

Megatrends in e-learning provision

The University of Ulster

Context

The University of Ulster is situated on four sites in Northern Ireland. The sites with brief descriptions are:

Belfast campus

The Belfast campus, part of the city's up and coming Cathedral Quarter, is traditionally considered the home of the School of Art and Design, though other disciplines are increasingly being taught there. The campus is situated near the city centre and is close to plenty of shops, bars, cafes and clubs.

Jordanstown campus

The Jordanstown campus is located a few miles north of Belfast on the shore of Belfast Lough. It is a large complex of modern and seventies buildings with views of the Belfast Hills, the Mourne Mountains and County Down.

Coleraine campus

The Coleraine campus was developed as a university campus in the late 1960's and is today a large complex of modern and original buildings set in mature parkland. It is the administrative headquarters for the University and located a short distance to the north of the town.

Magee College, (London)derry

The Magee campus, Londonderry, is a mixture of historical and new buildings and modern and traditional facilities. It is a short walk along the River Foyle from Derry's city walls.

In many of the listings of the campuses of the university, a fifth campus is given. This is called Campus One and is the centre of e-learning for the whole university.

The development of Campus One and of e-learning at the University of Ulster is given thus on the Campus One website:

October 1999. The idea behind Campus One originally spawned from the success of the inclusion of online material in the Biomedical Science course in 1999.

Summer 2002. The official launch of Campus One occurred in 2001. This is a screenshot showing how the website looked when we first had an identity.

Winter 2002. New staff, fresh ideas and changing technology meant we never stood still and by the Winter of 2002 a brand new look had been launched for the website.

Summer 2003. By this stage we had over 20,000 students hooked into our system (800 fully online) and a completely new, user friendly and fast site was required.

Spring 2004. A small freshen up is never a bad idea. This one was a necessity due to the burgeoning numbers of courses we were hosting.

Summer 2005. In 2005 we began aiming different sections of our website at our different types of key users with this quick redesign.

Summer 2006. The latest, most colourful version of Campus One has seen the website develop fully into a portal based approach, targeting our key users with only the information they require.



Fig. 1. This figure shows the locations of the campuses of the University of Ulster and the network served by Campus One.

An official University of Ulster publication, with the title *Utilising institutional e-learning services to enhance the learning experience* describes the evolution of e-learning at the university thus:

The University of Ulster is committed to delivering an enhanced, student-centred approach to learning by applying the most effective, flexible and appropriate teaching and learning technologies. The University has embraced the potential of e-learning to improve access, widen participation and support an increasingly diverse student base.

In 1999, the University organised a workshop that brought together early e-learning pilot projects and key stakeholders such as IT departments, Librarians

and academic staff developers. This workshop examined the opportunities / barriers for e-learning to impact on the learning and teaching experience and on institutional support departments and business processes. Following this workshop, a strategic institutional approach to the implementation of e-learning technologies and pedagogies was adopted.

In 2000, the University created an Institute of Lifelong Learning with a specific remit to strategically lead and facilitate the embedding of e-learning across the institution. Funding was utilised to establish an appropriate pedagogic support and technology-enabling infrastructure. In October 2001, the University launched its virtual campus – Campus One (www.campusone.ulster.ac.uk). Currently, the University offers 17 full online masters programmes and over 250 fully online modules covering the following broad subject areas; health and biomedical sciences; engineering; education; environmental studies; business and social sciences. A further 3 masters programmes are under development. The University currently has the largest portfolio of online masters programmes in the UK.

The adoption of an institutionally holistic approach to e-learning with a teaching and learning focus and the promotion of user-centred, cross-departmental initiatives has been referenced by sector research and are consistent with recent and emerging Best Practice recommendations.

Supporting both on- and off-campus students via technology has a high priority throughout the institutional Teaching and Learning Strategy. The University, via its Virtual Learning Environment (VLE) and Library systems, provides enhanced learning opportunities, added value services and improved access and flexibility to students on and off campus programmes. In the academic year 2003/04, all five Faculties utilized WebCT extensively to support student learning. Over 550 active WebCT modules were recorded with 16,000 active student participants and over 2000 modules have a Library hosted on-line resource list. Significant online flexible student support packages have been developed including study skills packs on plagiarism and online search skills. A highly innovative student induction package for online students has been developed and evaluated and is automatically made available to new enrolments.

The availability of a centrally supported and developed e-learning environment comprising highly integrated VLE and Library related tools and services has enabled course teams and academics to explore new pedagogical and androgogical approaches. Novel mechanisms for engaging and communicating with students have also been developed. New assessment strategies are beginning to emerge and opportunities to explore and support diverse learning styles are now available.

The University has in place extensive expertise in the areas of e-pedagogies, content creation and the integration of e-learning systems. This team consists of Learning Technologists, Staff Developers, Librarians and Systems Engineers, supported by Graphics / Multimedia Developers, Accessibility Specialists and Programmers.

These extensive resources underline the University's commitment to the development and maintenance of a world-class e-learning infrastructure and provide an opportunity to further develop institutional e-learning services and approaches that positively impact on the learning experience.

History

The University of Ulster's involvement in distance education was low key until 1998. In the period 1997-1999 there were a number of e-learning initiatives especially in Biomedical Sciences and in Education. In 1999 a new Vice-Chancellor brought the initiatives together and gave e-learning a new priority. In 2000 the university's Institute of Lifelong Learning was founded with a special responsibility to support e-learning. The university installed a new Virtual Learning Environment (VLE) WebCT. The official launch of Campus One occurred in 2001. More than 300 computers were placed in the university's Learning Resource Centres (LRCs).

Competence in e-learning was developed in looking after e-learning behind the scene. This was an institutional development and not focused on a niche group. The focus was on user support, studying online and student orientation. Competence was developed in three areas: technical, user support and staff development. Access to library resources was considered crucial to the success of e-learning and the library service was integrated into the VLE. This integration of the VLE with library services is described:

The University of Ulster was granted funding from the Joint Information Systems Committee (JISC) to further develop a working model upon which to fully integrate its VLE and library systems. This work was undertaken in 2002/3 to provide WebCT users with personalised contextual linkages to library resources and services along with seamless access to protected resources. The 4i Project (Interoperable, Institutional, Integrated, Implementation), builds on preliminary development work undertaken in 2001/2 and has scaled up these activities in order to assess the impact of an institution wide VLE-Library system integration on library business processes and the user experience. It also seeks to inform further development of technical integration methods to facilitate better interoperability between diverse systems and platforms.

The Institute of Lifelong Learning provides consultancy and staff development and makes learning technologists available, especially in curriculum development and in the use of tools. The fully online elearning programme uses a course team approach with a focus on content and communication. The e-Moderation initiative of Professor Gilly Salmon resulted in e-Moderation being a priority at the University of Ulster.

The University has a global reputation for its e-learning systems and provision. It is one of 28 global WebCT Institutes, and has actively supported the development of e-learning standards and systems. One feature of the University of Ulster's approach to e-learning is its focus on providing learner centred services. This seeks to package and contextualise information from a learner's perspective to achieve maximum relevance and understanding.

Key components of the e-learning initiative have been the development of learner support services, pedagogic support for academic staff / course teams and the development of innovative e-learning systems and services, in particular, the integration of an effective library service within the online classroom.

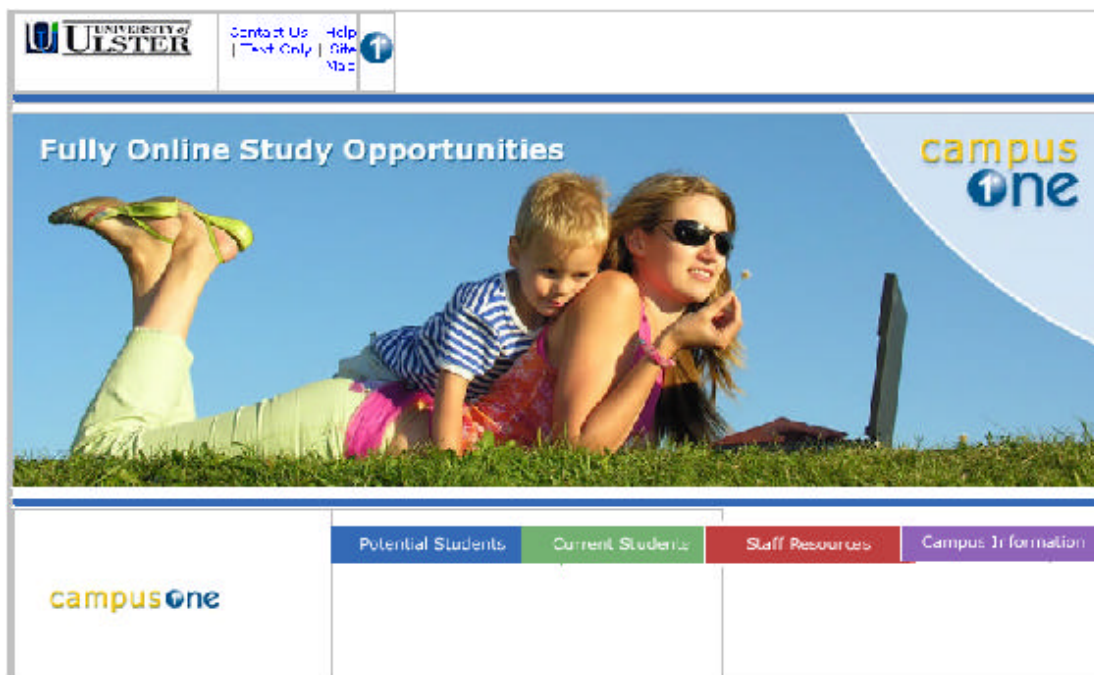


Fig. 2. The University of Ulster e-learning portal today.

Technical issues

From the view of information and communications technologies, e-learning has been, since 2000, seen from an institutional perspective. With the very large scale developments there was a need for resilience and scalability. There is full linkage from e-learning to student enrolment and the library services. E-learning and the library and staff development are integrated services.

Course development for widely used technologies underpins all the university's e-learning activities. Students should not need to purchase additional hardware or software. The general requirement is for a reasonable specification to make use of the availability of broadband. Some statistical packages are on CD Rom.

Every module has its module space on the VLE. Student e-learning accounts are created at enrolment. There is complete integration between the student record system and course enrolment. In each module space there are deep links to the library. Students have automatic access to all library resources, databases and journals and need no additional credentials to access these resources. The library service is integrated into the enrolment system. There is an immediate link from the university homepage to the library and to the subject librarian's homepage.

Courses

Currently, the University offers 17 full online masters programmes and over 250 fully online modules covering the following broad subject areas; health and biomedical sciences; engineering; education; environmental studies;

business and social sciences. A further 3 masters programmes are under development. The University currently has the largest portfolio of online masters programmes in the UK. Students can click on a course and can take a single module at a time. Students are encouraged to take a credit bearing module first and then later decide on the course or the programme.

Flexible start-up and flexible progression are not available from the University of Ulster. E-learning courses run every semester starting in September and January. All are post-graduate courses. Compulsory modules lead to optional ones. Students enrol in a credit bearing module first and then in the programme.

Campus One offers tools in both synchronous and asynchronous communication and encourages both. Education courses use synchronous communication and an extra 15 students per module means another e-tutor.

Management, strategy and attitudes

The Vice-Chancellor says e-learning is important. There are 1.500 fully online e-learning students. 50% of MAs are online. There is rapid growth in fully online students.

There are different drivers for different groups of staff, some groups of staff are very keen on e-learning. The fully online programme is well supported and staff are enthusiastic. A dwindling part-time course enrolment means that staff are keen on e-learning. Attitudes can differ but because there is a strong scaffolding around the e-learning courses, they are better prepared. Some staff grow their courses in a different way.

The University of Ulster has an e-learning strategy which is linked into the corporate plan.

All teaching at the University of Ulster is treated the same from the point of view of quality. The same quality processes apply to e-learning as to face to face. Many of the university courses are also subject to professional accreditation and this gives a second control. The university has a vested interest in quality control because if it has good quality it can compete with others.

The effectiveness of administrative routines in online education are affected by face to face enrolment and flexible options which can be a problem and cause tensions in administrative routines. Campus One starts the online courses a week later than other course commencements to help solve this problem.

We have tried to address the question of workloads in elearning. The business model and time line is 12 months in advance. E-tutors are appointed for 10-15 students per module.

The University of Ulster runs a few joint ventures, nearly all hosted on its own system. These have been with Flinders University of South Australia in maritime education Rochester University, USA, another in Hong Kong and another with Regis University, Colorado, USA.

The University of Ulster is very credible with government and public administration but this has no influence on the development or success of e-learning. The university is not doing e-learning because of the government but for educational reasons

The university is proactive about support induction and orientation of students. There are welcome packs and an orientation course on access to the VLE. The university takes a proactive role in community building and focuses on awareness rather than training. Campus One concealed all the e-learning problems behind the scenes. The library resources and journals are automatically available to all students and this contributes greatly to success.

Economy

Cost-effectiveness in e-learning is difficult to calculate, it is a question of how you allocate resources, how good the business predictions are. The university has a pump-primed central unit, the Institute of Lifelong Learning, with permanent staff which exists to support e-learning. The courses generate money. However, the university has the danger of being geographically marginalized.

Income from online education has been growing nicely, especially the growth in fully online student enrolments. The enrolment is nicely flat and stable now but it is a very volatile market.

The university is trying to be flexible and to adapt to the market. It is a question of not putting all one's eggs into the same basket.

Additional factors

It is a fact that elearning is delivering students to the university who would not otherwise have come.

Supporting over 1.000 fulltime elearning students with success is not risky any more.

The enthusiasts came first. Now it is good practitioners in teaching and learning and not from a technology focus any more.

The official University of Ulster publication, with the title *Utilising institutional e-learning services to enhance the learning experience* concludes thus:

The University recognised at an early stage that effective methods of user support would need to be developed to assist learners' transition to learning in an online environment, ability to participate effectively in online courses and

activities and understanding of how to best use the tools and systems utilised in online courses. This has led to the development of a suite of learner support tools and resources that was informed by emerging best practice, feedback from students and the specification that any institutional support should be learner centred and integrated with the overall student experience.

The model adopted is one of supporting student transition throughout the student application and enrolment process. Students enrolling on fully online course are provided with appropriate transition support as they progress through the course enrolment and registration processes.

A full learner support package accessible via the VLE examines and develops the key topics identified as critical to the success of such online programmes. These topics include "Orientation and training in the use of VLE tools", "Study Skills", "Self Management", "Online Searching and Evaluating Internet Resources" and "Plagiarism", with the topics being explored from a student perspective.

Using the VLE to deliver the learner support package enables learners to familiarise themselves with e-learning within a realistic context. It also provides a "just in time" level of support and guidance as they can revisit key sections during their studies. In the academic year 2003-04 this learner support package was further developed and released to all new students of the institution (over 10,000), with the service actively promoted to fully online students.

The University has evolved its course approval process to identify courses that will utilise significant proportions of e-learning and to ensure such courses are developed to provide a high quality learning experience. This is promoted through the provision of an institutional Learning Technologist from the Institute of Lifelong Learning and by an appropriate Subject Librarian to work closely with the course development team. This broadening of the course development team is in line with sector best practice.

The Learning Technologists support course development teams to identify and utilise appropriate pedagogic approaches and promote the full utilisation of available institutional and external resources and services. This ongoing consultation role is supported by exposure to exemplar courses, relevant case studies and research articles and by staff training in the use of online learning tools and pedagogies.

Learning Technologists are supported by a team including, among others, course developers and graphical designers who have extensive experience in the production of engaging online educational resources that meet relevant accessibility standards.

This input from instructional design staff and other e-learning domain experts has greatly assisted the integration of appropriate learning support strategies to online courses. A focus on establishing effective learning communities and promoting effective communication and feedback mechanisms has led to the introduction of focused staff development support in the flexible use of e-learning communication tools and in a formal e-moderation short course that is compulsory for all staff teaching and supporting learners on fully online courses.

This embedding of good practice has proved to be highly effective and well received by learners