. While at Warwick Mike was the Director of the Reinvention Centre for Undergraduate Research, a Centre for Excellence in Teaching and Learning.



Mike's research is grounded in critical social theory framed in the context of labour studies and the sociology of work. His writings include work on youth unemployment, poverty, trade unionism and other types of social protest and resistance, as well as work on theories of money and the state. Recently his work has focused on academic labour and undergraduate student life. This has included research into the development of learning and teaching spaces in universities. He has recently finished a research project on that topic: Learning Landscapes in Higher Education, which was funded by government agencies involved in the development of HE in England, Scotland and Wales. Mike is currently leading a Higher Education Academy funded project: Student as Producer, which aims to promote student research in the undergraduate curriculum. Mike has been an adviser and consultant for the Higher Education Academy Subject Centre Network and is a National Teaching Fellow.

Abstract

Student as Producer is the organising principle for teaching and learning at the University of Lincoln in the UK. Student as Producer is an attempt to deal with the dysfunctional relationship between research and teaching that lies at the core of Higher Education. It does this by regarding undergraduate students as being part of the academic project of the university. The talk will present the history of Student as Producer, making links with Humboldt's vision for the University of Berlin in 1811, and with the radical student protests of 1968. Student as Producer's claim to radicality will be supported by reference to the critical social theory on which it is based. The talk will also demonstrate the very practical ways in which Student as Producer is being made to work across the University of Lincoln, through its quality assurance and enhancement structures, its marketing and publicity, its events and conferences, its online and web based presence, its publications and its involvement with students and with other universities.

[Link to Video of Presentation](#)

Part 2: Students as Co-Creators of Knowledge

Collaboratively designing a module with students as co-researchers

Janice Crausaz, Gill Chard and Eileen Savage, University College Cork

Engaging in evidence-based practice (EBP) is viewed as an integral part of a healthcare professional's obligations, an essential element of best practice. Many studies, however, have demonstrated how challenging it is for practitioners to integrate recent and best evidence into their professional decision-making for it may require changing customary practices. Passive educational approaches to the acquisition of EBP skills have proved generally ineffective in changing practitioner's behaviour (McClusky & Lovarini, 2005).

A research partnership between a lecturer and qualified occupational, speech and physiotherapists aimed to collaboratively develop learner-centred approaches which would facilitate embedding EBP behaviour into clinical practice. Following a participatory action research (PAR) methodology, clinicians enrolled in a post-qualification MSc module on EBP and, together with the module leader, monitored and adapted the learning programme. Over four months, the students engaged in the PAR iterative cycles of reflecting→ planning→ acting→ observing→ reflecting. In their role as co-researchers, the students drew upon their expertise as experienced learners and clinicians for insights and advice about module design. Using the nominal group discussion method at the end of each class, students chose by majority vote what additional EBP content and which teaching and learning processes they wished to see integrated into the next session. As the classroom became a more democratic and active learning environment, the students took greater ownership of their co-constructed EBP knowledge and skills. As participant researchers, the students were able to make demonstrable changes that were meaningful to them. Through shaping the module design, they produced knowledge directly useful to themselves as practitioners, and to future module students, in the application of EBP.

McClusky, A. & Lovarni, M. 2005. Providing education on evidence-based practice improved knowledge but did not change behaviour: A before and after study. *BMC Med Ed*, 5:40.

[Link to Presentation](#)

Engineering Design in Practice: Shelters for the Homeless

Mark Dyer and Thomas Grey , Trinity College Dublin

How can Engineering students be moved beyond rote learning and enabled to think creatively, define real world problems and provide innovative context focused, usable and appropriate solutions?

Can the design process be used as a pedagogical tool to illustrate that design can be a problem solving tool, that user centred design can provide usable and useful solutions and that the design process itself can serve as a framework for structured, iterative problem solving?

The paper describes a second year engineering design project, where over 160 undergraduate students were required to design and construct shelters for hypothetical homeless people in the grounds of Trinity College Dublin. Over a twelve week period, the undergraduates worked in groups of 6 to 8 students with the aim of developing problem solving skills using the design process as pedagogical tool. The module was structured initially around a six week design stage that culminated in a poster exhibition of the individual designs supported by group design reports and individual sketch pads. This first stage of the exercise took the design groups from defining the “user need” and “site constraints” through to a review of past design solutions in a literature review culminating in a prototype design. The feedback from the poster exhibition was used to refine the prototype design before embarking on construction and assembly during the following six week period.

The module presented the students with a real world issue (homelessness in Ireland), provided an actual context (public streets and parks), with real users (homeless people) and the opportunity to engage with the Simon Community, an organisation that deals with homelessness on a day to day basis. This composition of elements provided the basis for a problem which reflected real world conditions and gave the students the opportunity to engage creatively with context, users and problem based learning.

[Link to Presentation](#)

[‘Gimme Shelter’ Design Brief](#)

[YouTube video of student project](#)

A report on a problem based teaching intervention for at-risk service mathematics students at the University of Limerick

Fiona Faulkner, Olivia Gill and Ailish Hannigan, University of Limerick

There has been a significant decline in the mathematical competency levels of service mathematics students on entrance to the University of Limerick (UL) since 1998. This decline has been partially attributed to the changing student profile of beginning undergraduates to degree programs involving service mathematics. The change in profile which has occurred includes an increase in the number of students entering UL with Ordinary Level Leaving Certificate mathematics as prior knowledge and an increase in those entering as mature students (Faulkner et al 2010). In response to this a problem based teaching intervention was implemented on a randomly selected sample of service mathematics students at the beginning of the academic year 2010/11 to determine if active learning methodologies within traditional tutorials could increase students’ chances of passing their end of semester examinations. Students’ likelihood of success in their service mathematics module were determined using a mathematical model which took into account each student’s diagnostic test performance on entrance to UL and their Leaving Certificate mathematics points. Students who participated in the intervention were arranged in groups of five, each group consisting of students with a variety of mathematical backgrounds. The performance of the students in the end of semester examination who took part in the intervention was then compared against those who were not involved to determine

whether the intervention teaching style better catered for the needs of this new profile of student than traditional, 'chalk and talk', whole group teaching methods. Students' performances are analysed quantitatively, in terms of their service mathematics performance, and qualitatively, in terms of their personal impressions of the intervention teaching style. The implications of the intervention for future policy and practice in mathematics education in UL are also discussed.

[Link to Presentation](#)

In-at-the-deep-end: graduate teaching assistants as role models in the university

Bettie Higgs, James Cronin, Marian McCarthy and Jacinta McKeon, University College Cork

At University College Cork, work with graduate students has culminated in an annual symposium entitled In-at-the-deep-end over the past 3 years. Graduate teaching assistants are encouraged to tackle a central question or problem emerging from their teaching practice, to formulate strategies for student engagement, and to critically analyse the effects of applying these strategies from the vantage point of their own emerging teaching and learning philosophies.

This paper draws on the findings of a preliminary analysis of the course using a narrative inquiry framework (see Kubler LaBoskey and Hamilton, 2010). The findings coalesce around the following:

1. Managing student expectations: situating learning, teasing out troublesome knowledge, and focusing on the needs of individual learners by using multiple entries to learning and an array of assessment tools to ask: how do graduate teacher assistants know what their students know?
2. Educational constructivism: Social constructivists, from Lev Vygotsky to Diana Laurillard, have spoken about the value of participatory conversations in learning, whereby, knowledge is co-constructed, negotiated, and mediated. How can teaching assistants engender an inquiry frame of mind?
3. Decoding disciplines and scholarly teacher formation: graduate teacher assistants help to encourage students to think within their chosen discipline or profession: how to think like a scientist or a social analyst etc. How does this help graduates, as researchers, to think about the construction of their own disciplines?

What emerges from these teacher narratives is an exposition of the current challenges facing teaching and learning across a diversity of disciplines in Irish higher education today.

Cronin, J; Higgs, B; McCarthy, M; McKeown, J (eds.). (2010). In at the Deep End: Starting to Teach in Higher Education. Cork: NAIRTL.

Kubler LaBoskey, V. and Hamilton, M. (2010). "Doing as I Do": The Role of Teacher Educator Self-Study in Educating for Reflective Inquiry (pp. 333-396) in N. Lyons (ed.), Handbook of Reflection and Reflective Inquiry: Mapping a Way of Knowing. London and New York: Springer.

[Link to Presentation](#)

Embracing the Hunt Report; engaging learners as co-creators of knowledge

Etain Kiely, Mia Mitchell and Bláithín McGrath, Institute of Technology, Sligo

The recent publication of the 'Hunt' report (2010) has articulated a vision for higher education which recognises the importance of active engagement, learner-feedback, technology- enhanced learning and generic skills development. A National study on graduate competences (NAIRTL, 2009) also highlighted the importance of integrating global generic competences into the curriculum. The challenge, however, for many higher education institutions will be in devising a coordinated roadmap to achieve this learning environment.

This paper describes a science programme's experiences of embracing and implementing this vision through an outcomes-led, enquiry based learning strategy. This has required investment from management and staff in designing new learning environments with round tables, computer hubs, flip charts as well as the administrative task of coordinating timetables to enable interdisciplinary team teaching. The paper explores using examples how the science team radically restructured its programme to include a capstone "enquiry based learning" module each semester which empowers the learners to integrate and apply interdisciplinary concepts.

The programme devised and aligned scenarios to embed and facilitate the cognitive load and generic skills development levels of the National Framework of Qualifications. First year learners engage as co-creators of knowledge through weekly repetition of a BASE (Brainstorm, Action Plan, Solve and Evaluate) model of learning. This aims to transition and empower first year learners to work in teams to integrate discipline specific concepts such as Maths, Physics, Chemistry and Biology to applied contexts. As learners progress through the levels, scenarios encourage employability skills development through working with real companies and community projects.

The programme team has collated data through an action research iterative cycle of development for the last four years with the view to closing the feedback loop and enhancing the learning experiences. Evidence of the impact of this learning strategy is reflected in course work achievements as well as success at national level in winning national competitions and securing competitive work placements and internships.

[Link to Presentation](#)

Be afraid, be very afraid: anxiety as an essential element of engaging the minds of learners

Catherine Lowry-O'Neill, Waterford Institute of Technology

Over the past 25 years, the place of emotion in higher education has become highly contested. Barnett (2007), for example, claims that 'the primary responsibility of teachers in higher education is to sustain and develop the student's will to learn...' Such a view is anathema to others who argue that prioritising matters relating to emotion, which they term 'therapeutic

education', undermines the true purpose of education - the pursuit of knowledge (Eccleston & Hayes, 2009).

Emotion is valued in the literature on student engagement which may be defined as: 'students' cognitive investment in, active participation in and emotional commitment to their learning' (Zepke, Leach, & Butler, 2008, p. 1). This paper focuses on one particular emotion - anxiety - and examines the role that it may play in engaging the minds and hearts of learners.

With reference to the literature on threshold concepts (Land, Meyer & Smith, 2008), and to transformative learning (Mezirow, 2000; King 2005), the argument is put forward that anxiety is an essential component of learning. If students are to effectively negotiate the often challenging journey towards authentic understanding, and challenge their assumptions, they must be willing to experience and manage a certain amount of anxiety.

The paper presents a critical reflection on the issue from the perspective of practitioner as well as learner. An analysis of perspectives of post-graduate students is at the centre of the inquiry. Information is gleaned from learners through a survey and from in-depth interviews. By analysing and evaluating the data with particular reference to therapeutic education, threshold concepts and transformative learning, the paper seeks to contribute to the on-going debate on the role of emotion in higher education, especially with regard to engaging minds and hearts.

Part 3: Civic Engagement and Social Responsibility

Students Learning with Communities

Catherine Bates, Sinead McCann and Elena Gamble, Dublin Institute of Technology

This presentation will examine how using active learning, participatory and collaborative strategies in credit bearing, course-based work will help develop civic and social responsibility in all participants - students, staff and community partners. These strategies are central to community-based learning (or service-learning) and community-based research, which have been cited as best practice teaching and learning methodologies in the recent National Strategy for Higher Education to 2030. We will draw on our extensive experience of coordinating the *Programme for Students Learning with Communities* in Dublin Institute of Technology to deliver this paper. The presentation will explore experiences and ideas, challenges and opportunities that are particular to engaging students from a variety of disciplines in community-based learning and community-based research. It will look at collaborative approaches that can be tailored to individual students or group/class work. Participants will leave with a clear sense of what is involved in using this approach to teaching/research and simple steps to get started.

[Link to Presentation](#)

Community based research to enhance student learning

Kenneth Burns and Siobhan Scully, University College Cork, and Catherine O'Mahony, NAIRTL

Science shops are an innovative mechanism to create and transfer knowledge “in response to concerns experienced by civil society” (EC, 2003). A research question is proposed by local/regional civil society organisations (CSO) to be carried out by the student in the HEI facilitated by the Science Shop. This bottom-up approach to research facilitates civic engagement by the student as makes them aware of the potential impact of research on society. Similarly, the support of community based research approaches such as the Science Shop may help in fulfilling the civic mission of Higher Education. Science Shop projects build upon existing supervision structures, but are based on "real-life" problems. The CSO commissioning the research is involved throughout the research process and develops a collaborative relationship with the student. The intention of Science Shop model is research for action (Stoecker, 2002), thus the final research results are translated into a series of recommendations, which are reported back to the CSO. This is followed by a discussion on how best the organisation might implement these recommendations.

The UCC Science Shop has facilitated four student projects in the recent year and engaged with three CSOs with a view to expansion in the 2011/12 academic year. The students are undertaking a Masters in Social work and the projects are centred on an assessment of the services provided by the CSOs with the aim of improving these services or highlighting the impact of these services. The presentation will outline the Science Shop research process and the civic engagement aspect

of this approach. The presentation will be given by Science Shop staff and students from the MSW with a view to providing an overview of experiences of participating in this form of research and initial conclusions as to what impact it had on student learning and civic engagement.

Stoecker, R. (2002) Thinking about CBR: Some questions as we begin. In: Best Practices in Undergraduate Community-Based Research: Challenges and Opportunities for the Research University (Ann Arbor, Michigan).

European Commission (2003) Science Shops: knowledge for the community. (Luxembourg: Office for Official Publications of the European Communities).

[Link to Presentation](#)

Class Acts: Introducing Forum Theatre

Kate McCarthy, Waterford Institute of Technology

The Applied Studies in Social Care programmes at Waterford Institute of Technology offer two drama electives to first-year students: Introduction to Community Drama, and Community and Performance. Forum theatre is a key concept in the field of community drama and performance. This presentation introduces participants to forum theatre as an applied theatre technique, which encourages students to reflect on their civic engagement and social responsibilities through the process of drama and theatre. Attendees are encouraged to engage with simple activities that illustrate how forum theatre can encourage active student engagement.

Forum theatre is a technique developed by Brazilian practitioner Augusto Boal and forms part of his larger body of work, the Theatre of the Oppressed (2002, 2000). The technique is supported by research that illustrates how drama and theatre can bring about empowerment, and personal and social transformation (Prendergast and Saxton, 2009; Prentki and Preston, 2009; and Taylor, 2007, 2003). Forum theatre is an accessible technique that does not require prior drama or theatre experience as is evident from its implementation in a number of fields (e.g. prison theatre). The 'performance' aspect of forum theatre requires active engagement and interaction from the audience. In Boal's praxis, the audience become spect-actors- they must 'act' on what they see instead of merely spectating.

In the community and performance module, the students devise, develop and present a scene to their peers based on the issues and concerns of their particular group. This semester, students presented scenes on the following topics: drug and alcohol abuse, homophobia, abuses of power, peer pressure, bullying and student services. The students work collaboratively to create the scene and are responsible for the development of the material, leading to a sense of empowerment and ownership.

[Link to Presentation](#)

Engaging with student research

Emma McKenna and Eileen Martin, Queen's University Belfast

This presentation will offer an opportunity to consider engaging students through the curriculum in research based projects.

There is currently a focus in higher education on developing student skills in an applied context and on student employability. However, the time that students have available for working outside of the curriculum is very limited. Science Shops offer a means of engaging students through the curriculum, offering them an opportunity to carry out a piece of research of relevance to a community sector organisation. The model is flexible enough to enable students to work in different ways - singly and in groups. And it enables students to use their academic learning in an applied context, bringing to bear the skills and knowledge they have gained through their degree to a real life issue or problem. Students are co-creators of knowledge in a very real sense - they help to define their research question and in discussions with the host organisation and their academic supervisor, develop a methodology and carry out a piece of research. This research culminates in a research report or dissertation, although in some cases the outcome may be more tangible, for example a website or e-zine. Students are encouraged to take responsibility for their own work, although they are guided by their academic supervisor and are able to rely on Science Shop staff for additional support. Given that the experience is real-life research, students need to develop flexibility and to be creative in responding to changes in the context of the research; and working for a third sector organisation offers students an opportunity for civic engagement.

This presentation will offer an opportunity to understand the Science Shop model in more detail and to discuss how to embed Science Shop working both within the curriculum and within the university.

[Link to Presentation](#)

Participatory research as a teaching and learning tool for voluntary sector management students

Féilim Ó'hAdhmaill, University College Cork

This paper provides a description and analysis of the incorporation of a participatory research project into the curriculum of the part-time Masters programme in voluntary sector management at UCC. The aim is to promote teaching and learning for the student, on a number of different levels, while at the same time encouraging civic engagement and social responsibility.

Participatory Research involves the student working with a community/voluntary sector organisation in developing a research proposal of relevance to that organisation and designing and conducting the research in participation with the organisation. The student is faced with a number of challenges over and above the normal development, design and management of a social science project. Indeed the process may involve a range of group work skills, including

facilitation, negotiation, problem solving, capacity building and conflict management. The research process is in many ways part of the 'outcome' as it requires not just an ability to carry out research along social scientific lines but an ability to work with members of a community/voluntary sector organisation and to negotiate with them at each stage of the research process.

Ultimately, it is essential that the research process follows social scientific lines but issues around what should be researched, the emphasis on what questions should be asked and how the results will be used, need to include participation and ownership by the community/voluntary sector organisation. The aim is to produce a research report of relevance and use to such an organisation while at the same time providing a dissertation which fulfils the requirements of a social science Master's Degree.

This paper explores some of the benefits, challenges and disadvantages of incorporating participatory research into the curriculum both for the management student, the community sector, the University and for teaching and learning in general.

[Link to Presentation](#)

Engaging Students in Effective Learning and Social Responsibility through Live Projects

Deirdre O'Loughlin, University of Limerick

Alcohol consumption among the youth is central to both public and social policy debates (Griffin et al., 2009) and is universally acknowledged as a 'social activity' (Tucker, 2004) and a standard prerequisite for effective socialisation among the Irish youth. Ranked as third across the EU, (Hope, 2007), excessive episodic alcohol consumption or binge drinking in Ireland represents a prevalent social practise among the youth (Ramstedt and Hope, 2003) which is particularly evident among Irish university students. Reflecting the mixed success of many social marketing programmes (Hastings, 2009), the promotion of responsible drinking attitudes and behaviours by state-funded bodies and alcohol awareness groups has enjoyed varying levels of success in Ireland as elsewhere.

Given this important social issue, a pedagogical opportunity exists to engage students in a worthwhile civic activity and charge them with the responsibility of creating innovative social marketing campaigns focusing on promoting responsible drinking directly to their peers. The concept of the "live project" was therefore employed as both an appropriate student assessment method and social activity as it is well established in offering students the opportunity to work on real-live business problems (Thomas and Busby, 2003) and in providing a range of learning outcomes and benefits including team work, critical thinking and applied skills (Chase et al., 2007). Student teams from the MSc in Marketing programme at the University of Limerick created and ran live innovative and impactful campaigns using print and electronic media, promotions and events to target and raise awareness of sensible drinking to UL students. Post campaign focus group research highlighted the range of practical marketing skills developed

among participants through the live project process and the effectiveness of student-run campaigns as well as underlining the heightened sense of responsibility and civic duty perceived by participating students in promoting sensible drinking to their peers.

[Link to Presentation](#)

The Civic Learning Conundrum

Rhonda Wynne, University College Dublin

The civic role of universities is to the fore for many reasons. Matters of democracy, governance and citizenship are on the agenda nationally, in Europe and globally. University engagement with wider society has been identified as a key area in the National Strategy for Higher Education. The growing numbers of civic and community engagement networks in place around the world are a testament to interest in furthering this public purpose of higher education.

One aspect of university civic engagement is student engagement. While there is a sense that civic learning is of value to the individual, and also to community and society, there are multiple conceptions underpinning the idea of active citizenship. Consequently, notions of what constitutes 'civicness' are diffuse and varied and conceptions of the civic realm and public life determine whether civic responsibility is viewed as an act of individual altruism, or is concerned for a just social order. Such different interpretations pose curricular and pedagogical challenges.

This paper will first look at these varied conceptions of citizenship and civic engagement before moving to consider practices associated with civic learning. While two of the most prominent strategies for enhancing student engagement are volunteering and service-learning, arguably there is not one specific programme, approach or activity responsible for developing the graduate-citizen. Many civic learning scholars argue that courses can be oriented towards citizenship or infused with civic values. Drawing on a European Grundtvig Learning Partnership on Active Citizenship, and from experiences of advocating for participative and active teaching methodologies in UCD's Adult Education Centre, this paper will consider how issues of classroom climate, friendship, and social learning practices can play a part in enhancing civic skills.

[Link to Presentation](#)

Part 4: First Year Experience

Student Leadership as an engine for personal and academic engagement

Marco Angelini, University College London

The University College London Transition Programme supports a variety of activities pre and post registration to engage first year learners at critical moments in their transition to higher education. These include peer-mentoring, Peer Assisted Learning, study skills workshops, information sessions, promoting social activities and VLE participation. The main goals of the programme are to foster engagement within UCL as a learning community, using student mentors in particular to facilitate discussion and activities that lead to increased personal and learning development. A key aspect of this work is to track the development of first years and mentors in order to measure any impact that the programme's interventions is having on the ability of students to regulate and manage their own experience as learners and institutional agents. Leadership development amongst students and staff is a central part of the programme's work, and is a key factor in determining the impact of our activities.

This paper will outline and evaluate the data we have collected from online surveys and feedback forums on the student experience, in particular as it relates to evidence that illustrates how intentional engagement and leadership have the potential to transform learning communities by prioritising participation and citizenship. Evidence discussed will include analysis of progression data, questionnaire responses and forum discussions. The main aim here is to chart various aspects of the students' developing identities as learners and institutional actors in order to map out a model of effective student engagement.

[Link to Presentation](#)

Developing creative potential using an active-learning experience

Amanda Gibney, University College Dublin

The beginning of first year in Higher Education is seen as a critical time in a student's life. Strong linkages are made in the literature between a positive experience at this time and an enhanced learning experience leading to academic success. Positive and active engagement with academic learning at this transition phase in a student's academic life should be the aim of curriculum developers. Curriculum review discussions in engineering tend to focus on technical content and teaching rather than on learning and the holistic development of the engineering student through their educational experience.

Through an engineering curriculum review process in UCD in 2010, two important priorities emerged in relation to the first year student experience. It was deemed to be of primary importance that an exciting engineering-related education experience be provided for students, entering a general first year engineering programme, alongside the development of their scientific and mathematical skills. In addition, the development of positive, active engagement,

independent study and learning skills, information literacy skills, teamwork and communication skills were recognised as being of key importance within the core curriculum.

These issues are addressed in a new first year 'Creativity in Design' module. This module provides an active-learning engineering experience through which students develop their observation skills, problem solving skills, lateral thinking abilities, visual and verbal presentation skills and information literacy skills. Students, working in groups, are encouraged to develop creative design solutions and to critically evaluate and present their solutions in a studio-based setting. The approach encourages students to actively pursue knowledge taking their learning experiences to a higher more engaging level than they have previously experienced. The presentation particularly focuses on this new first year module, outlining the approach used to develop the creative potential and problem solving abilities of first year students using an active-learning experience.

[Link to Presentation](#)

A First Year Experience Learning Support Package and Its Impact

Carina Ginty, Galway-Mayo Institute of Technology, and Nuala Harding, Athlone Institute of Technology

This paper describes a collaborative research study in which a new first year experience learning support package has been deployed simultaneously in two Institutes of Technology in Ireland, across a range of disciplines. The learning support package consists of two strands, a Peer Assisted Learning (PAL) programme and a new module titled 'Learning to Learn' (L2L).

The PAL programme is led by trained student leaders from 2nd, 3rd or 4th year who undertake a five ECTS PAL Leadership module. This module involves student leaders facilitating a weekly one hour timetabled study session with a group of first years on the same programme. Whereas the L2L module is led by a lecturer and it's focused on learning styles and skills development for 3rd level education. This module is quite novel as only the learning outcomes are prescribed in the module descriptor, allowing each discipline area to contextualize the delivery and content. The aim of both initiatives is to ease the transition to third level education and long term help retain students on programmes.

To date the PAL programme findings indicate: the challenges associated with implementing and embedding the PAL scheme long term; the first year student experience of PAL sessions; how PAL Leaders have benefited from the role; staff perceptions of the scheme; timetabling issues; support of staff involved on the programmes is imperative; on-going promotion and training workshops for staff and students is a key requirement.

To date the L2L module student experience findings indicate what 1st year students find most challenging when entering 3rd level education and what they enjoy most about the new L2L module for example: understanding their learning style; practical projects; class debates; working in groups; and skills development for future careers. In contrast, what 1st years dislike about the

L2L module is: the teaching or delivery approach in some cases; the time of day it takes place in some cases; over assessment or too many written assignments; and class contact time.

This first year learning experience study has the potential to inform the development of a model for adapting a first year experience learning support package which could be embedded within the policies and learning and teaching strategies of institutes of higher education in Ireland.

[Link to Presentation](#)

Towards bridging the gap between science and humanities for first year science students

Eilish McLoughlin, Odilla Finlayson and Pdraig Murphy, Dublin City University

In general, first year science students follow a programme of lectures, tutorials and laboratories in the science and mathematics disciplines, without any consideration of the social or ethical issues of science from the humanities and social science perspectives.

In this project, a first year cohort of science students participated in a twelve week module, where they were required, by working in small groups (4-5 people), to tackle a sequence of problems which addressed a broad spectrum of scientific concepts and issues. In particular, an interdisciplinary team of colleagues from the Schools of Chemical Sciences, Physical Science, and Communications developed a problem scenario to engage students in the complex socio-scientific issue of screening embryos for genetic disease. The objective of this problem was to enable students to gain an appreciation of the diversity of opinion, develop a better understanding of ethical issues in real-world situations, and to develop a perspective on the science profession entangled with moral issues in society and rhetorically argue this perspective.

The students were presented with seven different viewpoints on the use of Pre-implantation Genetic Diagnosis (PGD) for genetic screening within the context of a family being diagnosed with Friedreich's ataxia; Friedreich's ataxia is an inherited disease that causes progressive damage to the nervous system and results in early death. Each of the student groups were asked to defend a particular stance in the form of a written speech and an inter-group debate. The group assessment of these activities included the evaluation of the arguments presented based on scientific fact as well as moral, social and philosophical arguments.

In this presentation, an analysis of the student feedback on this problem will be presented and the outcomes of this project, which has been implemented with >700 students over a four year period, will be discussed.

[Link to Presentation](#)

Integrating theory and practice to design a framework for enhancing assessment in the First Year

Geraldine O'Neill and Elizabeth Noonan, University College Dublin

Student engagement in the first year of university has received considerable attention by higher education researchers and policymakers internationally (Krauss et al 2005; Nicol, 2009). UCD's current Strategic Plan to 2014 has prioritised fostering early and lasting student engagement. Arising from the plan, the University's "Focus on First Year" strategic project was initiated and an important part of this initiative included a focus on assessment in the First Year. The main objectives of this activity were to evaluate how first year assessment practices were supporting student engagement and to make recommendations for enhancement.

In order to design an institutional framework to enhance assessment in the First Year, theoretical data and evidence of current institutional practice were gathered and critically evaluated. Four specific methodologies were used: a comprehensive literature review; institutional data analysis of First Year assessment; case-studies of institutional practice and expert practitioner advice. These methodologies integrated evidence from both theory and practice.

Based on this evaluation it became evident that a design framework would need to incorporate a dual focus to address the design and operational issues at module level whilst also providing a more strategic design perspective from the vantage point of a School or Programme. Nine design principles emerged: 6 module and 3 strategic design principles. These principles were supplemented by an extensive suite of expert resources*, openly accessible, to assist academic staff planning changes to first year assessment (O'Neill & Noonan, 2011).

The framework (9 design principles and resources) will be used to direct enhancement of First Year assessment practices. The dual focus of the framework has the potential to provide a holistic lens with which to examine and identify directions for enhancement of first year assessment practices both locally and internationally.

*www.ucd.ie/teaching/resources/assessment/focusonfirstyear/

[Link to Presentation](#)

[Link to Resource](#)

Developing first years' pedagogic and assessment literacy via transformational learning cultures

Kay Sambell and Linda Graham, Northumbria University

This paper outlines one element of our Transformational Learning Cultures (TLC) initiative. TLC embeds the core principles of Assessment for Learning (McDowell & Sambell, 2006), using them to address issues of student engagement by providing 'high impact educational practices' (Kuh, 2008).

The session focuses on an innovative new module designed for first years: 'Approaches to Learning at University.' The module was developed in consultation with volunteer student advisors: 2nd years who had been studying the principles of Assessment for Learning (Black & Wiliam, 1998; Boud & Associates, 2010).

As a result, 'Approaches to Learning at University' represents a radical departure from previous 'Study Skills' modules. Instead of 'delivering' academic skills, it aims to involve first-year students actively and explicitly in activities which will help them begin to develop insight into formative and summative assessment processes, expectations, standards, principles and practices at university level. These include first-year students: working with exemplars; generating as well as receiving feedback; engaging in the scholarship of teaching and learning.

The session will outline how the module works. Broadly speaking, the first years undertake a 'Making Connections' project, in which they develop resources on deep approaches to learning (Ramsden, 2003; Biggs, 2005) which can be used with prospective university applicants at course-related open days.

The module was taken by 140 first year students. Qualitative research into staff and students' views will be presented.

[Link to Presentation](#)

Part 5: Engaging Large Classes

The rules of engagement, enlightenment and entertainment: using business presentation models and techniques in an academic teaching environment

Aine Carey, University College Dublin, and Niamh O'Sullivan, Irish Blood Transfusion Service

This paper draws on the authors' experiences from different teaching contexts in the academic, business and specialist information environment. It seeks to identify innovative methods of engaging with users taken from these contexts, and looks to apply them to academic teaching environments. Key to our approach is to explore how methodologies that are used most frequently in, for example, a business setting, can have merit in engaging learners in an academic environment. The paper looks at areas such as the importance of setting the context for learning, identifying appropriate 'points of need' to allow for more meaningful interactions, how to 'capture' and engage an audience, and responding interactively to learner needs as articulated during the teaching session.

The central premise that the methodology and practices of engaging audiences in a business environment can be applied to an academic teaching setting, to aid student involvement and learning, has been taken from the authors' experience in presenting, teaching and training in different contexts. In the business environment there is often an explicit need to 'make the case' and engage the audience successfully in order to proceed with the teaching or instruction. We ask whether, in an academic environment, there is an assumption that the audience is captive, to an extent, and teaching focuses on presenting material, rather than engaging and learning about the audience as a starting point.

We propose that taking business-led approaches offers opportunities to enhance student engagement and participation, and while modification of approach is required in an academic context, such approaches can lead to a more dynamic and interesting approach to academic teaching.

The presentation is envisaged as being lively, practical and involving demonstration of approaches and will be co-presented by Niamh and Áine.

Engaging and Challenging Students in Large Science Class

Mike Casey, University College Dublin

Innovations in the teaching of a large first year module, 'Organic Chemistry & Chemical Biology', to more than 400 students will be presented. This is a challenging module because approximately half of the students are learning Organic Chemistry for the first time, and about three quarters intend to major in a subject other than Chemistry. Several changes have been initiated and designed (i) to help students learn the material, (ii) to improve student engagement and retention, and (iii) to extend the learning outcomes to include transferable skills. Initiatives included asking the students to do many exercises in class, using the time freed by providing

partial lecture notes in advance, and incorporating 'Mastery Problems' in the lecture material to allow students to test their ability to meet the learning objectives, which are listed in detail. An interactive website with powerful tools for the manipulation of 3D chemical structures has been created, to help students understand difficult concepts of molecular structure. A sustained effort has been made to make the lecture material more interesting, and the power of multimedia presentations has been harnessed to explain concepts clearly. Perhaps most importantly, a new component has been introduced. Students are grouped into small teams, each of which is asked to give a PowerPoint presentation on the chemical and biological properties of a drug. The objectives were to increase student engagement, and to help students to learn information retrieval, teamwork, independent learning, and presentation skills, as well as to reinforce chemical concepts. The administration and assessment of this component is onerous (>80 teams), but the standard of the presentations is high and many students find it rewarding and stimulating. The results of the changes are encouraging, with a positive student response, increased examination pass rates, and an increase in the number of students taking Chemistry in year 2.

[Link to Presentation](#)

Interactive Lectures (Discussion)

Sharon Flynn, National University of Ireland, Galway, and Derek Bruff, Vanderbilt University

This session is focussed on the use of classroom response systems and similar technologies in engaging large classes. Participants are invited to share their experiences and ask questions. Dr Derek Bruff, Vanderbilt University, will contribute to the conversation, giving an ideal opportunity to follow up on his keynote in a less formal setting and allowing the discussion to evolve.

The role of student engagement in academic performance and commitment to college

Yseult Freeney and Martin Fellenz, Trinity College Dublin

In efforts to improve student retention rates, higher education institutions increasingly focus on student engagement initiatives, which reflect research findings that consistently link students' engagement in learning with higher retention and performance levels (Blank, 1997). The question of what exactly is meant by 'student engagement', however, has not yet been answered in a comprehensive and universally accepted way, and despite the considerable attention on student engagement in the literature, the concept lacks clear operationalisation (Steele & Fullager, 2009). Using behavioural and attitudinal measures of engagement, this study investigated factors that contribute to and detract from study engagement and the role of these

factors and of engagement for subsequent academic performance and commitment. More than 550 first and second-year students taught through large classes completed an online survey measuring demographic, contextual (e.g., student-staff interaction, social support), personality, behavioural and attitudinal variables. End of year grades were also included in the analysis. By collecting data on both attitudinal and behavioural student engagement, the study sheds light on the roles of these different conceptions of engagement for relevant student outcomes. Study results provide important insights in three areas. First, they identify individual differences as the strongest predictors of engagement. Second, they provide support for the importance of engagement as a factor in student retention. Finally, they indicate study skills as the strongest predictor of academic performance, followed by conscientiousness and attitudinal engagement. A significant outcome of this research for the current discourse on student engagement is the finding that the attitudinal rather than the behavioural measure of engagement was a stronger predictor of students' commitment and academic performance. We discuss the implications of the findings for the conception and use of engagement as an explanatory variable in higher education and for guiding the design of student engagement initiatives by higher education institutions.

[Link to Presentation](#)

Capturing chemical creativity

Niamh McGoldrick, Bartosz Marzec, Noelle Scully and Sylvia M. Draper, Trinity College Dublin

The teaching of Chemistry can descend to the dry delivery of chemical facts without student engagement. A new exercise was devised in 2002 to help alleviate this problem. The objectives were to improve the Senior Freshman teaching programme (260 students) and despite the disparate backgrounds and career goals of the students, strengthen their motivation for the subject of Chemistry. Since its introduction the programme has undergone iterative improvement. It is now compulsory warranting 5% of the students' end of year grade. Unexpected benefits include the delivery of team working skills and the instigation of a sense of joint purpose and comradery in the student body.

Pre-assigned teams of 10-12 students are invited to select a topic, not specifically covered by the course, and to explore the Chemistry behind it. Memorable examples include "The Chemistry of Superheroes" and "The Chemistry of Bees". Two course co-ordinators (selected from the Chemistry postgraduate body and funded by the School) provide weekly support to the teams, giving tutorials on report writing, presentation skills and accessing scientific resources. A staff mentor also interacts on a face-to-face basis with 'their' team.

The student assessment has two components. The first requires the students to work in pairs to submit a scientific report on an agreed aspect of their topic. The second uses the accumulated reports as source material for a final group presentation. Marks are awarded at this stage to the innovative delivery of the information (slides, scripts, props, costumes and creative design). The 20 minute talks are marked by academic staff and the best are presented before the entire class

in a highly competitive and entertaining final. The winning team as determined by a panel of external judges (e.g. Jonathan McCrea (Newstalk, Spin 103.8) and Mary Mulvihill (Irish Times)), are awarded the perpetual silver trophy, before an audience of students with an invigorated interest and appreciation for Chemistry.

[Link to Presentation](#)

Some examples of innovative practices at UCD for engaging large classes

Patrick J. Purcell, Hilda Loughran and John Dunnion, University College Dublin

This paper describes some examples of developing innovative approaches for teaching large classes at UCD, as follows:

- (1) The experience of developing a suite of 'General Electives' at UCD for large groups of students;
- (2) Some examples of innovative practices for engaging and assessing large classes.

In 2005, the undergraduate programme in UCD was transformed to a modular, credit-based system. As part of that re-structuring, all programmes had to provide 30 credits of electives over the first three years of study, to provide students with the opportunity to introduce 'breadth' into their individual programmes. A suite of 'General Electives' was developed in 2009 with the following key objectives:

- (a) Increasing elective capacity in areas where there was a significant perceived student demand;
- (b) Enhancing the academic quality and learning experience of students.

'General Electives' are modules primarily developed for students outside the programme and are designed to give students a 'taste' of the subject. As part of a Teaching and Academic Development Fellowship, the authors undertook a review of the General Electives. The paper describes the results of this research and examines how successful the suite of electives was in meeting the original objectives. Some of the General Electives were delivered to large classes, and the paper describes the results of research into student and lecturer experience.

The second part of the paper describes a number of examples of innovative developments in UCD generally dealing with large group teaching, including:

- Use of 'blended' learning to improve student engagement and promote deeper learning in large class settings;
- Use of virtual laboratories to overcome the problems of providing physical laboratories for large classes in a time of diminishing resources;
- Use of small-group teaching approaches for large classes using techniques such as peer-assisted mentoring as an alternative to the more conventional lecture format.

[Link to Presentation](#)

Ask the Audience: Clickers in the Classroom

Barry Ryan and Julie Dunne, Dublin Institute of Technology

Students are becoming ever more aware and comfortable with technology. It is part of their everyday life, and as such, integration of technology into the classroom is a 'fait accompli'. Research has proven that an engaged student will absorb and understand more, with blended learning a key method of student engagement. Personal Response Devices (A.K.A 'Clickers') provide a simple blended way in which to generate an atmosphere of student interaction that can simultaneously enhance critical thinking and problem solving amongst groups and individuals. Clickers can also provide an immediate source of feedback for the academic and student, rapidly identifying areas of mis-understanding. Previous studies have cited the enthusiastic response of students towards Clickers and also the potential improvements in student learning based on Clicker use.

In this study, Clickers were introduced into both the lecture and laboratory environment for a first year undergraduate foundation organic chemistry module taught across Levels 6, 7 and 8 courses. Clicker usage encompassed small groups of three or less in lectures (n=120) or individually in laboratory situations (n=32). In the lecture environment, Clickers were employed to poll student comprehension of the fundamentals of chemical structure, nomenclature and reaction prediction, after a small group discussion on a given multiple choice question. Pre-laboratory concept understanding, experimental outcome prediction and safety issues were polled individually with the Clickers in the laboratory. Pedagogical evaluation of Clicker usage took the form of an anonymous student multiple choice questionnaire and a student discussion forum facilitated by an independent academic. Students commented that Clickers effectively improved their interaction, engagement and participation in class. Furthermore, active-learning and an increased level of advance preparation was also evidenced. Although very successful in this study, however, there still remain some issues hindering increased Clicker usage in large undergraduate classes such as initial cost, maintenance and logistics.

[Link to Presentation](#)

Part 6: Technology Enhanced Learning

Performance Nutrition Game

John Bradley, Tom Hill, Sabin Tabirca and Yin Jie Chen, University College Cork

Nutrition is a critical yet modifiable factor in all aspects of physical activity. The Performance Nutrition Game combines the three main predictors of exercise performance (Fitness, Muscle Energy Stores, Blood Sugar Levels) and applies them to cycle exercise in one software package. This then allows the user to compare different nutritional strategies and see how they influence performance.

Using published research investigating the substrate turnover during exercise, the relative metabolism of carbohydrates (blood glucose and muscle glycogen) and lipids was estimated at different intensities of cycle exercise in individuals of different levels of fitness. This was incorporated into software using Adobe Flash Professional CS5.

The Performance Nutrition Game was originally developed for students of Nutritional Sciences, Physical Education and Sports Science/Sports Studies. It is organised around three main screens, to introduce the user to a number of different concepts:

1. Dietary Input screen: This allowed the user to use a food record to analyse the diet from the previous 4-days. This was used to estimate muscle glycogen content.
2. Science screen: This allowed the user to investigate the physiological response to exercise at different workloads, different levels of fitness and under different nutritional conditions. The rates of energy expenditure from blood glucose, muscle glycogen and lipid during exercise were displayed in numerical and graphical form.
3. The Game screen: This allowed the user to 'create' cyclists with different fitness levels, nutritional characteristics and nutritional strategies. These cyclists could then compete against each other to judge the relative effects of diet, fitness, and supplementation and nutritional strategies on exercise performance.

The resulting software is available on the internet (www.ucc.ie/nutritiongame/). This project was supported by funding from NAIRTL.

[Link to Presentation](#)

Travelling the Digital Highways: Creating a Student Wiki for a Year Abroad in Germany

Doris Devilly, National University of Ireland, Galway

Recent years have seen a trend towards the increasing use of Web 2.0 technologies in language learning and teaching. Unlike traditional Web 1.0 technologies, these so-called web applications, e.g. social networks, podcasts, blogs and wikis offer more extensive, outcome-oriented

possibilities for communicative language learning. Due to their participatory and interactive potential, they not only foster the students' receptive language skills, but also their productive language skills as well as offering new opportunities for intercultural learning.

This presentation will showcase a German language project "Das Auslandsjahr in Deutschland" by final year Commerce/German students in NUIG as part of a 12 week module on "Creative and collaborative language learning with Web 2.0". The rationale behind this project was to create a wiki platform for second year students in NUIG who are preparing for their Erasmus year in Germany. The wiki should act as a medium to inform students on many aspects of living and studying in Germany, give some insights into the cultural and social aspects of the German-speaking world and pass on personal stories and experiences as well as useful tips and advice. The aim of the project was/is to enhance the students' language learning experience, nurture the four language skills (reading, writing, listening and speaking) and promote the use of Web 2.0 technologies for autonomous learning. It should also facilitate students' engagement with the subject and other learners as it encourages active collaboration and interaction between both groups of students as they set up focus groups and met virtually in social networks. In addition, final year students published their own German texts, uploaded pictures and web applications and conducted interviews which they edited and published as podcasts. The year abroad wiki, www.galwayerasmus.pbworks.com, is an on-going project in its second year, managed presently by a new cohort of final year students.

[Link to Presentation](#)

Leveraging Expertise in Distance Learning to Enhance Education for Ireland's Post-Experience Learners

Ellen Fowler, University of Limerick

Lifelong learning is a touchstone of an economy based on knowledge work and innovation – the kind of economy Ireland aspires to be. Learning options for adult and post-experience students are in increasing demand: mature student entries to higher education increased by 18% between 2005 and 2006 (the last years for which the Higher Education Authority has published this information), and interest in flexible/distance learning options has seen a striking increase.

Adult and post-experience learners are faced with a host of challenges not encountered by traditional students, including scheduling, skills development, isolation, and work/study/life balance. Distance learning and e-learning resolve some difficulties but add others, such as creating active engagement with teachers and fellow-learners – the sort of engagement that leads to deep and integrated learning.

The Enterprise Research Centre (ERC), located in the University of Limerick (UL), conducts applied research with some of the best companies in the world. ULearning, a branch of the ERC, currently provides research-based education to over 900 individuals employed in a wide range of industries and professions, including engineering, pharmaceutical, health care, government, manufacturing and service. UL's Centre for Teaching and Learning (CTL) is dedicated to advancing

teaching and learning activities by collaboratively engaging in evidence-based research and enabling key teaching innovations.

The ERC and CTL are currently collaborating on a NAIRTL-funded project aimed at articulating and disseminating ULearning's expertise in providing distance learning. At present there is a gap in knowledge, as well as in practice, regarding how to design and deliver e-learning and distance education that leverages the experience of adult learners and develops complex, higher-order thinking skills in students. This presentation will summarise the findings of the project to date and provide recommendations to institutions interested in using technology-assisted learning to communicate complex, non-linear content and/or build learning communities/networks among geographically dispersed post-experience learners.

[Link to Presentation](#)

A Story of Online, Multimedia Learning Design

Mary Loftus, National University of Ireland, Galway

The proliferation of tools like Articulate and the resulting production and sharing of interactive, multimedia learning objects is changing teaching. It is providing opportunities to create inverted classrooms, online classrooms and blended classrooms. All of these models focus on interaction over content and learning over teaching. This paper tells the story of how one online Masters programme has been learning how to design for this type of environment.

The Masters programme in Software Engineering & Database Systems is offered online and jointly by NUI Galway and Regis University since 2004. It offers students paced access to learning objects, virtual labs, an e-library of research journals and hundreds of reference books which are available 24x7. Online discussion is the glue that binds these elements together into a cohesive learning programme - accessible from anywhere in the world.

Over the past year, the team has been working on enhancing the core learning objects and integrating them more cohesively with the other programme components. 'Learning Design' in this context then, is more than just the creation of individual learning objects; it is the design of an integrated set of activities that lead students to meet their learning objectives and develop core competencies.

[Link to Presentation](#)

Show me the learning – re-usable learning objects as an active learning experience and resource

Lynne Marsh, Marian McCarthy, Maria Caples and Caroline Dalton, University College Cork, Richard Windle and Helen Laverty, University of Nottingham

Nurse education traditionally has adopted a didactic teacher centred approach to teaching and learning. Changes in practice and education, however, dictate that teachers are now required to adopt new educational approaches (Brown, Kirkpatrick, Magnum et al, 2008) to include the World Wide Web (WWW), wikis, virtual learning environments and Reusable Learning Objects (RLO's).

The aim of this study was to elicit if student learning took place through generating their own RLO using a Problem Based Learning (PBL) framework. The literature review highlighted that RLO's and PBL are effective as long as they are facilitated correctly in order to engage learners in self-directed and lifelong learning. Additionally, learners are encouraged to take greater responsibility for their own teaching and learning needs drawing on previous knowledge (Murphy et al, 2009).

Although RLO's and PBL have educational merit in their own standing, these pedagogies have the ability to enhance and support Teaching For Understanding (TFU) and relevant disciplinary knowledge. This study succeeded in stimulating intellectual curiosity, analytical ability, individual creativity, and critical thinking with this cohort, evident in student evaluations and feedback. The merging of RLO's and PBL is indeed an innovative and interactive teaching and learning strategy, and the reusability of this resource has the real potential to be applied to other clinical units of teaching and learning in an already broad and practical based curricula. Students were very positive of the inclusive teaching and learning approach used in creating and generating their own RLO. Moreover, they learned in a variety of ways and reported that being part of this process cultivated their awareness of communication, creative and critical thinking, reflection, and decision-making abilities through the application of theoretical and practical knowledge. More research is warranted, however, to establish if using RLO's, as opposed to generating them, will have the same impact on future student learning.

[Link to Presentation](#)

Effective use of e-portfolios as a measurement of the Learning Journey in Undergraduate and Graduate Education

Siobhán O'Sullivan and Hugh McGlynn, Cork Institute of Technology

E-portfolios offer many benefits to learners providing an opportunity to display knowledge outside of a static transcript.

Web 2.0 tools such as wikis can hyperlink to web-pages and video clips; figures and presentations can be enriched with voice overs to enhance the reader experience. Portfolio work is best viewed as a continuum; it is work in progress. It evolves over a period of time through group interaction and discourse. The expressions of learning in an e-portfolio can range from lower order thinking skills such as a PowerPoint presentation to higher order thinking skills as seen in a wiki, a blog acting as a reflective journal or a podcast. To align with learning, it should offer students the opportunity to self- assess and record their learning experiences. As learners create their own electronic portfolios, their unique voice should be evident from navigating the portfolio, reading

the reflections, watching the clips or listening to the podcast. From a graduate perspective, e-portfolios are a display of competencies, skills and personal attributes that increase a student's employability prospects.

This paper reviews the use of two different e-portfolios systems in assessment of group projects presented in first year and final year undergraduate Biomedical Science degree course. We examine the infrastructure of the portfolio and discuss whether the goal of the portfolio is reached i.e. are students engaging and using their own voice or is the portfolio a mere dumping ground for course materials. We examine different methods of engagement, methods of measuring group work activity and the creation of user generated content which can be reused as a resource. We also examine the student experience and feedback of the process. We question the effective use of e portfolios in graduate education and review how Curtin's attributes (e.g. communication skills, thinking and professional skills) can be truly measured and reflected.

Part 7: Pecha Kucha Presentations

Foundations for sUCCess: UCC PLUS+ Orientation

Maeve Bent, University College Cork

Successful Higher Education Access Route (HEAR) students, who enter University College Cork (UCC), register with the UCC PLUS+ Programme. These students will have met with specific and defined social and economic criterion, which ascertains that they are from low-income households and/or non-traditional third level backgrounds. The UCC PLUS+ Programme provides a range of practical, financial and academic supports to this student cohort throughout their time in UCC. Recent research, undertaken for the Gateway to sUCCess: The Destination of UCC PLUS+, established that there are direct linkages between the provision of supports, a positive student experience and impressive retention and progression rates.

However, it is the week-long fully residential Orientation offered to incoming first year students, by the UCC PLUS+ Programme, that has been consistently identified each year, by the students themselves, as the most positive element of their 'First Year Experience'. Their evaluation will have taken into account the broader context of first year university life and the wider institutional strategy for a positive first year student experience. It is suggested here that the success of the Orientation is down to certain aspects. Namely, that over the week long schedule of activities, students are given a chance to process their new environment, comprehend the pedagogical changes between the second and third level educational systems, gain a familiarity of their new milieu (ahead of main start-up) and the opportunity to establish supportive peer-networks. Students also meet individually with a UCC PLUS+ staff member and any particular support needs are identified, ahead of term start up. Students acquire, throughout the week, a unique tacit knowledge of the spaces and places that make up UCC, and of their chosen degree programmes. They form enduring friendships and gain a confidence that provides them with a new assurance of their ability to manage the main orientation process, the start-up of their studies and for many the transition of moving away for home. In sum, the Orientation gives them the foundations for success.

Smitten with Synch? Just say no

Liam Boyle, Limerick Institute of Technology

Continued development of internet and web technologies offers a range of innovative technology based tools that can be used to support learning. Through online learning, learners can overcome limitations of geography and time, to learn at their own pace, and at times and places that suit them. They can thus adapt their learning to work schedules and to domestic and other commitments, making this form of learning especially suitable for lifelong learning.

Recent increases in bandwidth have made synchronous real time communications though web based video conferencing a reality, with teachers able to simultaneously teach a dispersed

learner group, emulating an attendance based classroom. Many educators are keen to embrace this development.

This paper urges caution in the use of such synchronous real time technologies and online live classrooms. It argues that educators should think hard before they require learner participation in synchronous events, unless on the strongest educational grounds. While there are educational benefits to these technologies in certain circumstances, counter arguments include the fact that by requiring participation you compromise the flexibility introduced by the first wave of online tools. They also can facilitate a return to teacher centred approaches where being present takes precedence over the achievement of learning outcomes, and where listening to teacher takes precedence over active engagement by the learner with the subject.

[Link to Presentation](#)

SCVNGR - Using location based games to introduce First Years to campus

Brian Coll, Institute of Technology, Sligo

This presentation will give an overview of SCVNGR – a location-based game for mobile phones which students can use to familiarise themselves with the campus.

SCVNGR is a location-based mobile game that can be downloaded for free on the iPhone and on Android smartphones. It takes the form of an online treasure hunt with challenges that earn points and prizes. There is great potential for applications like this in a third-level setting, for open days, first year induction days and for clubs and society events. It has been adopted by over 350 colleges in the US including MIT, Princeton and Yale. It can also be used as an interactive visual guide for helping prospective students and their families tour the campus if they aren't able to make an official tour session.

The first SCVNGR hunt in Ireland was set up at IT Sligo with treks all around the campus. Students were awarded points by completing challenges, such as taking photos of the campus wind turbine, finding a book in the library or fun questions, such as what is the name of the coffee shop in the Innovation Centre?

This presentation will outline the experience gained in introducing SCVNGR to an Irish campus.

[Link to Presentation](#)

The Innovation Academy: engaging doctoral students through active learning, participation and collaboration

Paul Coughlan and Ruth Kearney, Trinity College Dublin, Suzi Jarvis and Francis Mitchell, University College Dublin

The Innovation Academy is the educational centrepiece of the TCD-UCD Innovation Alliance and is a collaborative educational venture between the universities and industry. The Academy is a high priority activity for both institutions. It is transforming the doctoral education experience by establishing innovation alongside research and education as an integral element of the PhD. The output will be a new breed of graduate, expert in their discipline, but with the creativity and entrepreneurial skills to convert knowledge, ideas and inventions into products, services and policies for economic and social benefit. Innovation is thus regarded in its broadest sense of exploiting new ideas in a competitive world; it is not restricted to science, engineering, technology and business, but encompasses creativity, leadership, cultural and policy innovation in arts and humanities. The Innovation Academy will enhance Ireland's reputation for PhD education, thus attracting high-quality international students.

In the Academic Year 2010-2011, the Innovation Academy is offering the Graduate Certificate in Innovation and Entrepreneurship to PhD students from across all domains within the two universities, including: life sciences; arts and Celtic studies; human sciences; business and law; engineering, mathematical and physical sciences.

Such diversity in the student body sets this initiative apart as particularly innovative in its own right. The modules are designed to address the issues and problems that entrepreneurs and creative thinkers face in recognising, developing, and assessing innovative opportunities for commercial and/or social benefit. The modules are structured to encourage action, participation, discussion, analysis and reflection. Throughout students undertake a series of projects in small multi-disciplinary teams challenging them to address real challenges in practice and involving the conversion of ideas into value. See www.innovationacademy.ie

[Link to Presentation](#)

Creating and Sharing Knowledge: Using podcasting, blogs and Wikipedia

Catherine Cronin, National University of Ireland, Galway

In a redesigned Professional Skills module, BScIT students experimented with new ways to create and share knowledge. Students demonstrated their writing skills by blogging, writing or editing Wikipedia articles and writing tip sheets for fellow students. These writing assignments, examples of creative and authentic assessment, created a dynamic space in which to develop writing skills as well as to give and receive feedback. Feedback from students indicated that they enjoyed these opportunities to write for an authentic audience, were motivated to produce work of a high standard, and understood that work shared online forms part of their digital identity.

The lecturer, like the students, also adopted new ways of creating and sharing knowledge. Rather than creating lengthy PowerPoint presentations to deliver via lectures, and sharing these as student notes, an experiment in podcasting was undertaken. The long presentation for each week's class was replaced by 3 items: *a short, image-rich presentation*, designed to prompt reflection and discussion during class; *a concise textual summary* of the key points; and *an audio podcast* summarising both the lecture and class discussion. These short audio podcasts

(approximately 5 minutes in length) were recorded very simply, using an iPhone. From both student and lecturer perspectives there were benefits to this approach. Student feedback was positive: students could listen to summaries of classes they had missed or listen again for summaries of key points. The lecturer found that this approach, which put a clear value on discussion and student input, enhanced both learning and the class atmosphere.

Additional flexibility in teaching, learning and assessment is planned for next year. Working with students, a range of options will be identified for module assignments and weekly class summaries. The objective of the lecturer is to move beyond solely text creation in assignments (e.g. more audio and video) and to find ways to incorporate student voice into the weekly class summaries. The objectives of the students... will be discovered in September 2011!

[Link to Presentation](#)

Trailmeme, taking the web for a walk

Laurence Cuffe, Wicklow VEC

In this talk I will describe a new tool from Xerox which can be used for group or social learning. Trailmeme is a new way of presenting collections of web content and developing annotated trails through those collections. I will describe how this can be used to curate collections of content for class study and revision.

[Link to Presentation](#)

Student voices in curriculum planning

Roisín Curran, University of Ulster

Student engagement can have different meanings across the higher education sector. For some practitioners student engagement is about focussing on activities which promote active participation of students in the classroom; for others it's about working with student representatives to feed into the design and delivery of the curriculum. Trowler and Trowler (2010) state that the main focus of the Higher Education's Academy (HEA)'s interest in student engagement is on students being actively involved in curriculum planning. The National Union of Students (NUS) and the HEA collaborated on a joint project (Student Engagement Project 2010) to support institutions and students' unions to better engage students in shaping their learning experiences. The three strands of the project were student feedback, student representation and curriculum design. With regards to the curriculum design strand, the project outcomes report that 'using students' feedback and representation should be key ways to shape the development of the curriculum'.

This paper provides an overview of a pilot project in the academic year 2010-11 involving students having a voice in the early stages of curriculum planning for two subject areas at the University of Ulster. It will outline the methodology used in obtaining feedback from students and how this was used by academic staff involved in the preparation for revalidation of their courses. It will also explore the changing nature of working relationships within the university, in particular the collaboration between staff development adviser, students' union officers and subject unit coordinators. Using the feedback from the pilot and strategies for engagement as put forward by Trowler (2010), a model for engagement with students and academic staff in the next academic year will be outlined.

NUS-HEA Project (2010) Student engagement project.

www.nusconnect.org.uk/campaigns/highereducation/student-engagement-hub/nus-heaproject/

[Accessed 25 March 2011].

Trowler, V. (2010) Student engagement literature review. York: The Higher Education Academy.

Trowler, V. and Trowler, P. (2010) Student engagement evidence summary. York: The Higher Education Academy.

[Link to Presentation](#)

PeerWise: A Tool Enabling Student Generated Content in Undergraduate Physics

Barry Fitzgerald, Jennifer Johnston and George McClelland, University of Limerick

This Pecha Kucha presentation will introduce the PeerWise tool which is an online software system that enables students to author and answer Multiple Choice Questions (MCQs) based on a particular course or module. PeerWise exploits the familiarity many students have with modern Web 2.0 software such as YouTube and Facebook where user-generated content is integral. Using the PeerWise platform, students collaborate with their peers to construct and answer MCQs which can then be evaluated leading to on-line dialogue among the students. Creative responsibility for content is assigned to the students while course instructors simply act as moderators of the Student Generated Content (SGC). The presentation will introduce the PeerWise facility and identify the most prevalent characteristics for submitting MCQs to PeerWise. In addition, preliminary results from the implementation of PeerWise in 1st and 2nd year Physics modules at the University of Limerick (UL) will be presented.

PeerWise was created by Paul Denny at the University of Auckland in New Zealand in 2007. Since its first use, more than 80,000 questions and 2 million answers have been contributed by students at over 70 institutions worldwide. PeerWise is one of several tools currently being investigated and developed by the Computer Science Education Research group at the University of Auckland.

[Link to Presentation](#)

EBL in the Humanities: first impressions

Gerry Gilvary, Institute of Technology, Tallaght

In September 2009, I introduced Enquiry Based Learning (EBL) methods into a number of practice and theory based modules on the Creative Digital Media Programme in ITT Dublin. As a recent convert to EBL practices, I was heavily influenced by the work of Phil Race, Ranald MacDonald, Ray Lands and Terry Barrett as a basis for the guiding principles to introduce EBL elements into my modules. The support of CELT in Tallaght with a SIF 2 grant, and the considerable resources of LIN, AISHE and NAIRTL, meant that I was not alone in my quest. I decided to adopt a hybrid-EBL approach across a number of modules in small stages.

The chosen modules were: Video Production (second year), Advanced Video Production (fourth year), Professional Practices (third year), and Scriptwriting (second year). The plan was to introduce more practice based elements into the theory based modules, and in the practice based strands, foster independent learning as a key transferable skill as well as to aid the production process. I particularly wanted to encourage the development of more worthy video projects with outside clients such as Cheeverstown Trust and Trustus, two voluntary organisations operating close to the Institute.

The first requirement was the roll-out of Moodle in order to provide a reliable method of course delivery and management. Secondly a series of new approaches were introduced such as Meyer-Briggs Type Indicators (MBTI) for team working, The Enneagram for scriptwriting generation, and The Media Production Triangle for assessing each team member's skillset. Thirdly was the introduction of Peer and Self-Assessment, Reflective Lab Reports, and Reflective Journals to moderate student achievement. Finally was an evaluation of the methods as part of a Programmatic Review. As I complete my fourth semester, I feel that I would like to share my experiences, the challenges I faced, and the future goals of EBL in the Humanities. My Pecha Kucha presentation will provide an overview of this constantly evolving arena.

[Link to Presentation](#)

Investigating paired teaching on a collaboratively designed module

Damian Gordon and Muireann O'Keeffe, Dublin Institute of Technology

Paired teaching usually consists of two teachers delivering joint lessons in the classroom. In this study following the restructure of a programme, two separate modules were redesigned and merged into one module. Rather than having each lecturer teach on their own unique element of expertise, it was decided that a paired teaching strategy be implemented to facilitate module workshops. This paired teaching strategy presented several challenges, including that both lecturers came from differing epistemological and ontological perspectives, and had different training and experiences of the use of technology for teaching. This resulted in an entirely novel experience for both the lecturers and the students. For some elements of the module it was

apparent that either one lecturer or the other had more experience, and the other lecturer served as both support and student, whereas on other elements of the module both lecturers were able to contribute equally. In deference to the pedagogical shift that this paired approach brought about, Gibbs' model of Reflective practice was identified as an appropriate model for evaluation of the strategy. Gibbs' model enables reflection from descriptive reflection to supporting more critical reflection in the latter stages of the cycle. Through the process of evaluation both lecturers identified challenges and lessons learnt. Potential improvements were acknowledged for the paired teaching strategy and thus an action plans to effect positive change for the future of the module was implemented. This paper will analyse the challenges of paired teaching and also present the Gibbs model of reflective practice as an appropriate tool to evaluate this strategy.

Posters as student engagement approach in first year science

Adrienne Gorman, Muriel Grenon, James Brown, Helen Dodson and Andrew Flaus, National University of Ireland, Galway

Active student engagement in teaching and learning activities is widely linked with higher levels of motivation and improvements in academic performance. We have observed a decline in traditional lecture attendance and attainment in first year Biotechnology classes over recent years. To address this, we introduced a series of regular poster presentations.

Our first year Introduction to Biotechnology module has a principal learning goal of inspiring students by connecting textbook scientific knowledge with real-world applications. We divided teaching into six-session topic blocks consisting of traditional lectures taught mainly by young researchers. At the conclusion of each block, the class of 25 students (in groups of 3-4) was assigned to research and produce a poster on a specified example or application of the topic.

Presentations were designed to replicate a mini-conference style, using standard presentation pinboards with refreshments supplied. An A1 template was provided in the style of research posters, but allowing students to attach their own A4 printed sheets as content.

During the poster session, student groups stood with their poster to describe their work, answer questions and engage in discussion by invited members of academic staff. Their research, presentation and understanding was individually graded using a custom assessment form.

Student feedback indicated they found making the posters was a positive contribution to their learning. Notably, they commented that having the related poster session immediately after a lecture series was a useful way to reinforce taught material. They felt they had learned important relevant skills, such as how to use online journals and databases, and valuable communication skills. The academics who participated agreed it was an enjoyable and positive experience, and appeared to have strongly stimulated student interest.

We conclude that poster presentations provide positive benefits for student learning, broaden opportunities to gain relevant skills, and improve overall engagement.

[Link to Presentation](#)

Managing students who use a range of assistive technology

Ann Heelan and Mary Quirke, AHEAD

The Road Not Taken - Robert Frost

Two roads diverged in a yellow wood,

And sorry I could not travel both

And be one traveler, long I stood

And looked down one as far as I could...

All students as we know have different learning styles and currently as academics and teachers, we manage a lot of students with different abilities/intelligences, personalities and interests.

Learning is a process and there are many tools associated with this process. Tools we can traditionally identify with learning include blackboards, chalk, notes, books, recordings, images – we can identify with these because we are familiar with them and they have history. Today there are new tools increasingly coming into classroom, and sometimes it is difficult to keep up and fully understand how these work - iPods', iPads, eBooks', recording devices.

Do we embrace this invasion or prevent it? How do we manage it? What do we need to consider?

In considering such questions we need to look at *which* students are using these 'gadgets', and is it because they like them or need them? There are now 6,800 students with disabilities in higher education, or 4% of the student population. These students are enrolling on courses such as nursing, teacher training, medicine, and engineering, and with these technologies can consider careers that challenge bias and assumptions.

Policies, Rights and Responsibilities, and Codes of Conduct may need to be revisited as our classroom changes. As academics and teachers there are factors that need to be considered as students continue to use technology to enhance their learning. Such considerations could make a difference.

Two roads diverged in a wood, and I—

I took the one less traveled by,

And that has made all the difference.

[Link to Presentation](#)

Reducing vulnerability to medical error

Helen Hynes, Simon Smith, Pat Henn and Robert Gaffney, University College Cork

The World Health Organisation with the publication of a patient safety curricular guide has challenged medical educators to innovate. The patient safety simulated ward at UCC medical school provides a series of clinical scenarios reflecting commonly encountered antecedents to medical error. The simulated ward provides a low risk setting in which to demonstrate competence, reflection and consolidate learning. Students rate the experience positively, noting the learning afforded by this exposure to autonomous clinical practice.

[Link to Presentation](#)

Action Learning: a process which supports organisational change initiatives

Pauline Joyce, Royal College of Surgeons in Ireland

This paper presents an evaluation of action learning as a process which supports organisational change initiatives and demonstrates how students can be co-creators of knowledge. An interprofesional group of healthcare professionals met monthly to partake in a highly structured, facilitated team process of reflection and action. An Action Learning Set Evaluation (ASLE) tool was used to survey the students who participated in this process as part of their master's programmes. In addition focus group meetings with the facilitators were carried out to evaluate action learning from their perspectives.

To date the survey suggests that action learning is a powerful tool in engaging students to take ownership of their change projects. This ownership is assisted by the use of questioning from team members so that peer accountability ensues. The importance of the use of challenge and support from peers and facilitators is discussed. The action learning process is also linked with the ability of the student to problem-solve and demonstrates that students can come to a solution themselves. The power and benefits of action learning are discussed with examples of quotes from students and facilitators. The use of action learning to support students undertaking organisational change initiatives is highlighted. The findings also suggest the importance of questioning by peers and of engagement in reflection during and following the meetings.

Drawing on the literature around action learning, the use of a framework to underpin the success of this process is recommended. In addition to supporting students to undertake projects in their organisations, the facilitation of action learning set meetings has encouraged them to use this process following the completion of their postgraduate studies.

[Link to Presentation](#)

[Link to Pecha Kucha video](#)

Embedding Peer-Assisted Tutoring in a Chemical Engineering Curriculum: Tutor and Tutee Experiences

Patricia Kieran, Dermot Malone and Geraldine O'Neill, University College Dublin

Peer-Assisted Tutoring, a form of Peer-Assisted Learning (PAL) or Supplemental Instruction (SI), has been sustainably introduced to the curriculum for a 4-year, professionally-accredited degree programme in Chemical Engineering at University College Dublin. Small-group, peer-assisted tutorials (PATs) are currently associated with two core (compulsory) 3rd Year modules: (i) Unit Operations, (ii) Computational Methods in Chemical & Bioprocess Engineering. For Unit Operations, the PATs provide 3rd Year students (the Tutees) with regular opportunities to work together, solving lecturer-defined problems, related specifically to the course material. For Computational Methods, the Tutees work both individually and collectively on computer-based implementation of numerical methods for the analysis of Chemical/Bioprocess Engineering systems. In both cases, the PATs are facilitated by 4th Year students (the Tutors).

The system is now in its third year of operation and has been warmly received by both Tutors and Tutees. This paper reports on the development and implementation of the system, with reference to the experiences of both Tutors and Tutees. Tutor training and evaluation is now facilitated through a 5-credit, elective module: 'Peer-Assisted Tutoring in Chemical Engineering'. (Development of this module was supported by NAIRTL.) To date, Tutors have reported improved understanding of the relevant engineering principles, increased confidence in group management and a sense of satisfaction in supporting others in their learning. Tutees identified the PATs as a supportive and productive learning environment; they welcomed the opportunity to work with and learn from the Tutors; they felt more confident in tackling relevant problems. The enthusiasm of the Tutees for the system has yielded a steady supply of Tutors, thereby ensuring the sustainability of the system. Although developed specifically for a Chemical Engineering curriculum, the PATs have obvious potential for implementation in other engineering and scientific programmes.

[Link to Presentation](#)

Teaching of Human Anatomy without using human cadavers: Co-Creation of knowledge of Human Anatomy through Role Play

Rabia Malik, Katie Robinson and Amanda M. Clifford, University of Limerick

In the traditional Medical and Allied Health science courses in UK and in Ireland students attend human dissection sessions on a regular basis for at least four hours each week through their entire semester to gain knowledge and understanding of Human Anatomy.

At the University of Limerick Human Anatomy curriculum is delivered without involving the dissection of cadavers or human prosections. To meet this major but an exciting challenge and to

achieve the learning outcomes; Anatomy curriculum was delivered using innovative teaching strategies in 1st and 2nd year human anatomy modules.

The objective of this study is to describe the design, usage, and the impact of these teaching strategies on: students' knowledge of anatomy, on student class experiences and on their practical skills.

An educational strategy based on role-playing was developed to engage all students. In role playing students (therapists) used each other as live models (patients) to get hands-on experience for identifying, localising and labelling body structures. Student opinions were sought on the appropriateness of these strategies to the subject content and to their future practise.

The findings of this study are based on data gathered from 3 undergraduate anatomy modules; and relates to quantitative analysis of student results, content analysis of learner messages to module feedback questionnaires and two recent in-class observation sessions.

The new teaching approaches were found to result in a substantial increase in student-student interaction, leading to observable improvements in the achievement of learning outcomes. The findings highlight the pedagogical value of these strategies and also suggest possible ways in which their benefits can be maintained while still meeting the formal assessment requirements of the course.

This study highlights that real interactive learning from the start is needed for students, in order to prepare them appropriately for their future clinical interactions.

[Link to Presentation](#)

Peer Supported Learning Groups (PSLG): Enhancing student experience in UL & beyond

James Murphy and Hussain Madhi, University of Limerick

The regional PSLG is a cross institutional centre for promoting effective, learner focused peer-supported learning programmes by building on the experience and expertise in peer-supported learning gained over the years from UL's highly successful academic enrichment programme known as Peer-Supported Learning Groups (PSLG). The centre was opened in March 2009 as an initiative by UL funded by the HEA SIF II, to support the establishment of a student led active learning culture, via providing guidance, advice and assistance on setting up effective peer-supported learning projects. Since its opening the PSLG has delivered a number of induction seminars to teaching staff, course leaders and faculty boards across UL and other institutions. This year it has initiated and piloted 17 PSLG programmes across UL catering for more than 1,700 students. For the third year running, we have also been actively involved in assisting Waterford Institute of Technology (WIT) in setting up and implementing their peer-supported learning/monitoring programme. Of the 17 programmes initiated this year, 6 were specifically aimed at first years with a further 3 targeting students who attended PSLG sessions in the previous year. This allows us to examine the continuing impact of PSLG sessions on the student

body. This presentation will provide an overview of the PSLG, its activities and achievements over the last academic year, with particular focus on the impact of the PSLG programme on the first year experience in UL.

[Link to Presentation](#)

UL's first seven weeks initiative: exploring the initiation of an adjustment strategy for new students at the University of Limerick

Maura Murphy and Sarah Moore, University of Limerick

This presentation will summarise the process undertaken to establish an enhanced student support process for new arrivals at the University of Limerick (UL) spanning the first seven weeks of the first semester. Based on existing research that highlights the importance of early adjustment, exposure to supports, interventions and habits, and the risk of dropout or dropout decisions in the very earliest weeks, this initiative aimed to provide information, resources, advice, support and encouragement to new students at UL, using a range of strategies and incorporating social networking as part of its communication strategy.

The presentation will outline the process undertaken to establish the first seven weeks task force, the principles and ideas explored, the themes we agreed to organise the initiative around, and the impact that the initiative had on the experience of UL's newest students. As well as describing the process of its establishment, we present data gathered after the first seven weeks summarising students' perceptions of their early experience and the ways in which the first seven weeks may have helped them to become more effectively orientated to the challenges of learning and living in a higher education context.

As part of the presentation we will explore what this initiative can tell us about the following:

- the role of social networking as an aid to student adjustment
- the utility and support of 'peer mentors' in assisting with simple but important adjustment related issues
- the importance of a 'whole institution' approach to student adjustment with collaboration from both academic and non-academic functions within the institution
- the practical, academic and emotional impact of enhanced student supports in the early weeks
- ideas for creative engagement with student support in current economically constrained climates
- importance of the first year experience as a forum for the establishment of healthy, productive and effective learning orientations.

[Link to Presentation](#)

Peer assessment of active teaching and learning

Sinéad Ní Ghuidhir, National University of Ireland, Galway

Active teaching and learning is widely encouraged to promote independent thinking and to foster student centred learning. On the The Dioplóma Iarchéime san Oideachas (DIO, an initial teacher education programme conducted through the medium of Irish at NUI, Galway), active teaching and learning is carried out in workshops as part of the core teaching and learning module. The students are encouraged to use cooperative teaching and learning techniques, which they can transfer to their own practice in the classroom. Over the past two years, peer assessment has been incorporated as an evaluative tool into the module. Peer assessment was chosen in order to afford the student teachers the opportunity to share their own work, to creatively engage in their own learning and also to encourage their development in the consideration of active methodologies and in reflective practice. This approach was based on Phil Race's work in peer assessment. Using his guidelines, a marking criterion was developed with class participation. Each student peer taught, each was a pupil in their peers' lessons, and each marked a selection of their peers. Following this process each student was required to write a reflection, outlining what they liked about the process, what they did not like and what they learned. This paper outlines this process, and gives the students' own reflections on the process. Results of reflection from both years are tabulated and analysed and directions for change and alterations are indicated. Data will show that while the students both years had difficulty with marking their peers, the shared learning they experienced was highly rated, and the opportunity to see their peers teaching and to learn from them was high on the list of what they liked about the process.

[Link to Presentation](#)

Interaction as practice: Investigating the co-creation of knowledge through questioning techniques

Anne O'Keeffe and Elaine Vaughan, University of Limerick

Asking questions in class is one of the most deceptively basic strategies available to teachers. Questions can function at a literal level of checking understanding and recall, but they can also create and increase interactivity and promote critical thinking. Despite their centrality in classroom discourse, they have received relatively little attention in empirical research. We argue that a greater understanding of the role of questioning and question types in teaching and learning needs to be explored because how, when, and why we ask questions is critical to how students respond and learn, from the teacher and from each other. This paper will focus on questioning techniques based on authentic spoken data from third level classrooms, and research on classroom interaction. It problematizes the notion of the teacher-student co-creation of knowledge and investigates how we go about actively engaging learners through

enhanced questioning strategies. In doing so, it also takes the stance that interaction in the classroom is more than simply a means to an end: interaction is practice and can be investigated as a record of practice.

[Link to Presentation](#)

Articulating the knowledge- exploring the learner’s experience of organising an experiential learning case for assessment

Phil O’Leary, Cork Institute of Technology

Learning takes place in all spheres of life and in many contexts. In this era of lifelong learning individuals are availing of higher education throughout their lives. Mature students are an increasing cohort in higher education. These learners may have significant prior learning and engage with higher education now with considerable knowledge. Often this knowledge is based on roles and competencies established in the workplace. This paper focuses on the student as co-creator of a prior learning case, specifically the learning portfolio which presents prior learning for assessment. It explores the process from the perspective of the learner whose task is to transform the language of the workplace/life to that of academic for assessment for credit. The mentor’s role (an academic) is to engage with the student and enable them to identify, articulate and reflect on this knowledge in order for this learning to be assessed. This paper investigates the process with a sample of learners from a range of disciplines. Consideration is given to the task of the student in preparing the prior learning case.

[Link to Presentation](#)

Use of business simulation game as a multidisciplinary teaching tool

Breda Sweeney, National University of Ireland, Galway

As part of the BComm (Accounting) programme in NUI Galway, an interactive, online business simulation game called Globalsym was used in the classroom in 2010/11. This game involved students managing a company and competing against other companies and was managed by both classmates and students in other Universities such as University of Texas. Students face decisions on how to handle the problems, opportunities, and challenges facing the modern company. It involved making decisions on marketing, strategy, finance, production, and sales each week in response to economic and political information. Companies operate as retailers or manufacturers of digital cameras and MP3 players in three different countries. Students must detail the initial strategy of the company and show how their strategy changed in light of new information each week. Students respond to a variety of external threats including inflation, political changes, legislative changes, security and other threats.

The market is determined by the players, and companies compete against each other and not the computer. After reading the instruction manual, newsletter and consulting reports, students make a number of decisions including whether or not to sell to the consumer market, price, advertising, and production level, investments in manufacturing and financial moves. Students from different teams can also make contracts with each other in order to buy or sell goods. Therefore there are unlimited opportunities for realistic negotiation and networking between companies and players either over the web or face to face. Once the first decisions have been processed, the simulation provides feedback to student “executives” and the decision cycle begins again.

[Link to Presentation](#)

Part 8: Poster Presentations

Students as Co-creators of Knowledge

Mature Students as co-creators of knowledge in the innovative BA for Personal and Professional Development

Jean Berry, All Hallows College

All Hallows College offer the BA in Personal and Professional Development on a part time basis for mature students since 2009. Based on the adult learning BA for non-traditional students at De Paul University in Chicago, the programme has now 140 students. Students create their own plan or grid for the degree programme, with options for recognition of prior learning and the programme is based on fulfilling outcomes in four Strands of Study: Adult Learning, Human Development, Arts & Ideas and a Professional Focus Area. They are engaged from the beginning in creating their own plan of study and pursuing outcomes which align with their life and work experience. Flexibility and student engagement are hallmarks of the programme. This presentation is about the key practices of our BA programme that match best practices for adult learning and thus promote student engagement and co-creation in the development and assessment of the learning process.

Scaffolding Minds Less Ordinary: Transforming Economics Thinking by Intelligent Looking

Daniel Blackshields, University College Cork

Foss & Foss (2002), Foss (2003), Foss, Foss & Klein (2006) and Foss & Klein (2008) argue for an appreciation and encouragement of the entrepreneurial function in all employees. If this is a key employability criterion for the 21st century graduate then educators must consider how personal creativity/entrepreneurial mindset may be encouraged in graduates. Sarasvathy argues that the creative/entrepreneurial mindset derives from an effectual process consisting in individuals appreciating 'how they frame problems, what alternatives [they] perceive and generate, which constraints [they] accept, reject and/or manipulate and how and why [they] heed certain criteria rather than others in fabricating and implementing new solutions' (2008: xiv). This process requires the development of the synthesising and creative minds; minds that Gardner posits are traditionally neglected in disciplinary pedagogies (2007). Perkins argues that thinking is transformed when experiential intelligence is managed by reflective intelligence (1994), the latter remedying the hasty, narrow, fuzzy and sprawling nature of human cognition (ibid: 45-47). This paper argues that the development of undergraduate and postgraduate Economics students' effectual processes can be encouraged by building reflective intelligence performances into disciplinary pedagogies. It reports on the background, design and enactment of a Visual Arts based student performance initiative designed to encourage transformational learning by students. It is argued that these performances encourage students to question their anointed mental models; coaxing them out of complacent and indifferent attitudes that they may have

about Art and life enhancing the effectual process of; 'expand[ing] the choice set from a narrow sliver of highly localised possibilities to increasing complex and enduring opportunities...' (2003: 208). A narrative of incidents of transformative learning by students is presented. Emergent findings on the facilitation of undergraduate and postgraduate Economics students on their journeys of personal and professional development through these performances are considered.

[Link to Poster](#)

Engaging minds around curricular and cross-competence in post-primary teacher education: The Learning to Teach Study (LETS)

Paul Conway, Rosaleen Murphy, Michael Delargey, Kathy Hall, Karl Kitching, Fiachra Long, Jacinta McKeon, Brian Murphy, Stephen O'Brien and Dan O'Sullivan, University College Cork

The aim of this research, the Learning to Teach Study (LETS), the first of its kind on the Postgraduate Diploma in Education (PGDE) in Ireland, was to develop and implement a study of initial teacher education in the PGDE in post-primary education. It sought to identify the individual and contextual dynamics of how student teachers develop curricular and cross-curricular competences during initial teacher education. Within an overall framework that explores how student teachers co-construct their skills, competences and identity as teachers, it focuses on curricular competences in mathematics, science and language teaching, and on the cross-curricular competences of reading and digital literacy and the development of inclusive teaching practices. Rooted in a socio-cultural perspective on learning and adopting an interpretative methodology, LETS involved the collaborative development of three interviews protocols and a survey by the research team. Seventeen (n=17) students were interviewed three times during the PGDE, and one hundred and thirty three students completed a detailed survey on their learning to teach experience (n=133, i.e. response rate of 62.7% of the cohort).

Among the main findings emerging from the study are: (i) schools provide valuable support for PGDE students but this typically does not focus on classroom pedagogy, (ii) PGDE students typically felt that they had to be 'invisible' as learners in schools to gain and maintain authority and status, (iii) inherited cultural scripts about what it means to be a 'good' subject teacher shaped teacher identity and classroom practice, and (iv) as PGDE students begin to feel competent as teachers of maths, modern languages and science, this feeling of competence typically does not include their capacity to teach for inclusion and reading literacy within their subject teaching. We discuss the findings in terms of the student teachers co-construction of their identities and knowledge as teachers.

Engaging Science Students through Research Seminar Presentations

Muriel Grenon, Andrew Flaus and Adrienne Gorman, National University of Ireland, Galway

Biotechnology is the application of molecular biology to real world problems. Although this is one of the most dynamic areas in contemporary science, students often find the underlying scientific principles intimidating and disorienting.

To address the resulting disengagement, we have created a realistic seminar programme to actively involve our second year Biotechnology class of 20 students.

In semester one, students are assigned individual topic involving the application of molecular biology principles. After introductory presentation training, students research their topics and design a PowerPoint presentation to deliver their findings at weekly sessions. The full class attends each seminar and pro-active engagement is driven by grading everyone's contribution to questions, comments, and anonymous written feedback provided to the speaker.

In semester two, the cycle is repeated with an assigned topic taken from a "Scientific American" article by a leading international researcher. This provides experience with scientific literature at a realistic entry level, as well as giving the opportunity to build on skills after the semester one feedback. A written presentation is also requested to improve scientific writing skills.

The participation of guest academic staff in the audience provides fresh perspectives for every session as well as underlining relevance of the learning to local research activities.

Using this format, we have achieved 100% class attendance at the presentations over two academic years, and 95% submission of written assignments. Guest academic participants comment on the high standard presentations and student's enthusiasm for discussions, even when they are not part of the assessment in semester two. Students offered very positive feedback about the programme commenting on interesting topics and the acquisition of key skills.

Engaging in realistic scientific exercises allows each student to focus on achievable personal goals as well as building up core scientific skills of presenting and discussing scientific concepts.

[Link to Poster](#)

Think globally, teach locally: A study of student teachers' engagement with global citizenship issues

Patricia Kennon and Thérèse Hegarty, All Hallows College

This paper investigates the potential for developing student teachers' critical and active engagement with issues in intercultural education and global citizenship within a third-year 42-hour B.Ed. elective, 'Think Globally, Teach Locally' during 2010/11.

Through their experiences with popular culture, media, simulation games, conversations with members of marginalised communities and school placements, the 16 students explored questions such as: What is culture? How does a sense of national identity evolve? What counts

as knowledge? Which voices are listened to and which voices are neglected or silenced? This interdisciplinary and strongly participatory course developed out of a conviction among the Froebel faculty that ethnocentricity needs to be interrogated among student teachers if they are to be equipped to work with our intercultural school population and to centre justice as a core value in their teaching and children's learning.

Responsibility for demonstrating their knowledge for assessment purposes was left with the students themselves through their engagement with a discussion board, and by challenging them to choose, design and reflect on their collaborative final-group presentation. We will show clips from the video of the drama which the group chose to present as a medium for conveying their knowledge production and their learning journeys.

In this presentation we will share the learning about concepts of discourse, multiculturalism and power that emerged along the way, the scaffolding which we put in place such as the discussion board on the College Moodle, enriching linkages between theory and practice, feedback from students and the impact the course has had on ourselves as reflective practitioners. We will invite the attendees to reflect on the learning of the students and to imagine how they might have managed some of the dilemmas we faced along the way. We will argue that “not knowing” is more valuable than “knowing” for teacher education as it stimulates the crucial work of higher-order thinking, curiosity, enquiry-based learning, openness and accountability.

Peer-Learning: a model for optimising the environment of mutual help to facilitate scaffolding of student learning

Rabia Malik and Hussein Mahdi, University of Limerick

The use of educational strategies that require students to be more actively involved in the learning process is now strongly advocated for third level education; thus shifting the paradigm from a teacher-centred to the student-centred approach. ‘Peer learning’ is an educational strategy that refers to students learning with and from their fellow learners (Boud, 2001).

The aim of this study was to develop a peer-learning model and ascertain the feasibility and outcome of engaging student groups to learn and develop study strategies and skills for the subject of Human Anatomy.

Four peer groups were formed, incorporating 1st and 3rd year students. A two-day training of senior students/peer leaders in specific teaching and learning theories was provided. Peer supported learning sessions were held on weekly basis. In these sessions peer leaders encouraged students to take responsibility for processing course materials; facilitated the review of notes and discussed their difficulties. Student leaders then used various strategies to facilitate students to structure their understanding of the content. At the end of twelve weeks, student and the peer leader feedback was collected using two separate questionnaires.

An analysis of feedback revealed that peer learning contributed very positively to the learning experiences; not only for student learners but also for the peer leaders. Data suggested that

through conversations in these sessions students gained confidence in their understanding of the subject knowledge and in communicating the subject information. Results reflected other major benefits gained both by students and the leaders.

'Peer-Learning' is an effective model for providing students an opportunity to take initiative and manage their own learning and thus can play an active role in their educational and personal development. Peer learning process can thus be potentially beneficial to all clinical and related education.

[Link to Poster](#)

Project based learning in renewable energy with first year Level 7 and Level 8 Engineering Students

Aidan O'Dwyer, Dublin Institute of Technology

This contribution will report on the use of a student design project for enhancing learning about renewable energy solutions on separate first year modules in electrical engineering at the author's college. The project objective, as outlined to the students, was to design and build a, possibly innovative, everyday device that can generate electricity from sources of "free energy". As background to the project, students were made aware of some examples of devices available commercially, such as an energy generating rucksack and a clockwork radio; they were also shown examples of projects completed by previous student cohorts. The project could be done individually, or as part of a team of two persons. The finished project was demonstrated by the student(s), and formed part of the student's continuous assessment grade.

From a learning viewpoint, the project objective was to encourage first year engineering students to use their natural design creativity in a freeform, brainstorming manner, in an area of pressing interest to society. The benefits of the design project are as follows:

- it allows young engineering students to use their creativity and to further develop their academic interests;
- it establishes a balance between students' expectations of their programme, and the nature of the academic work;
- it assists with student engagement and retention;
- it introduces competitiveness in a fun and undemanding form;
- it allows students to interact and associate with one another through a common interest;
- it gives students an opportunity to show interesting work to their friends and family.

The author has used the design project as part of a suite of learning and assessment options in two first-year modules for five academic years. Examples of student project work will be detailed in the accompanying poster presentation.

[Link to Poster](#)

An investigation into student perceptions of peer learning

Julianne Ryan, Rabia Malik and Amanda Clifford, University of Limerick

Peer Learning (PL) involves using experienced students (leaders), working alone or in pairs, to regularly facilitate and supervise the learning of a small group of first year students (learners). This group learning 'PL session' is usually classroom-based, designed to offer a range of benefits to; an institution, its teaching teams, its courses, and to students involved (Capstick, 2004). Despite this learning strategy being used extensively throughout third level undergraduate programmes in Ireland and UK (Capstick, 2004) a significant gap in research exists on student perceptions of PL.

The aim of this pilot study is to investigate student perceptions of peer learning in an undergraduate physiotherapy programme. This study is a pilot quasi-quantitative cross-sectional retrospective questionnaire design. Following ethical approval, a sample of convenience of a cohort of 2nd and 4th year students was invited to participate via email. Questionnaire designed by the researcher consisted of mainly closed questions (participants rating statements on 5-point Likert scale from strongly disagree- strongly agree) with several open questions throughout the questionnaire; incorporating both quantitative and qualitative component to the study. Data analysis was performed with SPSS and thematic analysis undertaken for open-ended questions.

A valid response rate of 81.5% was obtained. The overall response to PL was positive with comments such as "PL helps clarify difficult topics, provides advice on best ways to learn, facilitates discussion and questions on topics that aren't fully understood". 75% of participants agreeing / strongly agreeing that PL benefited them in 3rd level education. The reported negative aspects were related to timing and organisation of the sessions. The results showed that generally students perceived PL as a valuable and beneficial intervention. This form of learning could be extended to other years and further research is recommended involving more students.

[Link to Poster](#)

Pre-enrolment & post-enrolment predictors of academic success in Business Economics

Noel Woods, University College Cork

Aim: To investigate the impact of pre enrolment (CAO points, socioeconomic factors) and post enrolment (attendance at lectures/tutorials, hours worked, hours study, etc) factors on academic success during the 2009-10 academic year for 380 students of business economics. The hypothesis that a particular dominant intelligence was correlated with academic success was also considered.

Data and Methods: Academic success was subjective to the individual and was determined by comparing their expected grade to their actual grade in their end of year exam. Both qualitative

and quantitative data were elucidated from questionnaire responses, and attendance was established from sign-in at lectures/tutorials. Examination results were extracted from the university's examination system. The dominant intelligence was determined from responses to an online multiple intelligences (MI) questionnaire based on Howard Gardner's Theory.

Results: Multivariate regression was used to establish the relationship between the predictors and the outcomes as measured by exam results. The investigation of MI established that three main intelligences dominated; interpersonal, logical-mathematical, and musical. Interpersonal intelligence was found to have a positive influence on academic success. CAO points were generally found to be positively related to exam marks and academic success. Attendance at lectures was a significant predictor of academic success and a positively correlated with examination mark. Commerce students felt that lecture attendance was the significant factor, whereas BIS students attributed success to their own self-discipline and effort but attributed failure to quality of teaching.

Conclusions: The findings provide a basis for helping lectures reflect on their expectations about students and to be better informed about methods that facilitate learning. They provide a source for helping students to reflect on their perceptions and expectations of university study so that they can gain more control over their learning, and therefore they can approach their studies in a way that will maximise success.

Civic Engagement and Social Responsibility

Teaching Cardio Pulmonary Resuscitation to School Children

Andrew Carroll, Maureen Kelly, Craig Mac Liathain, Barry O'Donovan and Gerard Flaherty, National University of Ireland, Galway

Two medical students will present their experience of participating in a Special Study Module (SSM) in Community Engagement- teaching national school children how to perform Cardio Pulmonary Resuscitation (CPR).

The presentation will be in two parts:

Part 1: Third Year Student Andrew Carroll will present the student motivations, expectations, learning objectives and techniques used to provide this community learning initiative.

Part 2: Second Year student Craig Mac Liathain will present his experience of teaching the national school children. A unique feature of the SSM is that the medical students taught CPR through Irish in the Irish speaking national schools. A video log of the teaching will be shown. Reflections from the medical students involved, our community partners, the national school children and their principal will be shared. Details of the assessment of the SSM will be presented.

SSM Overview: The SSM is now in place for three years. It runs over a ten week period. Over the first four weeks the students are introduced to the concept of community learning and civic engagement through an interactive workshop, learn the skill of CPR and learn how to teach a clinical skill. Students then have to liaise with local national schools, organise the teaching, draw up a lesson plan, and resource material for the teaching day in the schools. The teaching is then delivered to the local schools. Feedback from teachers and national school children is gathered, a group poster or video log describing the endeavour is produced and a reflective diary of the value of the experience to student's development as a doctor is written. The CPR teaching in the national schools is based on the ABC for Life Programme, Queen's University Belfast. The authors would like to acknowledge Dr Mac Closkey for sharing this material.

Reflections of the pilot Civic Engagement Module in GMIT

Maria Conboy, Galway-Mayo Institute of Technology

This paper will document details of the pilot module of Civic Engagement to undergraduate programmes delivered by the Hotel School Department in Galway/Mayo Institute of Technology. The ultimate future aim of the School is to embed the module into the curriculum and allow students to gain academic credit for their participation. This paper will detail the experiences of the module leaders and their evaluation of the pilot programme.

This module integrates academic theory with community needs and uses workshops, reflective journals and group presentations as a means of assessing the student learning experience and understanding of the subject matter. The students involved in the pilot programme will outline their experience and reflect on their personal development and academic learning as a result of undertaking the module.

[Link to Poster](#)

AccessCampus; Bringing the University to the Community and the Community to the University; Civic Engagement and Social Responsibility at the University of Limerick!

Sean Costello, University of Limerick

Despite the boom years of the Celtic Tiger, it appears opportunity did not knock on everyone's door. Educational participation remains a key issue for socially economically disadvantaged groups, exacerbated in the Irish context by a move towards the knowledge economy. This paper explores and documents opportunities for civic engagement between the University of Limerick and a range of targeted communities through programmes run at the AccessCampus, a community outreach centre operated by the University of Limerick on the south side of Limerick City. The AccessCampus delivers a number of educational initiatives and programmes that serve groups, whom are underrepresented at third level education. The paper will outline how AccessCampus has evolved to provide the opportunity for service learning for students across a number of disciplines, facilitate research with practical outcomes and benefits for both the University and Community and deliver needs- based interventions and initiatives to communities.

Through an in-depth analysis of the supports offered through the Study Club Initiative, a programme aimed at post primary pupils, this case study will both report the key benefits to participants including a tracking of results to date and set out the benefits and challenges to civic engagement for both the higher education institution and the communities it seeks to serve, along with providing a model of best practice for civic engagement in the community.

Findings indicate that a range of benefits result from civic engagement, in terms of widening participation, research and community recognition. The implications of the findings are discussed, including the need for higher education institutions to adopt civic engagement as a core value and to formally recognise the effort and contribution of academics, staff, students and community alike in developing and maintaining these strategic alliances.

[Link to Poster](#)

A Universal Design Approach to Education: What is it?

Ann Heelan, AHEAD

There are now 6,800 students with disabilities in higher education, or 4% of the student population. These students are highly intelligent, creative, hard-working and able but many of them think and learn differently. They think laterally and creatively, are entrepreneurial, and as a result of their life experience are resilient problem solvers.

These students are in higher education and cannot learn the way higher education has traditionally taught so it is vital to step back and design courses for all students who want to go on them. This approach is called a Universal Design Approach which looks at all the potential students and how they learn, and then designs a suite of flexible teaching, learning and assessment methods that will enable a diverse group of students to reach the learning outcomes.

AHEAD has in consultation with the sector produced good practice guidelines to include students with disabilities and this presentation will explain what a Universal Design Approach to education looks like. It will provide a very practical guide to including students with disabilities in your course by using a range of good practice teaching and learning strategies. It will also look at how to ensure your learning strategies are accessible to students with disabilities while also upholding robust academic standards.

Working together to negotiate a better future

Lorraine McGinty and Imelda Huggins, University College Dublin

It is widely agreed that higher education institutions exist to serve and strengthen the society of which they are part. Recent years have seen an increased focus on providing student-learners with the opportunity to take more responsibility for their own development and personal education.

Over the past 2 years UCD has successfully implemented Ireland's first negotiated model of postgraduate learning (i.e. Level 9, Certificate, Diploma, MSc degree awards). This paper concentrates on one such programme - "the UCD MSc in Computer Science by Negotiated Learning" - which is currently the largest and fastest growing programme of its kind in Europe.

Computer science plays a vital role in almost every business in today's world. Now, more than ever, skilled IT professionals are in high demand. At a time when sustainable employment is under threat, high-quality IT graduates are still in demand. According to the Central Statistics Office's 2010 figures more than 74,000 are employed in the Irish ICT Sector, and The Innovation Taskforce estimates in excess of 177,000 posts will be created by 2020. Furthermore, in 2010 over €72million was invested in the ICT Schools Initiative, and according to the Economic Forum's Global Competitiveness Index for 2009-2010 Ireland was rated 21/133 countries for company spending on Research and Development. These facts serve to highlight even further how higher education institutions have a very real civic responsibility to foster partnerships between universities and ICT industry in order to enhance economic opportunity, empower individuals, and strengthen the relevance, reach, and responsiveness of university education and research.

The negotiated learning model provides enormous potential for students who may be returning to education in view of further developing their skill sets in a democratic way that allows them to re-position themselves in the ICT sector. The extent to which this potential can be realized depends on how quickly other universities and industry adopt this model to offer programmes of mutual benefit. The paper discusses how individual student-centred learning contracts can be negotiated across a broad choice of more than 100 module offerings, and why thematic “specialization” streams should be informed by industry-focused needs.

How community engaged academics reflect on their practice: a study and a model

Brian Ó Donnchadha, National University of Ireland, Galway

Based on data gathered from over forty practitioners who use community-based learning in the US, this paper discusses the findings of a study of how academics reflect on their practice of engaging with the community.

Practitioners report using a variety of reflection methods, including silent, written and verbal reflection, and both informal and formal collaboration. The data suggests that there is an absence of a forum in which academics can reflect on their engaged teaching and research practice. One recurring theme is that of the need for a ‘safe space’ in which to critically examine the practical and philosophical questions that arise from implementing service-learning and community based research. A second important theme is the absence of a structure with which to reflect on practice. Arising from the findings, a model is proposed to contribute to the reflective practice of academics in higher education.

The Community of Reflective Practice has its theoretical basis in the work of Wenger; Ash & Clayton; and Brookfield and aims to address the need for a forum within the academy to reflect on teaching and research. It is a structured model which facilitates academics to critically reflect with their peers in a safe and nurturing environment on their academic, civic and personal development.

Making the Case for Moral Development Education

Joanne O’Flaherty and Elaine Doyle, University of Limerick

In the context of the numerous scandals and resulting negative publicity that have plagued both the public and private sectors in many jurisdictions across the globe in recent decades, there has been a significantly increased focus on ethical behaviour and the variables that influence it. Examples include reckless and unethical banking systems; top executives displaying discriminatory attitudes towards minorities or the opposite sex; insider trade fraud; environmental misconduct; product safety issues; physical abuse and government officials accepting gifts/donations. The importance of education in developing ethically sensitive

individuals who use principled moral reasoning when facing dilemmas has been widely acknowledged (Pascarella and Terenzini, 1991; Rest *et al*, 1999a). However, ethics is typically omitted from the higher level curriculum and, if raised at all, comprises a very negligible element of the course content of a small minority of modules (see, e.g. Clarkeburn *et al*, 2002). This paper makes the case for including deliberate moral reasoning interventions within higher education programmes. It draws on the professionalism, citizenship and social capital literature and explains how moral reasoning development would encourage serving the public interest, active citizenship and the development of social capital. The paper focuses on the role of teachers and educational institutions, particularly higher education institutions, in developing professionals with integrity, who are also responsible citizens and contributing members of their communities. To illustrate the critical need for the inclusion of deliberate moral reasoning interventions to be achieved urgently, the paper refers to evidence from two studies carried out in Ireland, demonstrating a clear lack of principled moral reasoning among the respective cohorts tested.

[Link to Poster](#)

Bring Healthcare Informatics Teaching to Community

Huiru Zheng, University of Ulster

This paper presents the practice of engaging students in community healthcare during the Healthcare Informatics module teaching. The aim of this research is to bind teaching and learning in universities and colleges to civic engagement, to add social value to the module teaching and to enhance students' experience.

Background: Classroom teaching and lab practice are two traditional teaching methods used in Computer Science. With the development of the course curriculum, Healthcare Informatics module has newly been taught to final year students in Computer Science. The module introduces concepts, methods and applications of ICT in supporting healthcare, ranging from telehealth, pHealth, decision support and technology for independent living. Students can find it challenging due to their lack of health care or social care experience.

Methods: Two approaches were carried out in this practice. Firstly, external speakers from two healthcare service providers were invited from health care related industry to deliver seminars to students in the classroom, so that students had an overview on current services, how technology is being used, and what the expectations are from the industry. Secondly a 'field trip' was arranged for students to visit a local Telecare site where technology is used to provide supports for elderly people. Students had the opportunity to view the current telecare system, to talk to elderly people, and to discuss with the staff on what could be improved. Questionnaires were used to analyse the feedback from the students on both teaching activities.

Results: This teaching practice is well received by both students and the community. Students gained better understanding of the needs from the society while the community understands better what technology and the higher education can help. Following this activity, a final year student project has been proposed and undertaken to develop a user-friendly system to help

elderly residents in using the Internet. How university teaching can work to address problems in the community deserves further study.

[Link to Poster](#)

First Year Experience

Promoting First Year Student Success

Nóirín Deady, Con O'Brien and Claire Dunne, University College Cork

Significant research has linked the relationship between a successful first year student experience and graduation rates (Tinto, 1993; Levitz, Noel, & Richter, 1999; Gardner, Barefoot & Swing, 2001; Gardner et al, 2005).

Recognising this dynamic relationship, one of University College Cork's strategic goals is to 'improve the Student Experience' paying particular attention to those in first year. A Vice President for the Student Experience was appointed in January 2008 to provide strategic leadership to the development of an integrated and holistic student experience. Since 2008 UCC has adopted a particular focus on improving the First Year Student Experience and a First Year Student Experience Coordinator has responsibility for coordinating support for first year students.

Harvey et al (2006) concluded that there is no single first year experience but a multitude of first year experiences. The challenge for UCC was to find ways of optimising the chances of success for students presenting from different age groups, from different ethnic and cultural backgrounds and with different socio-economic histories. Many first year students are in transition not only to UCC but also to adulthood – a period viewed by Hall (1904) to be a time of heightened conflict, mood disruption and risk behaviour - a period of 'storm and stress' when extra support is critical in the early period of transition.

In this regard, UCC recognised the importance of Orientation because it marks the beginning of a new educational experience. It is the best opportunity to welcome students, to promote student interaction and to introduce students to the university.

Annual student feedback on orientation since 2007 and analysis of first year student retention data identify a matrix of factors which impact on student success in the first year. This poster presentation summarises the activities promoting first year student success in University College Cork and the impact that these initiatives have had on improving retention rates among first year students.

[Link to Poster](#)

Sustaining Change – what happens after a research project

Odilla Finlayson, James Lovatt and Pat O'Malley, Dublin City University

Many research papers in science education focus on addressing particular practice issues and report positively on the effects of a particular intervention or change in practice. Most frequently, the effects of the changes in practice reported, based on past research literature,

have positive effects on student learning. However, the question arises as to what happens after the research study has been completed? Are these practice changes maintained and are the benefits for student learning also maintained?

This paper address this question of whether changes can be maintained after the initial enthusiasm for the research project has died down.

Two of the authors, who were involved in a research project, addressed the development of a first year chemistry laboratory aimed at increasing student engagement and ultimately in making the laboratory a positive learning experience for all students. Many elements were introduced into the laboratory practice including small group tutoring, tutor assessment of students by in-lab questioning, notebook maintenance. Specific activities were focused on skill development, development of central concepts and problem-based activities. Student learning was evaluated when this laboratory was implemented. This laboratory has now been run by different people over the intervening 4 years – so it is interesting to determine how particular aspects has changed and if the central construct of the laboratory has been maintained.

NCAD First Year Core Studies: Art and Design Studio Teaching and Assessment

Feargal Fitzpatrick, National College of Art and Design

NCAD First Year Core Studies is the first year programme for students commencing all degree programmes at NCAD*. Core Studies seeks to implement and maintain best practice in the management of students' academic progress and the assessment of their work.

(*The degree in Industrial Design is a partial exception)

The objectives of this study were:

- Clarify and make more transparent the assessment procedures
- Introduce students to student-centred study
- Involve students in the management of their own academic progress
- Support students in developing an independent, critically reflexive studio practice
- Position Core Studies as an interdisciplinary discourse (i.e. set of concerns and/or practices) within NCAD, as opposed to a time or location-based foundational model

Methods/Actions

- Written briefs are provided for each module listing learning activities and learning outcomes.
- Teaching is focused on meaningfully connecting learning activities to learning outcomes.
- Assessment criteria are published
- Assessment is by at least two staff per module
- Results of each module are provided to students in tutorial sessions
- Feedback is broken down and discussed as per marking criteria
- Student report forms are issued and collated (students provide a written account of their tutorial, advice given, and course of action to be taken)

Results/Achievements

- Increased transparency in assessment procedures
- Greater clarity as to each student's academic progress
- More opportunities to support underperforming students
- More even spread of workloads (for staff and students)
- Students take more responsibility for their own progress
- Students become co-creators of knowledge

Challenges/Experiences

- Staff and students value the improved clarity and structure.
- Progress to 2nd year simplified
- Students become adaptable, resourceful and independent

Conclusions: These procedures provide a solid basis for progress in the face of imminent significant change at NCAD and across Irish 3rd level education.

[Link to Poster](#)

Living the Law: A Tour of Legal Dublin

Noelle Higgins and Elaine Dewhurst, Dublin City University

Undergraduate legal education in Ireland generally consists of undertaking a set of 'core' law modules, by listening to lectures, analysing cases and legislation and reading lengthy treatises on various principles of legal theory. Very little of the modern law curriculum deals with the realities of legal issues or professional legal practice, indeed, the emphasis in Irish law schools is laid on the theoretical to the detriment of the practical.

In order to better prepare our students in the School of Law and Government, Dublin City University, for life after graduation and to provide them with an insight into the practical side of the law, it was decided to organise a Tour of Legal Dublin, whereby students would visit legal institutions such as the Law Society, King's Inns, The Four Courts and one of the major solicitors' firms in the country, and be provided with an opportunity to see the Law in action. It was decided to offer places on the tour to 20 of our first year BCL students who had attained the highest marks in semester 1 exams, in order to instil in them an enthusiasm for the legal world outside of books from the beginning of their university experience.

As part of the tour, appointments were made in each of the institutions with senior employees who could explain about the history and work of the institution and could provide information on the life of a legal professional. After the tour, the students were asked to fill in a survey on the experience and their ideas of learning law. This poster details the learning outcomes of this exercise and provides conclusions on the incorporation of such experiential learning activities in undergraduate, especially first year, law curricula.

'Peer Supported Learning Groups' Pilot Project in Irish Language in UL - A First Year Cultural Experience

James Murphy and Hussain Mahdi, University of Limerick

The Regional Peer Supported Learning Centre (PSLC) is an initiative by UL funded by the HEA SIF II Fund to promote and support the establishment of student led active learning culture in the region with specific focus on our highly successful academic enrichment programme known as Peer Supported Learning Groups (PSLG). Since its establishment in 2009, the PSLC has been piloting a number of PSLG programmes across UL at a rate of 4 pilot projects per academic semester, targeting students in various courses and disciplines. One of the most interesting and popular pilot programmes the PSLC has piloted this year and actively assisted in implementing is that associated with the Irish Language Centre (Aonad na Gaeilge) in UL. The project involved adopting the PSLG model to provide learner support for a first-year Irish Language module (Teanga, Sochaí agus Saíocht), with the aim of helping students taking this module with their studies. The initiative also aimed at implementing Aonad na Gaeilge strategy to promote the use of the Irish language on campus. The purpose of this paper/presentation is to give an overview of this project and focus on examining the impact of provided peer-support on the students of this module, both academically and socially. In particular, we will shed more light on the PSLG impact on the students' use and practice of the Irish language in their daily lives. Our examination of the impact of this PSLG pilot is based on feedback and interviews with students, leaders and staff regarding their experience and perceptions.

[Link to Poster](#)

Improvement in learning outcomes on a Level 7 Year 1 module in engineering through the repeated use of formative assessments

Aidan O'Dwyer, Dublin Institute of Technology

The use of audience response technology ('clickers') is recognized as one the most exciting recent developments in classroom activity, allowing the consolidation of student learning through immediate feedback. Multiple-choice questions are frequently used as part of this activity in formative assessment mode. Unfortunately, significant infrastructure is required to support the use of the technology, which is not available in the classrooms used by the author.

The contribution will report on, and assess, the use of the lower technology solution of short, paper-based, multiple-choice quizzes, to improve student learning on a Level 7, Year 1 module in engineering. The quizzes, which have been used over two academic years, are given at the end of each topic explored in the classroom as formative assessments; typically, quizzes have an average of eight multiple choice questions and take place every week in the semester. Students complete the quizzes anonymously, with the author communicating that the purpose of the work is to identify "muddy points" in student understanding. After the lecture, the author analyses the

quiz results, identifying any difficulties experienced; the solutions of the quiz questions that a large number of students found difficult, and the related underlying concepts, are then explored in the next classroom session, before a new topic is started.

Student response to the use of the quizzes has been positive. There has been a significant increase in subject classroom attendance in the past two academic years compared to previous academic years, and an improvement in student learning outcomes as measured by the results of summative assessments. The contribution will explore these issues in detail.

[Link to Poster](#)

Collaborative learning and developing the capacity as a reflective practitioner

Phil O'Leary and Deirdre Goggin, Cork Institute of Technology

The BA in Community Development has no final written exams and instead depends on a number of other approaches to assess the students learning.

In year 1, semester 1 students take a module called 'Portfolio Methods for RPL' which explores the process of RPL, and what a learning portfolio is. More importantly, it requires the students to focus on their prior learning and not experience per se. In the following semester the method is used to report on work placement and to capture the authentic and individual learning of each student.

This paper explores the collective approach to documenting work based learning through the use of learning portfolios and the process of reflection to enhance and enrich the learning experience. The emphasis is on the student taking ownership for their own learning, away from the input approach and towards individual ownership.

It also looks at students as co-creators of knowledge in the community sector which strengthens the engagement with higher education and the community at large. A key aspect is for the student to identify their learning and develop the capacity to enhance this learning through reflective practice.

Beyond this engagement it is transferable means of incorporating the prior learning of adults in meeting the standards of higher education institutions.

[Link to Poster](#)

Unlocking potential: a lifeskill baseline study

Margaret O'Rourke, Sean Hammond, David O'Sullivan, Ciara Staunton, Mike Murphy, Helen Prendergast and Paul Moriarty, University College Cork

LIFEMATTERS UNI-V is a positive psychology university wide programme focused on enhancing the student experience by promoting mental health, emotional wellbeing and lifeskills. It is an evidence-based bio-psycho-social program that has been specifically designed to assist students in managing the rigours of their academic and personal development at university and beyond.

The aims of the study were:

- To provide baseline data on the LIFEMATTERS Uni-V program
- To examine student stress levels, coping resources, life skills and needs as measured by the Comprehensive Lifeskills Assessment Systems (CLASys)
- To provide an initial evaluation of the impact of the program on lifeskills and wellbeing.

Method: This study involved a single cohort, before and after study. All students enrolling in the program were invited to complete CLASys before and after the completion of the 8 session lifeskills program. Students also completed weekly evaluation of their experience of the program.

Results: Two hundred and four students enrolled on the program and 162 of these participated in the baseline study, giving an excellent 79% response rate. Of these 78% were female, 89% Irish with a mean age of 21 years (age range 18-59). There was significant post graduate uptake 38% with 62% undergraduate participation.

Qualitative Analysis revealed four major themes that students used to describe the outcome of the program; these were labelled 'Goal Orientation', 'Holistic Approach to Life' 'Interpersonal Relations' and 'Intrapersonal Change'.

Quantitative Analysis revealed a drop in all stress scores, with stress due to hopelessness being a statistically significant finding. Coping styles also showed changes as did support seeking behaviour with self-worth levels also increasing after the program. An interesting finding was the fact that emotional intelligence was found to have increased as a function of the program.

Conclusions: Beliefs in personal efficacy play a central role in personal development and change. The implications of this and other qualitative findings are discussed.

Sleep Disturbance and Insomnia: causes, consequences and solutions for students

Margaret O'Rourke and H. Alkhdher, University College Cork

Sleep is essential to health. Sleep disturbance (sleep deprivation and insomnia) is common amongst final year university students and if not addressed it can lead to physical and mental health issues.

This paper summarises the findings of a large web based study set in UCC during the academic year 2010/2011. The study had three aims: To examine the prevalence of sleep deprivation and insomnia among university students, to examine the causes of sleep disturbance as reported by students and to identify Strategies used by students to overcome problems with sleep.

Method: A web based customised self-report questionnaire was sent to the entire student population via student webmail. Data capture was limited to 1,200 responses as this was deemed the maximum data set we could deal with within time and other constraints.

Results: Of note was the fact that over 1,200 students responded to the study within three days. 1,198 questionnaires were complete enough to be included in the study. The students were aged 17-65, with a median age of 20 years. 66% were female and the majority of the sample was Irish, 89%. The prevalence of insomnia was high 35.30% as was the prevalence of sleep deprivation, 32.6%. The majority of students 74% cited academic stressors and workload as the main cause of their sleep disturbance, while other causes cited were part-time jobs 10%, timetabling 7% and social and personal pressures 6%. Students reported that sleep disturbance led to poor attendance (34%) poor concentrate and ability to do course work (31%), missing lectures(22%) , falling asleep in class (6%) and poor exam outcomes (3%). Almost half (44%) of students surveyed reported that they used exercise to improve sleep, while almost a third (29%) said they used music and 14% reported they used sleep aids.

Conclusions: This study demonstrated that sleep disturbance is common among students. Students surveyed report a restricted range of solutions and strategies for this problem. Given the importance of sleep to human health and learning, strategies for addressing student stress and sleep hygiene are discussed.

Prevention is better than cure: using diagnostic testing to help weaker students

Aine Regan and Peter Childs, University of Limerick

Increased numbers of students seeking third level education in Ireland has resulted in many choosing science programmes for which they are not adequately prepared. This study aims to increase retention amongst weaker students in undergraduate science programmes. An Intervention Programme was designed for three course groups of students, previously identified as low achievers. This programme consisted of two semesters of tutorials: Part 1 focusing on Chemistry basics and Part 2 focusing on the mole and chemical calculations. The tutorials utilised various strategies: peer learning and assessment, formative assessment and the use of concept questions. A pre- and post-diagnostic test of chemical concepts and misconceptions was administered in the first and last tutorial session and students' performance was measured in both tests. The pre-diagnostic tests were used to design the Intervention Programme to meet the students' specific needs and address their weaknesses. The results of the Intervention Programme were positive. In both parts, students did significantly better in the post-diagnostic test than in the pre-diagnostic test. In this paper we report on Phase 2 of the project which involved interventions in two semesters (parts 1 and 2). In this phase we not only assessed student's knowledge of basic chemistry and misconceptions, but also assessed their confidence and attitudes towards chemistry. At the end of the two parts of the intervention we also interviewed two students from each class group to gain deeper insights into both their difficulties with chemistry, their attitudes towards chemistry and their views on the value of the intervention project. A grant was obtained from NAIRTL for 2010-11 to support Phase 2 of the

intervention. While the results are encouraging, poor attendance in both the main module and in the Intervention Programme will have affected the results.

Engaging Large Classes

Exploring the Rules of Engagement via Exemplars: enhancing staff and student dialogue about assessment and learning practice

Linda Graham and Kay Sambell, Northumbria University

The Rules of Engagement project supported tutors to develop their own bank of concrete exemplars of student writing, which they subsequently used in large-classes (over 100 students) to stimulate staff-student dialogue about 'acceptable' and 'unacceptable' approaches to writing for the purposes assessment.

Key examples were chosen so as to be typical of designated levels of competence and approach to assignment-writing in situated contexts. The aim was to foster formative dialogue (Black & Wiliam, 2009) about the tacit, as well as explicit standards, aims and expectations before students' work 'counts' in summative assessment (Rust et al, 2005; Bloxham & West, 2007).

The use of tangible examples of student work was key to embedding and contextualising issues about assessment, which previous research has shown reside tacitly in the discipline (O'Donovan et al, 2006; Bloxham, 2009).

The poster will

- Give a broad overview of the Rules of Engagement project (plus details about where to find further information)
- Enable delegates to see precisely how exemplars were embedded in classroom practice (illustrative exemplars will also be provided for delegates to view)
- Give a flavour of our research findings, to illustrate how students responded to the activities.

The Rules of Engagement Project was funded by an ESCalate Developing Pedagogy and Practice grant. It was led by Northumbria University and involved partners from Roehampton University.

Context dependent memory in two learning environments: the tutorial room and the operating theatre

Timothy Switzer and Andrew Coveney, University College Cork

Increasingly, medical education has focused on moving away from tutorial and lecture based learning to more clinical teaching environments. Such a strategy poses significant logistical challenges in an era of increasing student numbers. While intuitively better, it is difficult to find evidence that empirically supports this change. Much of this is based on the belief that what is taught in a given environment is best recalled in that same environment.

We tested this hypothesis using a free recall experimental model. Fourteen volunteers were taught pre-recorded audio lists of thirty words in two learning environments, a tutorial room and

an operating theatre. They then recalled the words in either the original environment or at the alternative site. In the operating theatre participants wore full theatre attire and gathered around an operating table while learning and recalling words. In the tutorial room, participants wore casual clothes and were seated around a table while performing the same exercises. The same time duration (fifteen minutes) and disruption was experienced by all participants between learning and recalling, regardless of the environments used, thus excluding differences in recall due to disruption. The fourteen volunteers consisted of male and female medical undergraduates fluent in English.

The mean recall score from the twenty eight tests performed in the same environment as the learning episode was 12.96 +/- 4.63 (SD). The mean recall score from the twenty eight tests performed in an alternative environment to the learning episode was 13.5 +/- 5.31(SD), indicating that changing the recall environment from the learning environment does not cause any statistical difference ($p=0.4447$).

This supports the continued use of tutorials, lectures and videos for training in settings remote from the clinical environment, thus demonstrating that such an approach is both practical and effective, and ultimately facilitates the expansion of medical student numbers without compromising effectiveness.

[Link to Poster](#)

Technology Enhanced Learning

Improving student engagement and collaboration in a large class - a blended solution

Eileen Bohan, Rita Smith and Orla Daly, University College Dublin

This paper which addresses two of the conference themes, namely engaging large classes and technology enhanced teaching, describes how the appropriate use of technology has enhanced active student engagement and collaboration in a large enrolment part-time graduate module. The level 9, fifteen credit module, delivered in a blended format, requires a high degree of theoretical and conceptual thinking. The motivation underlying the adopted pedagogical approach was to enhance student learning and engagement. New approaches are needed to optimise student learning in large group classes. Students were supported in developing the requisite skills to organise, manage, and collaborate effectively to successfully complete learning activities and assignments in an online environment.

Research findings acknowledge that active learning in groups, peer relationships and social skills are important in engaging learners. A technology-based strategy was adopted that focused on developing student communication and social interaction in a supportive online learning environment. A number of scaffolded online discussion forums were put in place to facilitate student group preparation for summatively assessed in-class debates. Separate group discussion forums were used to create and complete group wikis. VLE (Blackboard) communication tools were used to provide prompt and useful feedback for the summative tasks i.e. the debates, and to ensure students were constantly made aware that instructors were easily contactable and readily available to support them. VLE Evaluation tools were used to monitor student participation in the forums and supported early intervention with those who did not appear to be participating.

An analysis of the VLE forum statistics and review of group discussion forum posts reveal high levels of engagement, interaction and active collaboration amongst student groups preparing for both the in-class debates and group wiki projects. This paper will present and discuss this analysis. Student evaluations will also be presented to reiterate and authenticate the positive learning experience.

[Link to Poster](#)

NDLR: Three Stage Evolutionary Pathway for Supporting NDLR Users

Catherine Bruen, Trinity College Dublin, Terry Maguire, Institute of Technology, Tallaght, Claire McAvinia, National University of Ireland, Maynooth, Jen Harvey, Dublin Institute of Technology, and Ann Marcus Quinn, University of Limerick

The NDLR (National Digital Learning Resources) mission is “to promote and support Higher Education sector staff in the collaboration development and sharing of learning resources and associated teaching practices”. A key impact of the service is to support greater collaboration for developing and sharing digital teaching resources and associated teaching experience across all subject disciplines and communities of academics and promote good practice use and re-use of existing resources.

By being empowered by the support of communities of academics, staff from different disciplines can share effort and expertise as they raise the bar collectively for how they support their students learning, embed research in their teaching and potentially embracing partnerships with research and industry, both in Ireland and Internationally.

The service has developed a Three Stage Evolutionary Pathway for Supporting NDLR Users. This presentation will describe the three levels of support available to Irish academics.

Individual Academics – Level 1

Local Innovation Projects (LIPs)

The NDLR, through the local Institutional representative, provides support and encourages the development and sharing of reusable teaching and learning resources to members of academia through the coordination of a number of local initiatives and local supports

Groupings of Academics – Level 2

Learning Innovation Community Support Projects (LINCs)

Learning Innovation Community Support Projects (LInCS) are activities (around the development and utilisation of learning resources) to encourage the emergence of academic groupings around particular subject disciplines (i.e. SMARTCoPs).

SMART Communities of Practice - Level 3

Sustainable, Manageable, Active, Relevant and Reflective, Targeted (SMART CoPs)

SMART CoPs are cross-institutional subject discipline related communities associated with locally funded institutional learning innovation projects (LIPS) and cross-institutional collaborative projects funded (LINCs). They are nurtured and sustained from support given to individual academics and groupings at both local and national levels. SMART CoPs are focused on targeted funded RLO development through projects, and evolve from successful collaborations through LINC projects.

Motivating students to learn computer programming using the Learning Activity Management System

Christopher Duke, National University of Ireland, Galway

Information and Communications Technology (ICT) is central to Ireland’s goal of promoting itself as a “smart” economy. However, the government’s Expert Group on Future Skills Needs has

identified a shortage of qualified graduates to fill roles in the ICT sector [1]. Undergraduates studying for a BSc in Business Information Systems (BIS) at NUI Galway are expected to add to this pool of qualified graduates, but a recent formal review of the degree highlighted poor attendance at lectures and high failure rates as substantial problems. Anecdotal evidence from the 2009-2010 cohort of students suggests that they have little interest in or motivation to study the computer programming components of the BIS degree, components that are fundamental to them becoming highly skilled ICT graduates. It would appear that this is not uncommon; previous research indicates that many ICT students have a “phobia” when it comes to learning how to program [2], with the effect that they have difficulty in grasping “threshold” concepts.

The aim of this preliminary project was to investigate our students' experience of using the Learning Activity Management System (LAMS). In particular, did LAMS help the students to follow learning material presented as part of an Introductory Java Programming course and help motivate them to grasp “threshold” concepts. In this paper I will provide a brief overview of how the LAMS was implemented at NUI Galway and present the results of a simple survey of our students' experience of using the LAMS.

[1] EGFSN (2008) Future Requirement for High-Level Skills in the ICT Sector.

[2] Thomas, L. et al (2003) Code Warriors and Code-a-Phobes. Proc ACM SIGCSE'03, pp. 363-367.

[Link to Poster](#)

Is DVD assisted training as effective as face to face training in educating student therapists on an ergonomic method of using a hoist?

Aideen Gallagher and Robert Gilligan, National University of Ireland, Galway

Funded by the National Academy for the Integration of Research Teaching and Learning (NAIRTL), this year long project focused on the creation and evaluation of a DVD tool in the education of Occupational Therapy (OT) students in an ergonomic method of using a hoist. With expertise in the prescription of assistive technology to alleviate the effects of disability, Occupational Therapists are prominent professionals in Health Services, in recommending and providing education in the use of hoists for people with disabilities and their carers. Undergraduate programmes are therefore required to teach students these key clinical competencies, to equip them with the skills in meeting this need.

This project sought to challenge traditional models in teaching these clinical skills to undergraduate student therapists by determining if DVD assisted training in hoist use was as effective as traditional face to face methods. Integrating research, teaching and learning into the undergraduate occupational therapy curriculum, this project was led by a fourth year Occupational Therapy student. A pre-test post-test study design was employed to evaluate the learning tool which was used with a cohort of twelve students in the fourth year class.

The results of the research have illustrated that the DVD tool was as effective as face-to-face teaching methods in communicating these clinical skills to students. It can therefore be

concluded that DVD tools are valuable in the education of health sciences students in clinical skills in preparation for practice.

[Link to Poster](#)

Is video effective in teaching clinical skills? A systematic review

Aideen Gallagher and Margaret McGrath, National University of Ireland, Galway

In the past decade there has been an increased use of digital learning resources within higher education. This escalation is driven partly by the increased availability and relatively low cost of new technologies, demands from a new tech savvy generation and the perception the using digital resources may be a more efficient method of teaching large groups of students.

In the Health Sciences, third level education is required to equip students with the knowledge, skills and attitudes to practice as competent professionals upon graduation. This has resulted in a significant amount of the undergraduate curriculum being devoted to teaching clinical skills in preparation for practice. Consequently, digital learning resources are being used more frequently to support the acquisition of both basic and advanced clinical skills and to promote on-going professional development.

Although digital learning supports are perceived to be a valuable way of engaging students to develop professional skills, limited attention has been paid to the efficacy of digital learning supports. Although they can engage students in learning, can they achieve the same outcomes as traditional learning approaches?

This paper attempts to address this question by presenting the results of a systematic review examining the use of digital learning resources within healthcare education.

[Link to Poster](#)

What teacher knowledge is required to mediate synchronous on-line learning spaces?

Michael Hallissy, Hibernia College

This poster will present my research proposal in the area of teacher knowledge and synchronous learning environments. I am enrolled in year five of the International EdD in the Institute of London where I am currently finalising my thesis proposal.

As Director of the Masters of Arts in Teaching and Learning (MATL) within Hibernia College I have identified that many of our tutors are experts within their subject field and are experienced teaching in face-to-face settings. But many find it challenging to mediate synchronous online classrooms where they are engaging with students at a distance. This poses issues for institutions

in relation to supporting their faculty develop the knowledge and skills needed to successfully teach in synchronous online learning settings. There is significant research on how tutors can mediate asynchronous learning environments but there has been limited research to date on the knowledge required to teach using synchronous tools, such as Interwise, Wimba and Elluminate. This raises issues around how to can prepare teachers to teach in live synchronous environments.

My thesis proposal builds on a presentation I made at NAIRTL 2010 where I surveyed a selection of MATL students on their views in relation to synchronous tutorials. This poster will articulate my research question, the research population, where the research will be conducted and the proposed timeline. It will also discuss the issues and rationale behind the study and will present a selection of the literature reviewed around the topic of supporting tutors to mediate online learning spaces. I will focus my literature review on identifying the knowledge and strategies best suited to creating social constructivist online learning spaces.

The rationale behind this study is to better understand the challenges tutors face in mediating online synchronous settings and the types of teacher professional development that may best meet their needs. I am currently trialling a number of online support workshops with a group of tutors and these are informing my research on how to better support tutors to improve their online teaching strategies.

Personalised Role Playing Simulations

Eileen O'Donnell and Mary Sharp, Trinity College Dublin

This research explores the use of personalised role playing simulations to encourage active student engagement in the learning process. Personalised role playing simulations could provide educators with an alternative teaching methodology, and students with course content tailored to their needs. The personalisation of student learning resources could be based on: level of achievement; prior experience; learning preferences; relevance of learning resources to individual students' requirements; and lecturers or students choice of direction through the units of learning provided. Some of the advantages of using personalised role playing simulations include: inexpensive to produce; easy to create; re-usable; not life threatening; engaging; and interesting. Research to date has shown that the main obstacles to developing authoring tools for creating personalised role playing simulations for use by non-technical authors are: the amount of technical assistance required; the cost of production; the substantial time commitment involved; and the complexity of design necessary to ensure the expected learning outcomes are achieved and pedagogical requirements are met. The criteria to be used to effectively evaluate authoring tools for creating personalised role playing simulations could include: user's acceptance; educators pedagogical considerations have been met; the authoring tool is robust; usability of the authoring tools satisfies the human computer interface expectations of potential authors; the simulations produced are effective; efficient production of simulations can be achieved; initial training required is substantial enough to enable educators to create simulations on their own. While research has shown that the concept of personalised role

playing simulations would enhance the effectiveness of existing learning management systems by improving student engagement and understanding, the obstacles to realisation have yet to be overcome (Brusilovsky, 2004; Foss & Cristea, 2009).

[Link to Poster](#)

Enhancing student engagement with programming modules using game-based approach

Haiying Wang, University of Ulster

Background: Advanced programming is a traditional programming module for second-year computer science and software engineering students. It aims to further develop students' algorithmic and object-oriented programming experience by extending the depth applied to data structures. It also introduces the concept of concurrency and multi-threading and the essential features of windows programming. Although the core content of this module has not evolved much over years, it is a common observation that teaching this module is rather difficult and challenging. Students struggle to comprehend theoretical models and core concepts such as nonlinear data structures and multithreaded programming. It has been found that keeping students attentions, interests and motivation throughout the module is a constant challenge. Due to the inherent characteristics of computer games-based approaches, recent years have seen a growing interest towards the incorporation of computer games into the delivery of programming modules.

Methodology: To enhance students' engagement with programming and promote self-motivated learning, we have incorporated the development of a well-known Pac Man video game into the module over the last three years. The activities include using a 2-D array to represent a maze, moving Pac Man and each of the ghosts on screen using their own thread, and enhancing intelligence levels of each ghost by implementing the shortest path length algorithm. The exercise normally lasts 4-6 weeks.

Results: Although a good amount of work is required in order to complete this exercise, it is generally acknowledged among students that, in comparison to traditional coursework, this exercise is enjoyable and has great fun. Not only can it foster the understanding of theoretical concepts and develop practical visions of various algorithms, the exercise also encourages critical thinking and creative solutions through visualisation, exploration and experimentation. Greater confidence in applying programming skills to solve real problems has been observed at the end of this exercise.

[Link to Poster](#)

Part 9: Workshops

Students as Co-creators of Knowledge

Engaging Students in the Curriculum Life Cycle

Stuart Brand, Birmingham City University

A university's student population represents an outstanding resource for the enhancement of curriculum design and delivery. This workshop will offer participants the opportunity to hear how Birmingham City University collaborates with students to inform and shape curriculum design and delivery. Participants will be guided through the JISC's Curriculum Life Cycle model and will use it to explore the potential for engaging students in curriculum design and delivery within their own context.

With reference to the JISC model, the facilitators will present two distinct projects that have catalysed student engagement in curriculum design and delivery at Birmingham City University:

1. The Student Academic Partner Scheme is a Times Higher Education Award winning scheme, run in partnership with the Students' Union. It provides employment opportunities for students to collaborate with academic staff to work on areas of mutual interest. So far, the scheme has generated ninety projects involving 210 students and 130 academic staff. In addition to offering the University additional capacity for curriculum development through a cohort of change agents, the scheme bolsters the employability profile of participating students. Additionally, the scheme itself makes a very significant contribution towards the development of a Learning Community unbounded by traditional delineations of 'those who teach' and 'those who learn'.

2: The Technology Supported Processes for Agile and Responsive Curricula (T-SPARC) project is one of twelve JISC-funded UK projects developing institutional approaches to curriculum design. The T-SPARC project makes effective use of technology to enhance the voice of students in curriculum design and to ensure that they are represented authentically at the point of approval.

Following a brief presentation, participants will use the Curriculum Life Cycle model to explore the potential for engaging students within their own institutional contexts using the exercise to generate questions for plenary discussion with fellow participants and workshop facilitators.

Civic Engagement and Social Responsibility

When Learners are the Community: Implications for Pedagogy, Research & Engagement

Elaine Ward, Dublin Institute of Technology

Dr Ward draws on ten years' experience working with adult learners in American higher education to facilitate an interactive workshop that explores how using an asset-based community-development model (Kretzmann and McKnight, 1993) empowers students to become co-researchers, co-teachers, and co-producers of knowledge. Dr Ward advocates that educators work to create a learning environment where the lecturer is decentred as the sole source of expertise but rather a shared, Freirean pedagogical approach is employed that recognizes and draws on the knowledge, skills and experiences the learners bring with them to the learning environment.

Dr Ward encourages us to consider what being an adult learner of the community in which the institution is engaged means to our current concepts of civic engagement and community-based research and learning. When the learner is of the community, she or he has a unique wealth of knowledge, skills and experiences upon which to draw, as the academic and the community come together to develop community capacity and attempt to address community-based problems. Again the asset-based community-development model has much to offer in terms of how both outsiders (academics) and insiders (community members who are also academic learners) work together to further the goals and potential of the community.

Adult-learners as community leaders and change agents are assets to both their community and to the academic institution of which they are a "student". The concept of the adult-civically-engaged-learner stretches the boundaries of our thinking about what it means to be a student, what it means to authentically co-produce knowledge and authentically engage with communities outside of the academy, and what it means to be a teacher and learner in a community-based learning environment.

This workshop will facilitate collective exploration of the concept of the adult-civically-engaged-learner and the institutional environments necessary for fostering such a model of learning.

[Link to Presentation](#)

Engaging Large Classes

Overcoming the challenges of participatory classrooms

Anne Wayne, Waterford Institute of Technology

What happens once you embrace the notion of students as co-creators of knowledge? I'm convinced of the value of participatory learning and have shifted the balance in my teaching so that I act more often as a facilitator than a lecturer, prioritise experiential activities over information giving and try to involve students in the assessment process. This change in the classroom provides a stimulating experience for me and it is very satisfying to see an overall improvement in the learning outcomes achieved by students.

I now find myself struggling, however, with a new set of problems which include:

- dealing with the enormous workload generated by creative teaching approaches
- meeting resistance from students who just want to know what they should learn for the exam
- being stifled by the fixed setup of classrooms which forces students to sit passively in benches
- developing participatory activities which work as well with 90 students as they do with 9
- working within a system that assumes students are passive recipients of knowledge

If you have also moved towards active student engagement in your classroom why don't you come along to share experiences and co-create knowledge about ways of dealing with these and other challenges?

This workshop will use the practical tools of participatory learning to explore the theory which informs our teaching practice. Activities such as the wagon wheel, opinion thermometer, comment cards, standing surveys and question swap will allow participants to discuss their teaching philosophy, share resources, learn from each other's experiences, discover common problems and work towards generating solutions.

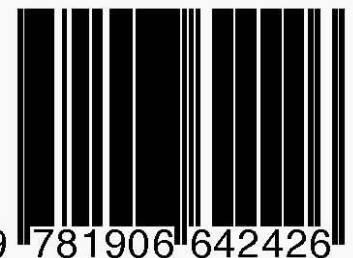
[Link to Workshop overview](#)

[Link to 'Barriers' Chart](#)

About this publication:

The 2011 Conference Proceedings takes the form of an interactive Table of Contents with hyperlinks to the presenters' contact details and their conference output e.g. abstract, slides of presentation or poster, paper on presentation, video of presentation, accompanying resources, website URLs etc.

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