Academic Council e-Learning Sub-Committee

An e-Learning Strategy to promote *technology enabled learning* in UCC

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REPORT FROM THE ACADEMIC COUNCIL e-LEARNING SUB-COMMITTEE[1]

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In an e-permeated world, Education, like many other sectors, has rapidly adopted digital technologies. Much has changed over the past decade or so: the pace of technological development constantly offers new opportunities; the social context of learning is increasingly shaped by digital media and together with personal ownership of various devices influences expectations and modes of exchange. Policymakers look to such technologies for great efficiency and continuous enhancement and expect boundary breakthroughs and new strategies. These changes have prompted an evolving relationship with digital technology in the Higher Education sector with increasing emphasis on the enabling role of digital technology to enhance learning and transform modes of delivery.

The strategy for e-learning outlined in this document is informed by good pedagogy practice and widespread consultation within UCC[2], and seeks to position UCC to take advantage of rapid digital technology development and respond to evolving markets and the broader policy environment. This strategic direction is guided by a set of fundamental principles. It is proposed that UCC adopt a pedagogically-led and learner centred approach that benefits from the enabling role of technology, to enhance the learning environment and support dynamic capability and diversity across the University. In this spirit the following mission is proposed:

Guiding Principles:

1. Pedagogically led
2. Learner centred
3. Technology enabled
4. Dynamic capability
5. Support diversity.

Mission

Create an innovative learning, teaching and research environment using technology appropriately to improve access, reach and engagement, enhance learning and stimulate innovative practices. In fulfilling this mission UCC will aim to:

- To provide a flexible, challenging and responsive learning environment.
- To use technology to both assure and enhance quality in learning and teaching.
- To support students and staff to adapt and adopt new enabling technologies.
- To further development of distance and blended learning programmes.
- To enhance UCC's intellectual footprint nationally and internationally.

This document outlines the main strategic drivers in the external environment, considers the strategic benefits that digital technology may bring and outlines a strategic framework to guide decision-making. An integrated set of projects are set out that aim to develop a set of good practice e-learning standards and capability that will facilitate enhanced access for all students while ensuring sufficient flexibility to adapt to new technological innovations quickly and effectively. For each project resource implications, ownership and metrics/outputs are outlined. This provides a basis for detailed costing of each project during the planning phase.

[1] See sub-committee details in annex 1.

[2] See sources of data in annex 1.

Situational analysis

"The key policy statement underpinning this HEA Strategic Plan is the National Strategy which sets out a challenging and ambitious vision and plan for the development of the higher education system. It details the changes that are needed to build a modern, flexible and responsive higher education system in order to enable individuals realise their full potential, to ensure an inclusive society and to achieve sustainable economic growth (HEA strategic plan, 2012-16, p.10)[3]".

Recent analysis[4] of the Irish Higher Education sector has pointed to a number of key drivers of change, these include: changing student profile and changing expectations of students; public budgetary constraints and the increasing importance of non-exchequer funding, globalisation and international competition; research, innovation and technological change; employment prospects and broader societal needs. It was against this background that the Department for Education & Skills established the Higher Education Strategy Group under the chairmanship of Colin Hunt to prepare a National Strategy for Higher Education to 2030. Their report in January 2011 has done much to focus attention on key opportunities and challenges us to respond through 'strategic dialogue' with the HEA.

While there are many factors driving change in Higher Education and influencing Technology Enabled Learning (TEL[5]) strategy, three key considerations are student profile, budgetary constraints and technological change.

Changing student profile and engagement

The Department of Education & Skills project a 50% increase in student entrant numbers by 2025, school leavers will only account for 25% of this increase (Hunt, 2011) Thus student profile is expected to change considerably over the next two decades with greater numbers of part-time, mature and international students seeking higher level education. This more diverse student body has wide ranging implications, for example pedagogical approaches, service provision, recruitment and access, progression/learning paths, and administrative systems all need to adapt to new demands (Hunt, 2011; Thorn 2012[6]). These changes need to be considered in the context of: (i) more diverse participation in existing/new programmes and (ii) bespoke programmes for post-experience

[3] HEA strategic plan, 2012-16, Higher Education Authority, March 2012.

[4] HEA Key Facts and Figures (recent years), http://www.hea.ie/en/Publications; National Skills Bulletins – annual publications 2005 to 2011, reports by the Skills and Labour Market Research Unit (SLMRU) in FÁS for the Expert Group on Future Skills http://www.forfas.ie/media/EGFSN110706-National_Skills_Bulletin_2011.pdf; Thorn, R., Lynn, M. & Campbell, C. (2012) Enhancing Flexibility in Higher Education: A Report on the Supported Flexible Learning Project undertaken by the Institutes of Technology in Ireland*, Institutes of Technology Ireland,* (*www.ioti.ie/about-us/flexible-learning-project*).

[5] The UK Universities and Colleges Information Association (2008) define TEL as: *"Any online facility or system that directly supports learning and teaching. This may include a formal VLE, an institutional intranet that has a learning and teaching component, a system that has been developed in house or a particular suite of specific individual tools".*

[6] Thorn, R. (2012) in Thorn, R.,System Performance – from Fixed to Flexible Learning Lynn, M. & Campbell, C. (eds.) Enhancing Flexibility in Higher Education: A Report on the Supported Flexible Learning Project undertaken by the Institutes of Technology in Ireland*, Institutes of Technology Ireland,* (*www.ioti.ie/about-us/flexible-learning-project*).

students. While increasing demand for post-experience education[7] offers considerable growth opportunity for HEIs, they also require a rather different pedagogical model to that dominant in full-time on-campus educational programmes designed for second level school leavers. Delivery to post-experience/adult cohorts is influenced by both age (impacting on learning patterns and hence on pedagogy) and the basis of participation (post-experience and often part-time). In the HEI sector pedagogical models have been somewhat adapted to deliver full-time postgraduate programmes that include older and more experienced participants, but probably less so in undergraduate programmes, notwithstanding participation by mature students at this level. The second dimension, basis of participation, requires quite a fundamental pedagogical change. Such demand driven education accentuates the learner's role and often includes work-based learning. Thus development of such pedagogical approaches and appropriate use of TEL can enhance market reach and thus respond to distance education opportunities nationally and internationally. . The potential for TEL to enhance access and engagement has been the subject of much discussion with increasingly less attention given to 'if technology will play a role' and more attention given to different pedagogical approaches and appropriate use of technologies[8].

Budgetary Constraints and Opportunities

The predicted increase in student numbers will further compound already constrained public finances. Furthermore, the HE sector has already absorbed higher student numbers with a proportionately lower budget. Over the period 2004/05 to 2009/10 full-time student numbers have increased by circa 20% while public funding per full-time student has fallen by 16% (HEA, 2012[9]). Thus capability to introduce greater efficiencies and attract non-exchequer funding is increasingly central to HEI strategies. In this context the Hunt report places particular emphasis on engagement of students with education and engagement of Higher Education Institutions (HEIs) with the broader environment. The capability to respond to opportunities presented in the current economic environment, such as job creation, upskilling requirements, career advancement and interest in lifelong learning, in many cases are dependent on a capacity to deliver TEL services. Thus an adequately resourced TEL development programme is necessary to benefit from such opportunities and also fulfil the policy expectation that HEIs further their engagement with enterprise and wider society. In addition, experience of TEL to date has underlined the positive contribution of such technology across all delivery formats, indeed in many cases it is as essential in the on-campus environment as it is in a distance-learning format. It is not surprising that recent policy documents at home and abroad have recommended that the potential of TEL is realised across all programme delivery formats. Thus investment in these technologies should take into account the benefits across the University and beyond.

[7] For example Continuous Professional Development (CPD), short courses, customised programmes (accredited and non-accredited) and accredited open access programmes.

[8] See Collis & Moonen (2001) - *Flexible learning in digital world*. London: Kogan Page - various theories of learning, which emphasise learning activity, participation in communities of learning, engagement theory and the contributions-oriented student model and further discussion of this by Catherine McLoughlin (2007) http://aare.edu.au/02pap/mcl02637.htm

[9] HEA Strategic Plan 2012-16.

Pace of Technological Change and Capability

Given the context above it is not surprising to find that TEL has received increasing attention and investment in recent times. The pace of technological change is of particular interest and in many respects this adds to the complexity that often characterises application. In this context the capacity to scan for potential improvements and, in particular, learn from the use of different technologies is of strategic value. In this respect recent strategies adopted by some of the larger and best known US HEIs are of particular interest. The investment in edX by Harvard and MIT to provide a large, live laboratory to experiment with pedagogy, content and tools, is the most recent evidence of this trend[10]. Both Harvard and MIT have undertaken to invest $30m in this project raised through institutional support, grants and philanthropy. The scale of this signals their interest in establishing leadership in this field through research and practice. Stanford is also exploring the potential of TEL through provision of free on-line distance education. Susan Hockfield, MIT President, has emphasised the complementary potential of TEL[11]:

"Today in higher education generally, you can choose to view this era as one of threatening change and unsettling volatility, or you can see it as a moment charged with the most exciting possibilities for education leaders in our lifetimes. ...Online education is not an enemy of residential education, but rather a profoundly liberating and inspiring ally".

Thus, as with most technologies, a clear understanding of what one wishes to achieve is necessary in order to ascertain the role of technology in achieving it. Therefore, a clear sense of how technology enables learning and thus enhances the learning environment is of fundamental importance.

Growing out of Stanford University's experience with Massive Open Online Courses, two new start-ups have been developed: Udacity and Coursera. Udacity is a private educational organisation established by Sebastian Thrun (formerly of Stanford University), David Stavens and Mike Sokolsky. Udacity was established using venture capital funding and personal resources. It currently offers six courses Coursera which recently received $16million of venture capital investment aims to bring Ivy-League calibre courses to the online education marketplace. Coursera is currently offering free courses from Princeton University, Stanford University, University of Michigan and University of Pennsylvania. 2tor is a four year old educational start-up company which utilises a different model to online education. 2tor engages with HEIs to build a bespoke online infrastructure for online course delivery. It has secured over $100m in venture capital funding to date. Straighter Line is another company which offers online education although it is more focused on US domestic education market currently. Straighter Line offers undergraduate modules typically undertaken by first year undergraduates such as Algebra, Biology, Calculus, US History and English Composition. Straighter Line has received formal accreditation for their courses from several US HEIs but notably the Ivy League universities have not opted in. Straighter Line charge a fee of circa $350 per module or $1000 per year[12].

[10] Both the Harvard Extension School and Harvard Business School Executive Education have continued to offer their online programmes separately from edX.

[11] http://news.harvard.edu/gazette/story/2012/05/edx_press_conference/

[12] See annex 4 for sources and Further Reading

Benefits

The key drivers of e-learning are evident in economic, social, technological and political fields. There is an expectation that Higher Education embrace new technologies and offer a '21st century' experience. For example HEFCE's[13] revised strategy for *e*-learning (2009) classifies benefits arising from e-learning as: (i) efficiency, (ii) enhancement and (iii) transformation.

The use of a Virtual Learning Environment (VLE) has become the norm as lecturers upload documents (e.g. ppt slides, readings and exercises) for student use, rather than providing hardcopy (e.g. handouts, manuals, and textbooks). Such minimum use of a VLE as a repository should reduce some costs[14]. The transformation for the teacher and learner comes with the capability to avail of open access educational materials, (so there are less physical restrictions but a greater chance of information overload/dump) and the greater range and flexibility of modes of delivery (such as podcasts, itunesU, and discussion fora) and assessment to supplement face-to-face teaching and learning. Thus in addition to increased efficiency, the use of a VLE should enhance learning.

The capability of synchronous and asynchronous delivery can increase access and flexibility, from both learner and lecturer perspectives, in terms of time and space (e.g. part-time education, blended and distance learning). The latter promotes 'independent learning at own pace' and increases the student's control over when they engage. This increases the focus on 'student-centred learning' and increases learner autonomy. In recognition of the passive nature of such approaches many programmes include interactive elements, for example exercises and quizzes to further enhance the learning experience. On the other hand synchronous delivery can support interaction and peer learning, as it reaches learners in many locations simultaneously. Hence TEL can both enhance the learning experience and market reach as both blended and distance learning programmes may reduce spatial and temporal barriers.

Digital technology is being use to improve efficiency and to enhance existing pedagogy. However, it can also be used to transform the learning environment through the introduction of new pedagogies. These can enhance traditional classroom activity as well as extending communication and collaborative activity beyond the classroom, for example, through the introduction of web-based interactive game-based learning. Furthermore, when a critical mass of content is available in digital format new and more dynamic ways to combine and offer programmes are possible. Table 1 provides various examples of each of these benefits.

The enabling role of technology emerges as a common theme across all three benefits (efficiency, effectiveness and transformation), indeed HEFCE's revised strategy for e-Learning challenges Higher Education institutions to consider Technology Enabled Learning (TEL) rather than 'e-Learning'. Reflecting the evolving use of technology over the past decade the JISC conclude:

[13] HEFCE – Higher Education Funding Council for England.

[14] While efficiencies may be achieved in some areas there are increased costs in other areas, e.g. purchasing hardware and software to support the systems and cost of licences. There is a cost to students who print out the documents.

"For practitioners, the rapid adoption of technology presents many challenges but, by the same token, rich opportunities for enhancing their practice. Rather than replacing the teacher, technology has in many ways increased the focus on pedagogic skills. The art of the practitioner as instigator, designer and animateur remains key to the process of learning." (JISC[15], 2009:5)

Table 1: Benefits from e-Learning[16]

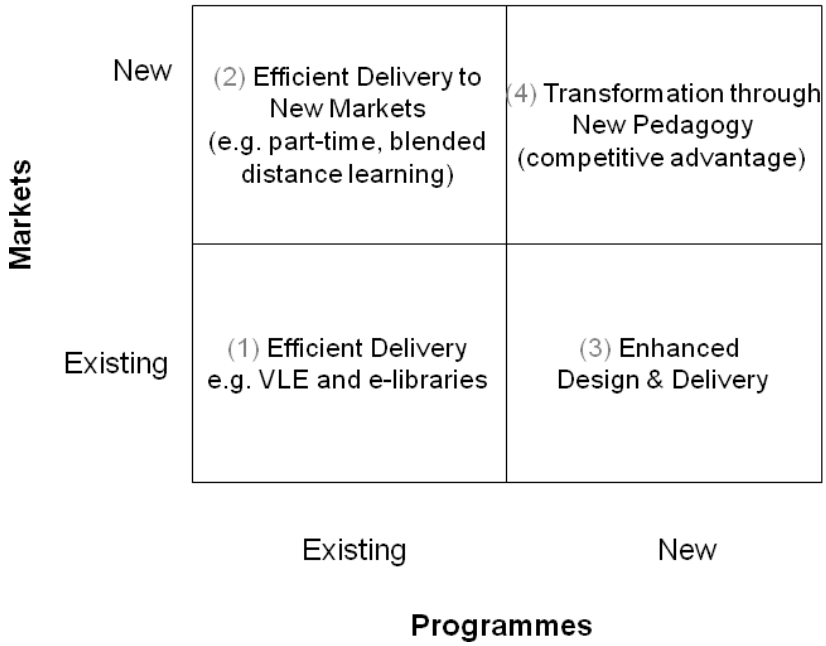
Potential Benefits	Drivers[17] (why are we doing this?)	software /hardware	Purpose
Efficiency Existing processes carried out in a more cost-effective, time-effective, sustainable or scalable manner	'Scalability & share resources Easy access for on-campus students Access for part-time and off-campus students. 'Staying on the technological curve'	Blackboard (as a repository)	Access to various documents (e.g. ppt slides and readings) and podcasts replaces handouts, incl. use of web resources.
	• synchronous delivery in many locations • Flexibility • Improved communication	Panopto	Intensive delivery of a lecture series recorded and uploaded to Blackboard for later review and study.
Enhancement Improving existing processes and the outcomes.	Flexibility Independent Learning Interactive • Engaging.	Blackboard (24/7 availability)	Ease of access and various activities encourages use and learning at own pace
	• Self-Directed Life-Long learning • Web-based materials • Distributed teaching teams • International/distributed student cohort	Self-assessment tools	Self-assessment with formative and/or summative feedback supports independent learning at own pace in an interactive environment
		Electronic books	Audio-visual, interactive and social elements enhance the informational content of books.
Transformation[18] Radical, positive change in existing processes or introducing new processes.	New pedagogy Extend communication and collaborative activity beyond the classroom. Potentially global.	Open source interactive material; Game-based learning:	For example; self-directed learning; goal oriented, social game environments, commercial games, role-playing, simulation, teams/collaborative games.

[15] JISC - 'Joint Information Systems Committee' - see http://www.jisc.ac.uk/aboutus/strategy.aspx for current mission.
[16] Based on HEFCE March (2009) Enhancing learning and teaching through the use of technology – a revised approach to HEFCE's strategy for e-*learning. http://www.hefce.ac.uk/pubs/hefce/2009/09_12/*
[17] Not mutually exclusive.
[18] Refers to pedagogical transformation rather than learner 'self-transformation', the latter is usually a higher education level goal.

Strategic Framework

Technology Enabled Learning (TEL) emphasises the need to build the capability to use technology appropriately rather than focusing on specific technologies and applications. That is not to say that technical capability is unimportant, to the contrary it is fundamental to efficient and effective pedagogical practices that create a supportive, engaging and responsive learning environment. Such a learning environment supports engagement with full-time and part-time on-campus students as well as blended/distance education. An adapted Ansoff framework below illustrates programme design and market opportunities.

Figure 1: Programme Matrix: Design and Market Opportunities



Activity in the bottom left quadrant maintains competitive position in existing markets. There is an opportunity to leverage this capability in new markets (top left quadrant), such as an increased interest in part-time and distance education both at home and abroad. The bottom right hand quadrant leverages the benefits of enhanced pedagogy and may create a competitive advantage (or at least more distinctive and valuable programmes[19]) through new programme development/programme improvement in existing markets. However, of greater interest are the innovations that transform pedagogy as this creates a stronger basis for distinctiveness and competitive advantage. Thus activity in the top right quadrant is of particular interest as this contributes to core capability and ultimately our intellectual footprint. In this regard UCC could leverage key specialist areas and thus further develop reputation in these fields.

[19] Many of these distinctive features will in (a short) time become prerequisites.

The University community have been widely canvassed (sources of data are outlined in the annex 1). Feedback emphasised the need to accommodate diversity in terms of both technology and staff engagement. This strategic framework can guide decision-making with regard to specific programmes and projects. Thus the provision of support to achieve activity in each quadrant is of fundamental importance. For example, increase awareness and dissemination of TEL and in particular the role of Blackboard in supporting a learning environment and meeting learner expectations. The proposed strategy seeks to ensure a strong link between pedagogy and use of technology[20], therefore both pedagogical and technological support should be available (e.g. a helpdesk). In this respect there is a requirement for a cadre of learning technologists. Feedback has also emphasised the need for assistance at different stages of programme development/ enhancement. For example where a group of academics wish to convert a programme to a blended/distance format and thus leverage an existing programme and access a new market. However, they needed assistance to address numerous pedagogical and technical challenges. While various supports are available such initiative would benefit from signposting/helpdesk. Therefore, a support service needs to be both proactive (i.e. dissemination, open access training) and reactive (e.g. helpdesk, roadmap service). Annex 2 presents one academic's experience, in this case leveraging an existing CPD module (to date 160 students have taken the classroom version in classes of 20) to a distance learning format. This highlights the type of challenges academics face and emphasises the need for a one-stop helpdesk/ signposting service.

In addition to demand for enhancement of existing programmes/provision to new markets there is considerable opportunity to develop new programmes (in some cases using transformational technology to pursue innovative pedagogical approaches) – i.e. the right hand side of Figure 1. As awareness of the potential of TEL increases and University capacity (in terms of staff, processes, standards and systems) and experience builds demand from academics interested in new programme development is likely to increase. In short to medium term (i.e. 2012-15) a structured approach to support a defined number (18 in total) of new programmes is proposed. The development and delivery of these programmes will provide a live laboratory to assess the type of supports required and also carry out a cost-benefit analysis. In addition the introduction of these programmes across all Colleges in the University will provide tangible evidence to the wider University of the value of technology enabled learning and also respond to key market opportunities and HEA policy objectives.

The proposed set of integrated projects is presented below. These aim to build the capability to use technology to improve efficiency, enhance and transform learning and promote innovation. Thus the projects proposed are directed at innovators as well as supporting widespread use of technology by early and late adopters. Innovation is a key support platform as it is recognised that an active community of innovators supports capability building. The infrastructural support (both physical network and staff) is considered fundamental to the success of the strategy and is addressed through specific projects in this programme.

[20] For example, there was discussion in a number of workshops/symposium on pedagogy and role of the teacher and technology in terms of (i) 'ways' students learn (with and without teachers) and (ii) 'ways' that teachers teach.

1. Infrastructure

Infrastructure refers to both the physical network (hardware and software) and staff support. This environment is characterised by fast-paced technological development. As indicated above the capability to scan the environment and adopt relevant technologies is key to ensuring an excellent learning environment. The establishment of a User Group will provide an interface between technical staff and users, in addition to exchanging experience and building a good understanding of current use, this group will also explore new developments. Similarly the Technology Sandbox[21] project will support an environment where innovative academics and technical staff can interact and experiment with new applications of existing technologies as well as new technologies. A Helpdesk should be established that supports staff at all stages of programme development (i.e. all quadrants if figure 1) is proposed. Good practice guidelines (including IP related issues) are essential to govern the introduction and use of new technologies, as are clear service level polices. Increased dependence on a VLE necessitates the development and implementation of appropriate risk management procedures (both mitigating and response protocols). Specific projects addressing these areas are outlined in table 2 below.

Table 2: Infrastructure Projects

Project	Resource	Owner	Timeframe	Output/ Metric
Maintain VLE	VLE budget, with increased finance to meet expanded use	LTU	Ongoing (but cognisant of the academic year)	99.7% availability of VLE, adequate server processing, storage and bandwidth to meet increased use of VLE for eLearning
Expand eLearning support to keep up with new technologies (mobile, tablet etc)	Budget for purchasing of Tech goods. Mobile learner. Pilot use of smart/iphones Blackboard mobile learn.	Computer Centre and LTU	2012-13 Pilot Blackboard Mobile Ongoing support for pilot programmes.	Proportion of courses etc available on mobile platforms, adequate bandwidth to support use of eLearning in on-campus rooms.
Technology Sandbox	Computer centre and LTU support selective innovations with new technologies.	Users who would like to use/experiment with digital technologies.	On-going	Build VLE/TEL capability. Number of innovators experimenting with open source VLE/TEL.
Risk Management	Implementation of risk management	Computer Centre and LTU	In place by mid-2013	Response to systems failure back-up and data

[21] The purpose of a Technology Sandbox is to provide staff and students access to technologies which are cutting edge - usually beta version that is ready for live testing.

	plan			integrity.
User Group	Time devoted to meeting and related activities.	AC e-Learning Sub-committee	Establish in 2012 On-going	Group activity developing criteria; Monitoring and Evaluation generating metrics.
Helpdesk - Pedagogy and Technology	Specified hours available each week.	<u>Coordinated by</u> Director of e-Learning <u>Supported by:</u> Audio-Visual Media Services Computer Centre Learning Technologies Unit Ionad Bairre	Establish in 2012 On-going	Improved communication between users and support staff Availability on demand User Group evaluation Number of staff receiving assistance.
Good practice policies (e.g. IP, privacy, e-mail),technical standards (e.g. software) and academic standards (assessment protocols, marks & standards/progression, etc.. Provide staff training and dissemination.	Time devoted to meeting, developing policies and related activities.	AC e-Learning Sub-committee to provide oversight and liaise with QPU, Registrar's Office - Academic Programmes, Audio-Visual Media Services, Computer Centre Learning Technologies Unit and Ionad Bairre	In place by end-2013	Quality assurance Reputation. User adherence. Academic Standards and programme structure framework for TEL courses.
Review of student administration services and systems to underpin the diversity of students and course delivery associated with eLearning.)[22]	Time devoted to analysis, meetings and related activities	Information Strategy and Education Resources Committee Registry Offices including Systems Admin Computer Centre	In place by end-2013	Identify additional student administration service requirements for flexible learners and implement process change to satisfy these. Enhance SRS

[22] Online learning requires more structured and disciplined coordination and deliver of programmes. The end user student usually expects one consistent interface or window to all components of the programme they undertake. This would contrast with current practice for on-campus students wherein many cases only some modules of their programme are available through the University VLE.

		including LTU Library Finance including Fees VP Student Experience		(student records system) to underpin process change mentioned above, as well as improved support VLE service through greater SRS/VLE integration. A standardised policy outlining what university services should be available for different student types.

2. Capability-Building

The range of projects proposed to enhance capacity reflects not only the diverse use of technologies but also various levels of awareness, and indeed interest, in the use such technologies.

The provision of a VLE, such as Blackboard, needs to be accompanied by both technical support and training. To date a relatively small number of staff in LTU have provided technical support, often trouble shooting in nature, whereas the resources devoted to training have been rather limited. If students and staff are to realise the potential value of TEL then training needs to be increased and coordinated. For example, while a high proportion of staff now use Blackboard their use is typically limited to the more basic functions and thus both students and staff miss the added value of additional functions (where relevant). Thus both open access (classroom-based & on-line) and on-demand training for staff are proposed. The latter would respond to proactive staff seeking particular training and this should be linked with the proposed Helpdesk. A digital literacy training programme offered to students will ensure prerequisite skills and this could be complemented by tutorials on Blackboard.

There is a relatively low level of investment in human resources (in particular learning technologists) there is still a range of training programmes provided by various units (e.g. Boole library, Computer Centre Training Unit, Ionad Bairre, and limited capacity from LTU). Thus compilation of a training matrix together a skills analysis would identify gaps and potential synergies. These projects are outlined in table 3 below.

Table 3: Capability-Building Projects

Project	Resource	Owner	Timeframe	Output/ Metric
Training Matrix: - Training and skills needs analysis. - An audit of all relevant training offered across UCC and identify synergies	Time devoted to meeting and related activities.	AC e-Learning Sub-committee	2012-13	Training Matrix report Training needs analysis report
Training Programme for staff based on Training Matrix. Periodic review of training and skills needs requirements to support the institutional growth of an e-Learning culture as well as keeping up with new technologies .	Time devoted to meeting and related activities.	AC e-Learning Sub-committee in association with providers	2013 On-going	Training programmes delivered and their evaluation.
Teaching and Learning with Technology training course	This course was successfully piloted during 2011-12. Roll-out across the University requires addition funding for Ionad Bairre.	Ionad Bairre Audio-Visual Media Services, Learning Technologies Unit	2012-15	Improved skill-base among staff. One or more staff members per academic unit trained.
Digital technology training for students	Inclusion in all undergraduate courses. Challenge: Technologies morph and change quicker than curriculum development cycles. Review programmes elsewhere and adopt, or further develop generic Univ Wide digital literacy modules which can be modified and adopted by disciplines	New director of e-learning and College management in conjunction with Programme director/Head of School/ Department. New director of e-learning - lead review of relevant modules offered elsewhere. Input from computer science/support services.	Pilot: 2012-13 Roll-out: 2013-15	Create generic modules, test, publish for adaptation by schools/disciplines Improved literacy: Student participation and feedback. Quality control carried out at College level. Digital resilience: Improved problem solving capability. Target: Inclusion in all undergraduate programmes.

Project	Resource	Owner	Timeframe	Output/ Metric
Pilot programme fund to support new blended/distance programme development at UG and PG levels (incl. CPD) for both full-time and part-time students	Pilot fund established for development & launch (incl. support for first cycle) Annual renewal of fund based on performance/ learning in previous year.	Task force established by AC e-Learning Sub-committee and VP for Teaching & Learning.	2012-14: Six program-mes/year	<u>Overall</u> A portfolio of 18 new blended/distance programmes established and visible in each College. <u>Programme metrics</u> e.g. User satisfaction with programme Revenue and costs

3. Innovation in Teaching & Learning

UCC has an established practice of research-led teaching and is well placed to contribute to pioneering development in pedagogy-led use of technologies. The launch of a number of blended and distance learning programmes (as outlined above) will increase our presence and visibility across a range of academic disciplines and thus offer a range of research opportunities. In addition specific projects to initiate research are proposed. Therefore, research in this field need not be dominated by large-scale projects such as edX[23] rather an active TEL Community in UCC can make a distinct intellectual footprint, at home and abroad, in this field. The projects outlined below in table 4 also support active involvement in funded research programmes, contribution to open educational resources (OER) and key electronic journals.

Table 4: Projects to promote technology-enabled Innovation Teaching and Learning

Project	Resource	Owner	Timeframe	Output/ Metric
Innovative applications of new content e.g. use of mobiles, electronic books, game-based learning And Tools for searching, filtering & classifying information available on the web.	Research Grant support. Support from Ionad Bairre, Learning Technologies Unit & Library.	AC e-learning sub-committee and Ionad Bairre	Annual funding awards scheme; One to three year projects	Min. two project/year Improved use of web resources.
National and International collaboration	Funding for attendance at national and international conferences on eLearning to monitor and report on developments, funding for study visits to institutions for benchmarking, funding for institutional memberships of relevant international bodies	e-Learning Sub-Committee and Director of E-Learning	on-going	Participation in of national and international funded project. Peer-reviewed journal outputs, including e-publications. Host a conference.

[23] http://news.harvard.edu/gazette/story/2012/05/edx_press_conference/

Electronic publishing	Requires discussion to determine where energies are directed Engagement with CORA (Cork Open Research Archive)	Individual academics – new forms of expression	2013	**Challenge**: Need to establish scholarly output measures.
UCC student projects	Supervision from participating Schools/Departments (should be win-win)	Coordination by AC e-learning sub-committee for pilot phase. In conjunction with participating Schools/Departments, e.g. Computer Science, Masters in Multimedia.	Pilot: 2012-13 Roll-out: 2013-15	Number of successful projects.
Production of OER – Open Educational Resources	Requires determination of standards for implementation, the provision of an accessible repository and dissemination to individual staff members	Ionad Bairre Disability Support Service	Launch activity in 2012-13 Usage metrics and resource expansion ongoing	A series of Open Educational Resources provided by the provisionally titled My UCC Study Toolkit Working Group led by Ionad Bairre and the Disability Support Service

Gantt chart

As indicated above these projects support an integrated programme approach, as such some are fundamental to provision, others enable development and the remaining projects enhance our intellectual footprint. A high level Gantt chart is presented in table 5, this indicates which infrastructural and capability-building projects are fundamental to delivery, projects that enable development and projects that enhance our intellectual footprint.

All projects will be governed by a project charter that includes: objectives, business case, metrics, sponsors, Gantt chart and reporting. In addition some projects have 'review and report' phases built into the high level Gantt chart due to their consultative nature or research orientation.

Table 5: Project Gantt Chart

Implementation and KPIs

This strategy aims to build an awareness of the role of technology enabled learning across a range of programme categories. This approach promotes the appropriate adoption of technologies to enhance the learning environment and respond to the needs and expectations of an increasingly diverse student profile. Specific attention is given to capacity-building in terms of both pedagogy and technical infrastructure and support. Specific outputs are indicated for each of the projects proposed. Higher level Key Performance Indicators (KPIs) are linked to the strategic framework – i.e. level of activity in each quadrant of figure 1:

Quadrant 1: Overall use of TEL across UCC programmes and modules (specific measures will be linked to training, helpdesk, user group, students evaluations, etc.)

Quadrant 2: Number of students registered for blended/distance learning programmes[24] by category (e.g. part-time and full-time).

Quadrant 3: Number of new programmes and modules using TEL to enhance design and delivery and number of students registered by category (e.g. part-time and full-time).

Quadrant 4: Number of new programmes and modules adopting innovative pedagogy and number of students registered by category (e.g. part-time and full-time).

The overall objective is to encourage widespread use of TEL to enhance quality in learning and teaching, improve access and engagement and stimulate innovative practices.

'Owners' and resource implications are identified for each project. As the projects are rolled-out owners will prepare an implementation plan, including costs, that will be considered by the relevant UCC office/committee. This approach ensures good management practices. However, in terms of resources the University should ringfence a fund that will support this activity and thus provide certainty with regard to Senior Management commitment. This fund should be agreed as part of the 2012-16 strategic planning cycle.

The benefits to UCC are many, including a strategic response to HEA policy, capacity to attract non-exchequer funding, process and system improvements and expanded intellectual footprint. Students and staff will benefit from an enhanced learning environment, flexibility and engagement. The current environment requires investment in a VLE and associated technologies therefore UCC must commit a certain level of funding to provide this. This strategy proposes to not only leverage this investment but to consider technology enabled learning as central to the University's strategy to its financial and academic benefit.

[24] Current provision is listed in annex 3, however this is incomplete as it based on responses to a survey and it appears not all course/module coordinators responded.

Acronyms

AC Academic Council

CACSS College of Arts, Celtic Studies & Social Sciences

CB&L College of Business & Law

CM&H College of Medicine & Health

CSEFS College of Science, Engineering & Food Science

CORA Cork Open Research Archive

CPD Continuing Professional Development

HE Higher Education

HEA Higher Education Authority

HEI Higher Education Institutions

HEFCE Higher Education Funding Council of England

IP Intellectual Property

JISC Joint Information Systems Committee (UK)

LTU Learning Technology Unit

OER Open Educational Resources

PG Postgraduate

QPU Quality Promotion Unit

SRS Student Records System

T&L Teaching & Learning

TEL Technology Enable Learning

UG Undergraduate

VLE Virtual Learning Environment

VP Vice-President

Annex 1

Academic Council E-Learning Sub-Committee

Terms of Reference

General Purpose:

A joint Sub Committee of the Learning and Teaching Committee and the Information Strategy and Education Resources Committee responsible for advising both Committees on the formation and implementation of the UCC's e-Learning Strategy.

E-Learning at UCC encompasses the use of Virtual Learning Environments (VLEs), distance and blended learning and in-class technologies. E-Learning is a core component of the University's overarching Learning and Teaching Strategy.

The Sub Committee also provides a forum for debate and for the dissemination of information on international good practice in e-Learning.

Specific Terms of Reference

1. Advisory to the Learning and Teaching Committee and the Information Strategy and Education Resources Committee on the following matters:

a) The formation of the University's e-Learning Strategy.

b) Actual and emergent e-Learning issues affecting the nature and quality of services to staff and students at UCC.

c) Staff and student development and training requirements and how these should be delivered to facilitate and embed e-Learning.

d) Procedures to monitor and evaluate the effectiveness of the University's progress in embedding e-Learning at UCC.

2. Other Business as required:

a) To submit to both parent Committees minutes from each meeting and to report on specific matters as required.

b) To advise parent Committees on areas of competent business as requested

Membership

Chair: Appointed by the President:

Dr Seamus O'Reilly

1 staff member from Ionad Bairre:

Dr Bettie Higgs (Nominated by the VP for T&L)

3 members of Information Services (Nominated by the Director): 1 from each of the following areas:

User Services: *Mr Michael O'Halloran*
Audio Visual: *Mr Aidan O'Donovan*
Learning Technologies: *Mr Peter Flynn*

1 member of Academic Systems Administration:

Mr Kevin Harrington (Nominated by the Academic Secretary)

2 representatives from the Learning and Teaching Committee, nominated by the Committee:

Professor John O'Halloran; Professor David Sheehan

2 representatives from the Information Strategy and Education Resources Committee, nominated by the Committee:

Ms Angela Flynn; vacant

1 representative from each College nominated by the College:

Dr Mike Cosgrave CACSSS
Dr Bridget Carroll CB&L
D r Dave Otway CSEFS
Dr Brendan Griffin CM&H

Student Union Education officer (or nominee):

Ms Cat O'Driscoll

Co-opted members (up to 3 members approved by Academic Council):
Mr Patrick Kiely
Mr. Tim O'Donovan

Committee Secretary:

Ms Mary Costello

Data collection:

(i) Sub-committee workshop - Affinity Diagram group brainstorming method used to gather and group ideas/responses. After forming two groups members were asked to contemplate the following questions: what is E-Learning, why is it important, and if they saw any associated issues/challenges. The resulting ideas were grouped together thematically and discussed. From this three workstreams were identified and each member joined a workstream.

(ii) The following workstreams were pursued by the following groups:

- Definition and Scope
- Baseline Audit
- Interaction with Students:
    - workshops held by the *Interaction with Students workstream* followed a brainstorming method similar to that used by the sub-committee.

(iii) Compilation of a UCC-wide list of blended and distance modules/programmes by Lindsey El Amoud and coordinated by Patrick Kiely, building on the work of Mike Cullinane.

(iv) e-Learning @UCC Symposium organised by Ionad Bairre (Bettie Higgs & Patrick Kiely) – Bettie Higgs reported the key findings to the sub-committee.

(v) Workshop organised by AC Teaching and learning Committee (included a specific e-learning theme) – as well as participation by a number of sub-committee members John O'Halloran discussed this with the sub-committee and forwarded the summary of outcomes for comment. Annex 2 presents sub-committee response.

(vi) E-mail from College representatives on the sub-committee to colleagues in each College inviting suggestions/proposals - to ensure interested colleagues across the University had the opportunity to submit suggestions/proposals to the subcommittee. In the case of CACSSS since an e-learning survey was already done the representative was invited to present a report on this.

Annex 2

Sharing my experience in developing and delivering a Blended-Learning Module 2011-2012

Background

The vision

The world of online learning, similar to all new disciples, has an entire vocabulary and language which included words such as Wikis, Camtasia, blogs, digital native, internet, web-based learning Panopto, VLE, webcasts, podcasts, , discussion boards, hyperlink, neticate etc etc

This was the first hurdle to overcome

I believe in the merits of online learning as I have seen support for blended learning approaches within the literature. According to Volery and Lord (2000) on-line offers a rich virtual workspace in which interactions occur among students either in real time or through discussion boards. Advantages include increased student satisfaction (So, 2009; Green et al., 2006), increased knowledge (Campbell et al., 2008; Sung et al., 2008), reduced staff workload (Dorrian andWache, 2009). Students appreciate the flexibility and convenience of being able to work in their own time and location without the need to travel (Ireland, et al., 2009; Welker and Berardino,2005).

The initiative

NU6085 Wound Management for Healthcare professionals (5 Credits) 18 students registered. The module is one of a suite of Continuing Professional Development Modules available within the School of Nursing and Midwifery. An added bonus available in 2011 was that all new students were eligible to register for Skills4Study so this was made available to NU6085 students

Target Population

Practicing Registered General Nurses

Track Record to date

On-going success in attracting students to another wound management module NU5007. This is a taught wound care module which 160 students have successfully completed in cohorts of 20 since 2009.

Motivation

Personal interest in wound care which incorporates the physical, psychological and social burden wounds cause to patients as well as the clinical challenge they pose to health care professionals in effectively managing wounds.

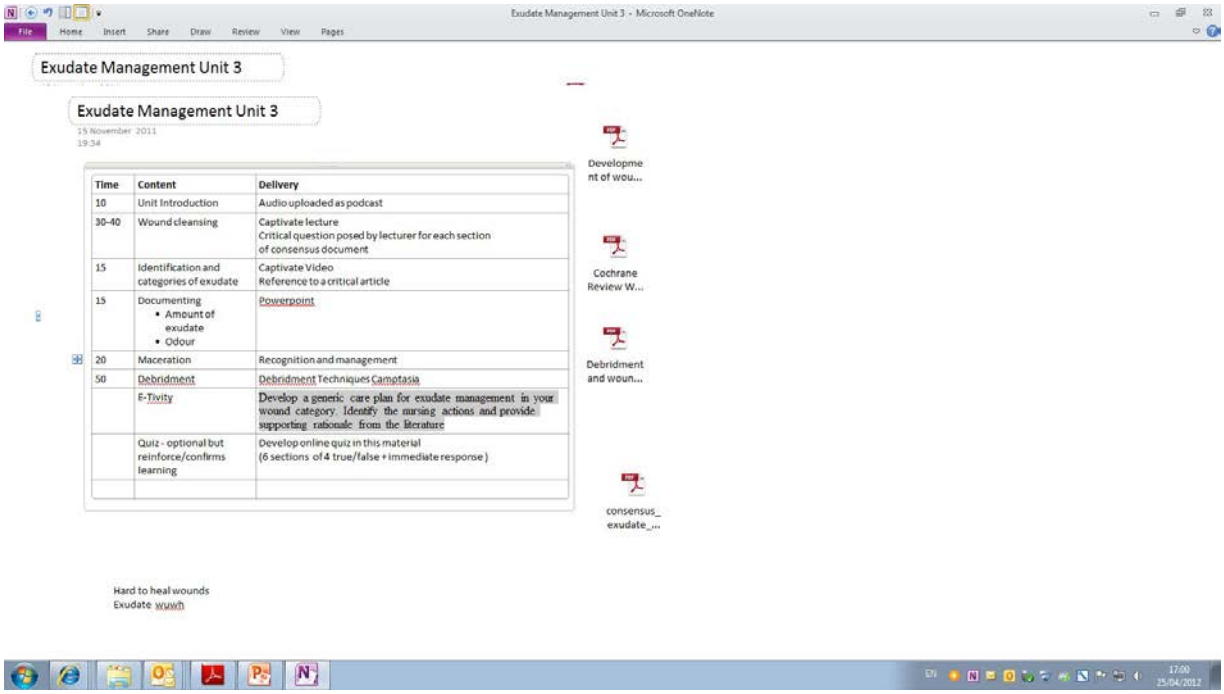
My start point

I used Microsoft ONE Note to create a 'story board' where I charted international learning objectives (European Wound Management Association EWMA) and aligned these to create new learning objectives suitable for level 9 study

On One Note I was also able to create a schematic representation of the content of the module, which was linked to learning outcomes. From consistent revision and re-thinking the module content

eventually subdivided to become four distinct sub-sections of the module. Subsequently I link each sub-sections to an e-tivity, the module assessment and learning resources.

For each subsection I created a proposed chart as to how I would link content to an on-line method of delivery which was supported by literature and would inform each e-tivity which would eventually form the foundation of the module assessment.



My timeline for preparation was tight (Sept – Dec 2011. Registered students were beginning the module on Jan 11 2012) so I began the journey of actually creating the vision for the module which was in my head and on One Note.

The reality proved to be something very different

I needed

- an interface which students could interact with such as a web page
- multiple buttons and hyperlinks so students could navigate through the module content
- an interface which supported accessibility and flexibility.

Blackboard was the only interface readily available to me so I attempted to use as many features as possible (Course Information, Assignments (Quiz) Tools!! Course Document folders, Powerpoints and essential reading). Learning Technologies Unit were very helpful in many ways for example how students could upload a photograph and brief case study of the problem wound they were going to concentrate on through-out the module.

Captivate, Camtasia did not materialise as I did not have the skills to produce such material and no guidance was available to me. While these programmes are wonderful tools they require technical expertise beyond mine.

Panopto lecture I managed to have one lecture (NU5007) recorded. There was potential for more but scheduling further recordings was a barrier due to unavailability of technical support.

Vod casts I created 2x10mins vodcasts by using a Dictaphone. It actually took almost 1.5 hours to record these short conversations of an expert speaker and myself in conversation.
Both Panopto and vod casts had to be processed by technician who forwarded them via e-mail for upload to Blackboard

E-tivities As my students were new to UCC they were not familiar with the technical aspects of Blackboard. Therefore for each e-tivity I needed to be as explicit as possible for example
Please complete one (only) of the two threads within this forum (You gain entry to the threads by clicking on the words 'wound assessment' to the left of this text. Before attempting this it is advisable that you have read and engaged with the articles relating to physiology and assessment (available to your within the literature folder) complete the suggested portions of 'Global Academy' interactive programme next you decide which discussion thread is suited to you to get started with the writing you might like to begin constructing your 200 words on a word document. Don't forget the references.
When you are satisfied copy and paste your work on to the discussion board using your name (e.g. Siobhan Murphy) on the heading bar.
To add variety I offered the following
As part of the 3rd E-tivity students were invited to participate in a SKYPE Telephone conversation with Tissue Viability Nurse Specialist (1 student takes lead to make contact.
*However **No** student availed of the opportunity*

Module Guide There was a need for some resource such as module guide to guide and direct students in the absence of a facility such as a home page or face-to-face direction. Again this was a large body of work and on critical review is a basic document

Contents of Module Guide

- Introduction to module and introduction to wound care
- Module overview
- WEB links to school,(including passwords) library, Blackboard
- "Your role in the module" (comparable to a Learning Contract)
- To begin –trial discussion thread

For each 4 units

- Introduction, Learning outcomes, Knowledge base, learning activity, supporting literature, e-tivity, quiz (20 page word doc with no element of interactivity).

Need to evolve as I develop more intellectually challenging and engaging commentary and questions for students as well as developments from emerging literature relating to wound care.

Student disquiets

Students encountered log-in and access difficulties with

- Student Cards (CPD Module)
- Access to library and Computer Labs
- Access to Blackboard – (had to access via e-mail)
- Navigating Blackboard-let alone putting up a photo/case study
- Issues with passwords

Reluctance to be 'first' contributor to Discussion Board

Example of a thread; Critically choose one aspect of wound infection associated with your wound category in the literature. Write 100words on diagnosis (of infection) and 100words relating to nursing intervention to manage this infection as presented in literature. List references at end (not included in word count)

- (71- 80 hits to thread but only 3 – 5 entries. Students were looking but not engaging
- Student comments that "Global Wound Academy" and "Skills 4Study" were easy to navigate and learn from which suggests NU6085 students were willing to engage with interactive multi-media but reluctant to engage with a complex interface(Blackboard)

Lecturer disquiets

"Global Wound Academy" In the absence of camtasia, captivate and panopto lecture content I had to direct students to a learning interface and chose elements of an educational programme produced by an industrial company who produce and market topical wound management products named "Global Wound Academy". This is a highly interactive site full of specific detail and animations to explain physiological concepts and threshold concepts core to the science of wound management. However the primary focus of this site is sales.

Choosing the correct time to respond to student e-tivities

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Ireland.
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Annex 3

Provision of Blended and Distance Courses and Modules – responses to survey

Department	Course	Mode of Delivery	Contact
Department of Applied Mathematics	MSc in Applied Science Mathematical Modelling	Video Conferencing	Dr Kieran Mulchrone (Course Coordinator)
Department of Process and Chemical Engineering	MSc in Technology Management (through Atlantic University Alliance)	Blended Learning	Anne Marie McSweeney (Course Coordinator)
Department of Process and Chemical Engineering	M.Eng.Sc Pharmaceutical Engineering	Blended Learning	Anne Marie McSweeney (Course Coordinator)
Department of Food Business and Development	Certificate/Diploma in Supply Chain Management	Blended Learning	Dr Seamus O'Reilly/ Aoife Sammon
Department of Food Business and Development	Postgraduate Diploma in Supply Chain Management	Blended Learning	Dr Seamus O'Reilly/ Aoife Sammon
Department of Food Business and Development	BSc in Mutual and Credit Union Business	Blended Learning	Dr Bridget Carroll
Department of Food Business and Development	Diploma in Rural Development	Blended Learning	Dr Mary O'Shaughnessy
Department of Food Business and Development	MBS in Cooperative and Social Enterprise Qualifying Exam	Blended Learning	Dr Olive McCarthy
Department of Food Business and Development	MBS in Cooperative and Social Enterprise	Online Learning	Dr Olive McCarthy
Management and Marketing	Springboard Certificate in Creative and Digital Marketing	Blended Learning	Gerard Horgan
School of Asian Studies (Irish Institute of Chinese Studies)	Doing Business in China	Distance Learning (in partnership with e-learning provider Intuition	
School of Pharmacy	MSc in Clinincal Pharmacy	Blended	
School of Pharmacy	MSc in Pharmaceutical Technology and Quality Systems	Blended	
School of Biological Earth and Environmental Sciences	Diploma in Geology (distance learning option)	Distance learning	Dr. Richard Unitt (Coordinator)

Department	Modules	Mode of Delivery	Contact
School of Economics	EC4000 Economic Foundations I	Blended	Ms Aileen Murphy (Module Coordinator)
School of Economics	EC4001 Economic Foundations II	Blended	Ms Aileen Murphy (Module Coordinator)
School of Nursing and Midwifery	NU6085 Wound Management for Healthcare professionals	Blended	Siobhan Murphy (Module Coordinator)
Department of Applied Social Studies	SS7001 An Introduction to Social Research	Blended	Dr Claire Edwards (Module Coordinator)
Department of Applied Social Studies	SS7002 Philosophies of Social Science	Blended	Dr Claire Edwards (Module Coordinator)
Department of Applied Social Studies	SS7003 Research Methods and Skills 1: Qualitative	Blended	Dr Claire Edwards (Module Coordinator)
Department of Applied Social Studies	SS7004 Social Policy Debates and Processes	Blended	Dr Claire Edwards (Module Coordinator)
Department of Applied Social Studies	SS7005 Research Methods and Skills 2: Quantitative	Blended	Dr Claire Edwards (Module Coordinator)
Department of Applied Social Studies	SS7006 State and Society	Blended	Dr Claire Edwards (Module Coordinator)
Department of Applied Social Studies	SS7007 The Politics of Social Research	Blended	Dr Claire Edwards (Module Coordinator)
Department of Applied Social Studies	SS7008 Designing for Research and Evaluation	Blended	Dr Claire Edwards (Module Coordinator)
Faculty of Law	LLM (Practioner)	Blended	Anna O'Sullivan

Annex 4

Further reading

https://www.coursera.org/courses

http://techcrunch.com/2012/04/18/coursera-raises-16m/

http://hackeducation.com/2012/04/18/coursera/

http://techcrunch.com/2012/04/14/straighterline-raises-10-million/

http://techcrunch.com/2012/04/03/minerva-gets-25m-from-benchmark/

http://www.straighterline.com/

http://www.straighterline.com/credit-transfer-center/transferring-credits-to-other-schools.cfm

http://techcrunch.com/2012/04/02/2tor-series-d/

http://techcrunch.com/2012/04/14/straighterline-raises-10-million/

http://www.udacity.com/

http://blogs.reuters.com/felix-salmon/2012/01/31/udacitys-model/

http://www.npr.org/blogs/alltechconsidered/2012/01/23/145645472/stanford-takes-online-schooling-to-the-next-academic-level