

## Northumbria University

### 1 Introduction

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Northumbria University was established as a university in 1992. Its deep roots in the region build on the amalgamation in Newcastle Polytechnic of three regional colleges<sup>1</sup> in 1969 and the subsequent incorporation of the City College of Education (1974), and the Northern Counties College of Education (1976) and the Bede, Newcastle and Northumbria College of Health Studies (1995).

Northumbria is a large metropolitan university and delivers a wide range of full-time, part-time and short courses in a largely modularised curriculum. Currently it has just over 23,500 students about 16,000 of whom are full-time. The University's academic structure includes 11 subject areas in 11 Schools<sup>2</sup> plus a Virtual Graduate School.

The University's administrative functions are handled by a cluster of University Services, including: Corporate Planning, Finance, Human Resources, IT Services, Learning Resources, Student Services and the Registrars and University Secretary's Office.

The University's City Centre site houses the administrative functions, the main Library, the Students' Union Centre and the Student Services Centre as well as the bulk of teaching accommodation. The University has contributed considerably to the regeneration of Newcastle's city centre and provides modern IT and teaching facilities in the Trinity Building and The Drill Hall. The university has two further campuses in Newcastle and one in Carlisle and provides access to an increasing number of courses and qualifications through distance learning and a portfolio of franchises.

### 2 Current state of play

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#### *Recent history and landmarks*

In spring 1998 "A Web enabled University" was presented to the University Senior Management Team. This is now seen as a milestone and pivotal point in the process that lead to where the University is today with regard to Online Services. It was recognised that there was a lot of expertise, scattered across the university with no central coordination. It was proposed that Northumbria should fund a programme of activity outside the normal line management structure. This would be developmental and innovative, if successful the outcomes would be mainstreamed and others would be able to benefit and learn from those successes.

During 1999 various Managed Learning Environment were appraised, with the user ability main focus. The outcome of the appraisal was to recommend Blackboard.

#### *Achievements*

More than four years on, the implementation is perceived as a huge success with high student take-up figures seen as the most convincing positive indicator. Northumbria now has a University Wide VLE, with at peaks 800 user log-ins per our, 2000 live modules/courses and more than 32000 students (plus approximately 875 academics and 250 non-academics) on live courses. Half these students have used Blackboard since week 1.

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<sup>1</sup> Rutherford College of Technology, the College of Art & Industrial Design, and the Municipal College of Commerce

<sup>2</sup> Applied Sciences, Arts & Social Sciences, Built Environment, Design, Engineering & Technology, Health, Community & Education Studies, Informatics, Law, Psychology & Sport Sciences and the two distinct Newcastle and Cumbria Business Schools

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Northumbria University and its staff and students are starting to enjoy economies of scale. The successful implementation and the expertise developed have created wider benefits:

- The university's ability to lead a NTI project. A capital grant of £1.7m has been awarded to Northumbria University on behalf of a new consortium, embracing education providers, employers and business support organisations. Northumbria is leading a consortium of ten colleges and universities in Tyne and Wear and Northumberland and 18 businesses and business support organisations to address skill needs in ICTs and to help small firms to keep up to date with new technologies.<sup>3</sup>
- The delivery of a content managed website – now moving to transactional
- The hosting of JISC Infonet and JISCPAS.
- Increased library integration – establishing one port of call for students;
- A rapidly growing course base of Distance Learning, franchise and collaborative ventures

The creation of a wholly owned subsidiary 'Northumbria Learning', exploiting Northumbria's expertise to commercial advantage and to the benefit of other organisations, is seen as a particular success. Northumbria Learning Ltd is designed as a unique partnership agreement with Blackboard. The close and effective working relationship is clearly demonstrated through Northumbria Learning's representation on the European Blackboard Advisory Board; through the University's trial of the Blackboard Learning Content Management System; and in a worldwide first virtual installation of Blackboard managed learning system.

### *The learning and teaching framework*

Northumbria distinguishes 4 broad 'types' of online learning provision, which all benefit from the integration and harmonisation of systems and information sources:

- *Enhanced* - communicating information. This includes the gradual exposure through the VLE of additional elements and facilities, to provide students with personal information from other systems and information sources within the University such as library, IT support, Student Services, etc.
- *Supported* - providing access to course materials. To provide a store of course notes and materials for flexible or part-time learners as backup to another delivery mechanism. (Face-to-face, CD based distance work, paper based distance work etc)
- *Enabled* - delivering on-line of some/all of the course is.
- *Community collaboration areas*. There has been a rapid uptake by many Schools to provide document sharing and discussion board areas

Northumbria sees these as complementary to each other and to other learning related processes, rather than a hierarchy of ambition or 'sophistication' levels.

### *Infrastructure and software*

All in all, Blackboard provides the core of the eLearning services, with functionality and usability enhanced by and integrated with a range of third party services, e.g. LearnLinc/Centra, QuestionMark, FlexAnswer and Crystal Reports.

Version 6 is now in use and the Blackboard LCMS is being implemented as a pilot service. The LCMS is a key component of the infrastructure that will allow further and deeper integration of learning focussed services.

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<sup>3</sup> The New Technology Institute will form part of a national network of such partnerships, which are supported by the Higher Education Funding Council for England and the Learning and Skills Council.

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The take-up of the VLE over the last three years (currently almost 90% of academic staff and 30% of non-academic staff are making regular use of the VLE in day-to-day teaching and student support) has been massive. Northumbria's implementation approach has followed Rogers (1995) S-shaped innovation adoption curve and reached a critical mass during the academic year 2002-2003. Crucial to the success of this innovation has been an extensive staff development programme for elearning.

The following diagram provides a top-level overview of the infrastructure and components planned by Northumbria University.

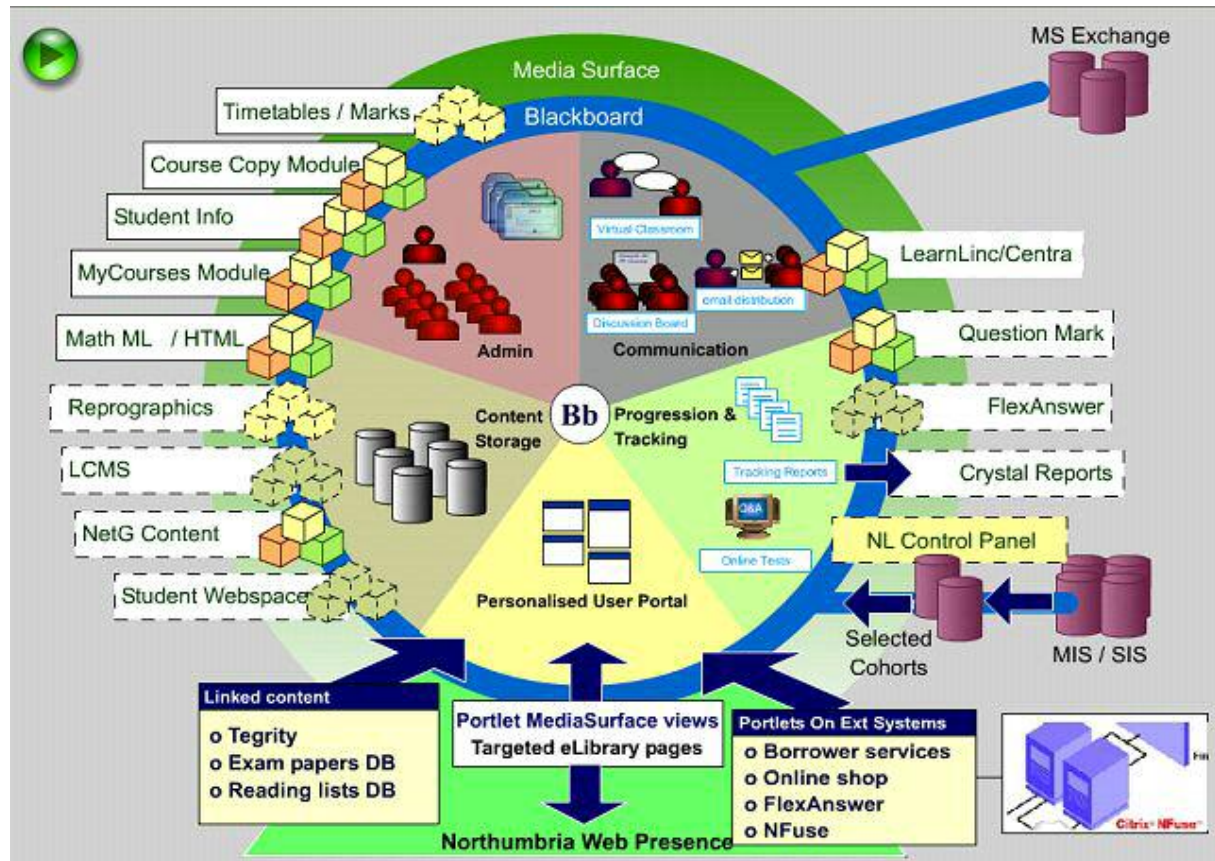


Figure 1: infrastructure and components planned by Northumbria University <sup>4</sup>

### 3 Drivers and considerations relating to MLE development

Staff at Northumbria are very clear that students and their needs now constitute the main driver for change. Between 2001 and 2003 the emphasis has shifted from improving efficiency and organisational flexibility to a more direct focus on support and enhancement of teaching and learning processes. During the case study visit, it was mentioned that:

“Although it's true that some of the drive to go “on-line” has come from above through academic development plans and university strategies, one of the main drivers for the development of on-line learning has been the student body. One of the greatest levers we've found has been student demand.”

Other drivers for Northumbria to move towards further roll-out and integration include the need to harness data quality, improve and harmonize the underlying processes and to provide a robust framework for staff development.

<sup>4</sup> From presentation 'Academic Web Services' by Prof. Tony Dickson, DVC (development) and Will Murray, Head of Online Services on 11 February 2004 at Northumbria University. Included with kind permission from Northumbria University.

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### *Model of adoption*

The model of adoption in Northumbria followed, the *forming, storming, norming, and performing* model.<sup>5</sup> Some key points that have emerged which have led to the cultural change required to support the level of success include:

#### Stages 1 and 2

- Breaking down the ICT interference factor allows focus to shift from technical to pedagogical issues. Once staff are familiar with the technology and how it works, the focus can shift to exploring how best to deploy it to the benefit of the learning and teaching situation. (Forming, storming)

#### Stage 3

- Staff development for elearning must not be viewed in isolation from other aspects of ICT and non-ICT staff development. (Norming)

#### Stage 4

- Staff development for e-learning is most effective when driven by the real needs of preparing a coherent, web based learning environment<sup>6</sup>;
- To engage fully with the pedagogical issues and not just the technical, the collaborative involvement of whole programme teams, both academic and administrative, in workshops is greatly beneficial<sup>7</sup>; (Cultural change)
- A range of approaches is essential. This involves looking at the different ways staff prefer to learn and catering for these in the staff development provision<sup>8</sup>; (Cultural change)
- The emergence of local champions, or leaders with vision is extremely helpful. These staff are at the forefront of developing the use of the VLE within their own teaching situation and are able to share and cascade their expertise to colleague.<sup>9</sup> (Performing)

### *External Drivers*

Drivers for further moves toward integration of systems within and beyond the University include:

- Awareness that the problems are being faced universally by both HE and FE (the experience with Northumbria Learning has been instrumental in identifying this)
- Improving the ability for partnering with other organisations.
- Competitiveness in the higher education market to provide a leading edge service to students.

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<sup>5</sup> Based on Bruce Tuckman's team-development model. Tuckman, B. (1965) Developmental Sequence in Small Groups. *Psychological Bulletin*, 63, 384-399.

<sup>6</sup> Collis, B. & Moonen, J. (2001) *Flexible Learning in a digital world – experiences and expectations*. London, Kogan Page

<sup>7</sup> Kirkpatrick, D. (2001) Staff development for flexible learning. *The International Journal for Academic Development* 6 (2), 168-176

<sup>8</sup> Robinson, B. (2001) Innovation in open and distance learning: some lessons from experience and research in F. Lockwood and Anne Gooley (eds.) *Innovation in Open and Distance Learning* (pp 15-26) Kogan Page, London

<sup>9</sup> Rogers, E. D. (1995) *Diffusion of Innovations*, 4<sup>th</sup> edn, The Free Press, New York

## 4 Consultation and strategy development – the process

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### *Strategic issues*

In the 'Online Services 2000' report the University articulated a vision for 3 years of ICT development. It intended to build on the many hitherto relatively ad-hoc e-learning and web applications. The aim was to 'Web Enable' the university through parallel technology development and staff development and to stimulate buy-in, capability creation and effective uptake by taking a 'by academics for academics' approach.

### *Consultation and support*

Northumbria brought together a team incorporating technology, administrative and academic skills and backgrounds –thus offering a multi disciplinary approach. It took a pedagogy-led approach, and combined it with effective practice and dissemination by:

- Working closely with the University on L&T aims and objectives;
- Staff Development sessions encouraging an understanding of systems – ensuring communication beyond traditional boundaries

Over the last two years a wide variety of use, including full distance learning courses, blended learning integral to campus-based courses and face to face delivery through, for example, problem based learning have been initiated and supported. Blackboard has proved to be very useful in terms of maintaining contact and providing support for the many students at this university who have placement experiences as an essential part of their academic programme.

Deliberately, a wide variety of approaches and L&T modes are supported, including distance learning and campus-based modes, support of conventional delivery and placement support. Support is provided for aspects of learning related communication, assessment, extension work and preparation before lectures.

Ongoing consultation with staff has illuminated a number of issues and concerns, including:

- Variable **quality of online materials**, which may be related to
- **Workloads**. Creating material for delivery online is hard work and takes a long time. This, in turn, is related to
- **Staff development** needs. For some colleagues the technology gets in the way, hence the imperative to design a programme for staff development to create more than just a driving lesson approach. It must look at how learning and teaching activities are to develop in institutional and wider contexts.

Consultation has also underlined that the bigger picture in which MLE development and use take place - and which it can positively influence - is one of culture and culture change.

Quoting from a presentation given during the case study visit:

"One bonus has been the development of collegial approaches to working with students. Programme teams are meeting, discussing and making joint decisions about approaches to L&T delivered through a VLE. So what's really happening is that e-learning is making us focus upon learning – quite revolutionary!!"

## 5 The implementation process

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Blackboard was introduced in the first half of 2001 for full roll-out in September with 800+ units/modules live in 2001/02 and 11,000+ students on live units. Subsequent roll out of BB level 3 in September 2002 resulted by May 2003 in 1998 live sites on Blackboard, involving 674 academic and 122 other staff and with 21288 students on live sites. Steps towards a

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more integrated and manageable learning environment continue with the implementation of Blackboard V6 and the LCMS, allowing for improved embedding of the VLE with other University systems.

Importantly, In Northumbria’s approach *adoption* is not primarily about technology – nor about raw numbers - although economies of scale are seen as very important to underpin sustainable quality, but about people, working practices and ‘culture’.

Through over 170 staff development sessions some 800 staff have been provided with basic training and as exposure to specific pedagogic applications. Embedding and main-streaming of services and support has started though cascaded delivery (Training of Learning Resources staff for support and training)

### 6 The future

Northumbria has taken and will continue with a very clear pedagogic approach to support academics and students in adopting the MLE. This is made possible by a high level of central co-ordination, with student needs and experiences right at the centre of institutional planning, resulting in clearly articulated development priorities. This was confirmed as part of Enabling Online, and served as an encouragement of good practice. The picture below shows key elements of the implementation progress to date and illustrates the identified priorities for the near future.

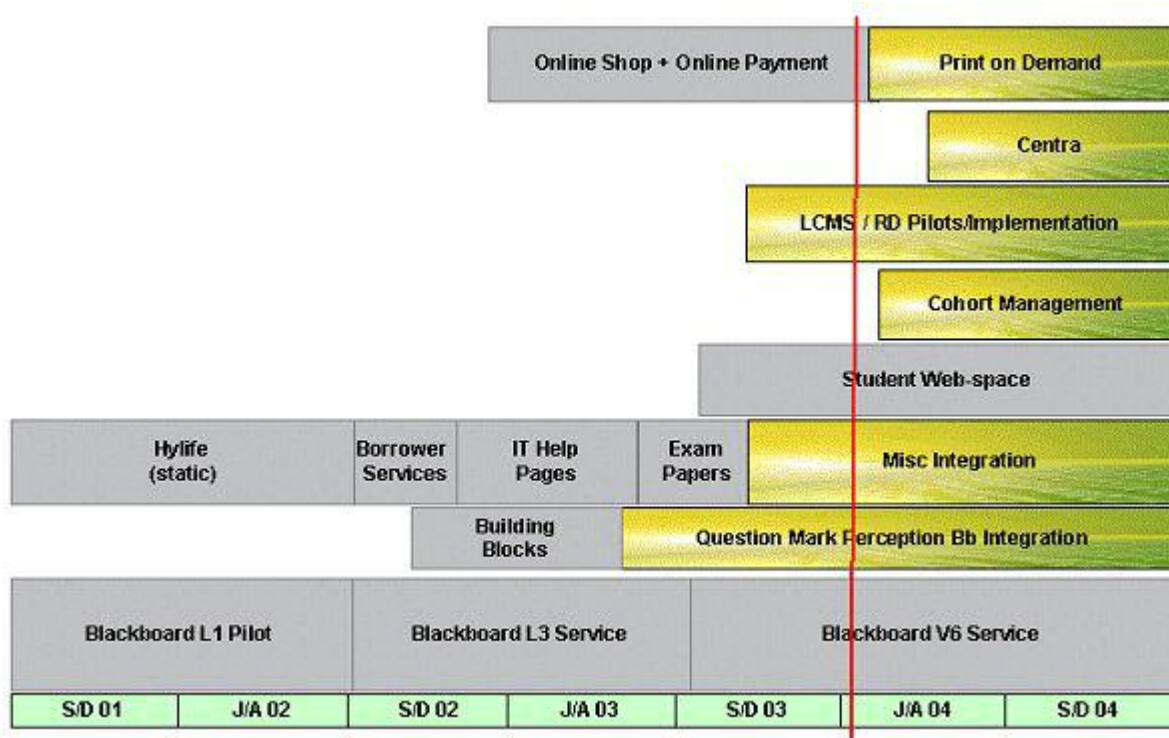


Figure 2: implementation progress to date and illustrates the identified priorities for the near future <sup>10</sup>

As illustrated above, the Online Services development plans for a managed learning environment within Northumbria include the upgrade of Blackboard to a full Learning Content Management System (LCMS), the implementation of Centra to enable video conferencing and sharing of applications for remote users and a cohort manager tool. Further strands of

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activity include the introduction of media tools, continued addressing of data quality issues (which requires understanding of all university systems and how everything fits) and a full staff development programme to support implementation and uptake.

Short and medium term barriers mentioned include data quality, accuracy, and timeliness. Northumbria is actively working on solutions in the development and implementation of its cohort tool.

It was noted that underlying systems and system changes are becoming increasingly mission critical and exposed as the services which utilise them become main-streamed and are being used in students' and staff daily routine. In addition, the development time for materials needs to be planned more closely now, in order to allow staff to capitalise on the opportunities offered by an enhanced infrastructure.

In summary, at Northumbria three aspects of design and implementation of a Managed learning Environments are particularly notable:

- First of all, a clear pedagogic approach to support for academics in adopting components of the MLE has benefited the organisation's ability to move forward rapidly whilst maintaining and improving the quality of student learning experiences. Northumbria managers stressed that the challenge is not so much the MLE (seen as a system or set of harmonised services) but that of engendering appropriate communication at all levels within schools. With Northumbria's impressive advances in recent years have come high expectations of services, foremost by students. Increasingly this requires that new services have to be "right" first time!
- Furthermore, Northumbria's success in creating viable spin-of activity, in particular through Northumbria Learning, seems to endorse that early adoption and progression – although not risk-free - can create clear competitive advantages for the institution and also generate benefits for the sector, which would otherwise be difficult to realise.
- Finally, Management of the MLE development is characterised by centralised responsibilities, but still manages to create a level of inclusiveness that is recognised and appreciated by many. The following quote from one member of staff illustrates this: "... this is an example of the university doing joined up thinking".