

1 Introduction

The University of Dundee is a 'hybrid' University. It was originally a college of the University of St. Andrews and became a University in its own right in 1967. It has since acquired a local college of art, two nursing colleges and the Dundee campus of the Northern College. It has approximately 12,000 students and is based on one main campus with the acquired colleges still being located separately.

The growth of the MLE project at Dundee came out of departmental systems and strategies. Up until 2-3 years ago all the VLE work was done on a departmental basis, but with growing pressures on the network it was realised that central involvement was essential and would allow the various management and learning systems across the University to be integrated.

2 Current state of play

The University now has a functioning VLE and will have an integrated MLE with the VLE, personnel, student management system (SMS) and computer-aided assessment system all integrated by mid-September 2003. The University is currently working on both the integration and the upgrading of Blackboard from the basic to the enterprise version. The University has also acquired a new SMS (SITS). A key criterion for its selection was the ability to link up to the VLE and other systems. There are currently two separate VLE systems in use, Blackboard which is used by the majority of the University and MESIS, which is used by the medical and nursing schools. Some areas of the University had, due to the departmental approach, been using WebCT, but these have now moved onto Blackboard.

About 50% of staff members currently use Blackboard (MESIS is heavily used by the medical schools). The University also uses Question Mark Perception to carry out online assessment and this is quite sophisticated – even being used to carry out tests for doctors using video clips of examinations of patients. The University has a dedicated Learning Enhancement Unit (LEU), which is responsible for the development of the VLE and training staff to use it to its best advantage. The Director of this Unit and the Co-ordinator of Learning Technology are both academics formerly in the Biology department, so they have an in-depth knowledge of the needs of both teachers and students. The University also has a ICT in Learning and Teaching committee, which is instrumental in the development of both the VLE and now the MLE. This group co-ordinates policy on the use of C & IT and mediate between the various interest groups involved.

The University recognises that it has been necessary to spend money on hardware as well as software – the main servers were replaced last year as it had become obvious that the existing servers could not cope with the increased use that the VLE was occasioning. The University received a ring-fenced grant from the Scottish Higher Education Funding Council (SHEFC) to improve its IT provision.

3 Drivers of MLE development

The key drivers for the University of Dundee were:

- Gaining competitive advantage and establishing a clear brand 'identity' for Dundee – the University has more students go into the 'professions' than any other Scottish University. There is a perception that Dundee does not have a clear "brand image", so the development of students with a high degree of IT skills is important to allow the University attract higher quality staff and students.
- To allow the University to become more research focussed – by allowing lecturing staff to spend less time undertaking direct teaching and move more into being facilitators of students' learning.
- The University needs to improve the quality of learning and teaching as efficiently and effectively as possible and it is perceived that the VLE and MLE can assist in this.
- To improve the internal image of the institution – it is important that staff have confidence in the systems and tools that they use.

4 Development, implementation and training

As was mentioned above, the development of the MLE strategy grew from the decision to integrate the various VLE projects into a University-wide model. There was then very wide consultation about the development of the MLE. Demonstrations were held to which academic staff were invited. One reason for the success of the implementation of the VLE was that it was not located in the technical or IT Services (ITS) department of the University, but was, from the outset, the responsibility of the Learning Enhancement Unit with help and advice from the ITS. This meant that academic staff could see that this was a project that was being driven by pedagogic considerations, rather than technical ones.

The software selection process was carried out by the C & IT committee working party, which was made up of largely academic staff. The primary criteria for selection was ease of use by academic staff. A wide range of staff development courses is offered, with several units opting for whole department training. Training sessions are held by the LEU and many staff members that attend these sessions subsequently act as champions in their own departments to show others the benefits of using the system.

The VLE is seen as being very student-driven – students want to see modules and courses using the system as they like the fact that material is available 24/7 and off-site. If student demand had not been high the University would not have carried out the upgrade to the enterprise version of Blackboard.

For the system to work well it is important to have the staff as well as the students on side. Some departments are more enthusiastic than others – 100% of courses in the Law department, for instance, now have VLE support.

It is felt that it is very important that staff feel that they are being supported in using these new technologies, so the LEU tries to make sure that everything is as simple as possible for staff. In using Question Mark Perception, for instance, if staff members do not wish to get to grips with the question setting software then they can set the questions and the LEU will do the technical side.

However staff are welcome and encouraged to do this for themselves as well. The role of the LEU is seen as being to take problems off the shoulders of the academics.

The University has also made it policy to offer incentives for good and improving teaching. It is now possible, for instance, for a member of staff to be promoted to Senior Lecturer on the basis of an excellent teaching record, whereas previously only a research standing allowed such promotion. It is also possible for staff to have sabbatical leave to undertake course development. Whilst these things are part of a wider picture than just the VLE/MLE project, they do act as inducements for staff to get to grips with the technology and try to use it to its fullest extent.

5 Staff views on MLE/VLE development

The current position was brought about by a crisis on the central network. The system 'fell over' frequently and both staff and students found it hard to log in to the system – sometimes it took up to 20 minutes to log in, which meant that the system was unpopular and not used to its fullest potential. The network problem was solved by investment in a new server "backbone" and the centralisation of support for the VLE and other e-learning systems. The new system allows much better communication between staff and students and students can also communicate with one another much more easily.

The VLE is also popular among staff as the system is easy to use and they can spend time that previously they might have spent trying to write HTML or PERL code, discussing learning and teaching with other academics. It is also forcing academic staff to think about pedagogy of delivering learning over a network, as there is no longer a technical excuse for not using the system.

The system is seen as being of immense benefit to students. It allows distance-learning students to maintain a better sense of community and, where previously these students might have felt isolated, they can more easily know everyone on the course and communicate with them. The VLE also facilitates collaborative working arrangements, and has changed the role of the tutor to facilitator and observer rather than active participant in discussions, for instance.

The staff feel that the integration of SMS and VLE systems will be an improvement and a boon. The new SMS system should also allow staff to track student records more easily when working in a support role. Having students enrolling automatically onto the system will make it easier for staff to communicate with and track students.

The staff perceive some disadvantages to the system –

- There is a tendency for staff to dump materials on the VLE and assume that they have an 'online' course. The system is also not yet fully integrated with either email or other VLEs. The latter can be a particular problem when one wishes to transfer files to and from external partners.
- A major drawback of the current system is the lack of file management in Blackboard. It isn't possible to link things within the system and it is difficult to correct documents, as you have to 'unmount', amend and then remount them. (This will be possible in the new upgrade.)
- The staff think, because the system is easy to use, that they can 'do' Blackboard courses in very small amounts of time – staff often underestimate how much time and commitment is necessary to get courses properly onto the system in a way that makes sense and which students can understand. Few staff understand that teaching online is much more difficult than face to face. It has been estimated that 1 hour online = 3 hours face to face.

The pedagogical implications of Blackboard are seen to be potentially very positive. Staff need to think hard about how they teach – it is just as possible to use Blackboard poorly as it is to lecture poorly. The staff development which has been offered in order for staff to learn and develop skills in the use of the VLE has been greatly appreciated and is very useful. People started off by being curious about it and then, as they learnt more and found that the network was working, they became more enthusiastic. Project champions help in this, they tell others in their departments what they have and can do and then others become interested.

6 Students views on MLE/VLE development

The major positive point for most students is that Blackboard gives them access from anywhere at anytime. The previous VLE systems (with the exception of MESIS) were only accessible from within the University, which meant that students were very tied to the campus. Now it is possible to download and print lectures from elsewhere. Students can carry out more learning at a distance and at times which is convenient to them, rather than convenient to the University and its staff.

The system is also heavily used by class representatives as a discussion forum and information sharing space. There is a perception among students that some staff do not know how to use the system and students would like to see more of their courses and modules being on the VLE. Students who are used to using MESIS do not see the benefit in using Blackboard, even though all their IT teaching is done through it. It is perceived as yet another thing to learn and this is particularly challenging for students (such as those on nursing courses) who already have high demands on their time.

There are seen to be some disadvantages with the system:

- Not all courses and modules are on the VLE. This can cause problems, as students have got used to having courses on the VLE and it is frustrating when they are not.
- Students would like to be able to see historical data – once you have taken an assessment on line, for instance, it disappears and it would sometimes be useful to be able to look at it again when you get your results.
- Students only have access to the modules that they are currently registered for but it would be very useful to have access to modules that they have studied before (or even, sometimes, modules that they will be studying in future) for revision and background reading purposes. The system is seen as being a bit clumsy – there are often a large number of steps and folders to work through before students get where they want to be and they sometimes get lost in the system.
- Some files can be very large – if you are working off-site through a modem it can work out quite expensive.

7 The future

The University is planning to consolidate its position in the immediate future. After what will be a very busy summer implementing the new SMS and the upgrade of the VLE and linking the two together, it is intended that moves should be speeded up to persuade more staff to use the VLE for their courses. In two years time the aim is to have a fully integrated MLE with all University systems where possible linked up and feeding into one another. It is also hoped that the fully integrated MLE will allow better and easier communication and collaboration with colleges of further education.