



Scottish higher education
funding council

heTNA
HIGHER EDUCATION
Training Needs Analysis

Report

November 2004

scrolla
SCOTTISH CENTRE FOR RESEARCH INTO
ONLINE LEARNING AND ASSESSMENT

Glenaffric
the natural choice for eLearning



South West Regional
JISC Scotland
Support Centre

Contents

1	Introduction.....	3
1.1	Background	3
1.2	Aims and objectives	3
1.3	Scope	3
1.4	Purpose and audience	4
1.5	Partnership and project management	4
2	Context.....	4
2.1	Scottish Funding Councils e-Learning Initiatives	4
2.2	Other background developments	5
3	Methodology.....	6
3.1	Approaches	6
3.2	Web-based survey	6
3.3	Key informant enquiry	6
3.4	Case studies	7
4	Reports on the Web-based Survey of Individual Staff	8
5	Report on Institutional-level Enquiry.....	8
5.1	Introductory comments.....	8
5.2	Current staff development provision for e-learning.....	8
5.3	Identified development needs	10
5.4	Desk-based study of current training provision	10
6	Case Studies	11
6.1	University of Abertay, Dundee.....	11
6.2	University of Edinburgh	13
6.3	University of Paisley	15
6.4	University of Stirling.....	17
7	Overall Analysis of HETNA Outcomes	19
7.1	Drivers for e-learning development	20
7.2	Barriers to e-learning development	21
7.3	Institutional factors	21
7.4	e-Learning and pedagogy	23
8	Recommendations	24
	Appendix A – Key informant enquiry matrix.....	27
	Appendix B – Current training provision study.....	29
	Appendix C – Case study visit brief and programme.....	30
	Appendix D – Diagram of emerging themes.....	31

1 Introduction

1.1 Background

- 1.1.1 The Joint Scottish Further and Higher Education Funding Councils e-Learning Group published their final report in July 2003.¹ The purpose of the report was to advise the FE and HE sectors and the Councils themselves on their approaches to the development of e-learning. The report presented several key recommendations, including the need for a systematic analysis of the information and communication technology (ICT) skills required by different categories of staff, to inform ways of developing these skills in the context of e-learning.
- 1.1.2 In September 2003, the JISC Regional Support Centres in Scotland produced the Enhanced Training Needs Analysis (ETNA) report on the training needs of staff in Scotland's further education (FE) colleges.
- 1.1.3 In February 2004, the Scottish Centre for Research into On-line Learning and Assessment (SCROLLA), in partnership with e-learning consultants Glenaffric Ltd and the Joint Information Systems Committee (JISC) Regional Support Centres in Scotland, was commissioned to undertake an analysis of ICT-related training needs across the Scottish higher education (HE) sector. The project was entitled HETNA.

1.2 Aims and objectives

- 1.2.1 The aim of HETNA was to gather detailed information on the ICT-related training needs of staff working in the 20 higher education institutions (HEIs) funded by the Scottish Higher Education Funding Council.

The objectives of the study were to inquire into:

- the range extent and availability, awareness and use of ICT resources for teaching, research and management support within and across Scottish HEIs;
- from institutional perspectives: what training is available currently for which staff context categories, what provision should be made to meet staff development needs to enable the support of e-learning, and how best to resource that provision across the Scottish HE sector; and
- from university staff perspectives: what ICT skills they have and how they use these in context, what ICT-specific training or development programmes they have undertaken in their professional contexts, what they know about available programmes and resources and their individually perceived training needs for best use of ICT in the support of e-learning.

1.3 Scope

- 1.3.1 Categories of staff included within the study were as follows:
- Academic and research staff
 - Library and Information Services staff

¹ Joint SFEFC/SHEFC e-Learning Group: Final Report, SFC, July 2003
http://www.sfc.ac.uk/joint_info/publications/joint_e-learning_report_july_2003.html

- IT Networking support staff
- Administrative and other support staff
- Senior management

1.4 Purpose and audience

- 1.4.1 HETNA was commissioned to provide the Funding Council with accurate intelligence to support the design and implementation of effective strategies for enabling the best development of relevant ICT skills for staff support of e-learning across the HE sector. It was also anticipated that study outcomes would be of value to senior managers within HEIs, indicating the extent of correlation between institutional e-learning support strategies and the level of staff skills available to implement them. University staff development officers should be able to make use of the information to ensure that training provision matches training need in different staff contexts.
- 1.4.2 HETNA should also inform other agencies already working in the area of providing ICT-related support to HEIs, such as the JISC and its sub-committees, the Learning & Teaching Support Network (LTSN), the HE Academy, the Universities and Colleges Information Systems Association (UCISA) and the Scottish Committee for University and Research Libraries (SCURL).

1.5 Partnership and project management

- 1.5.1 HETNA was managed by a core team representing SCROLLA (Universities of Glasgow and Edinburgh), the JISC Regional Support Centres for Scotland, and Glenaffric Ltd. Additional research and fieldwork support was also undertaken by staff from these organisations.
- 1.5.2 The project team established a consultancy group representing the Scottish HEIs. The remit of this group was to give advice and feedback on project scope, approach, interpretation of findings and dissemination plans from the perspective of the sector.

2 Context

2.1 Scottish Funding Councils e-Learning Initiatives

- 2.1.1 The Joint Scottish Further and Higher Education Funding Councils (SFC) e-Learning Report of July 2003 highlighted the need for specific staff development in support of e-learning, noting the need to avoid the impression that staff can 'muddle through' the implementation of such a complex activity. The report also emphasised the need to draw a distinction between the pedagogical skills required by all teachers, and specialist technical, design and programming skills. It noted the impact of e-learning on the staff development needs of non-teaching staff (such as senior managers, librarians, network managers, guidance staff and careers advisors) and the emergence of new professional groups such as learning technologists. The report highlighted a need for HE to introduce a more systematic approach to the identification of e-learning support skills needed by staff, and for the effective development of those skills.²

² Ibid. Paragraphs 54-57 deal explicitly with staff development for e-learning.

- 2.1.2 The Joint e-Learning Report identified a range of distinct institutional processes with scope for ICT-based solutions. A key recommendation was that the Councils should offer strategic development funding to support those institutions which are prepared to embark on a process of transformational change in order to embed e-learning within their core functions. In March 2004, Councils announced the actions they were taking in response to the report's recommendations, and institutions were invited to register an interest in the development of initiatives to promote transformational change through the use of e-learning resources.³
- 2.1.3 The proposals for implementation of the e-learning report recommendations were to be seen in the context of the Councils' broader priorities for enhancing the quality of learning and teaching. Proposals were to be based on sound pedagogic principles that were consistent with the culture and values of the institutions involved, and the development of e-learning should be led by student needs rather than technological potential. The importance of 'blended learning' models involving a mix of delivery methods was highlighted.
- 2.1.4 These developments and proposals take place against the background of the consultation document published by the Scottish Executive in April 2004 'A Changing Landscape for Tertiary Education and Research in Scotland'.⁴ This document proposes the merger of the Further and Higher Education Councils, bringing together definitions of further education and higher education, and referring instead, in broad terms, to tertiary education.

2.2 Other background developments

2.2.1 Other initiatives which have a bearing on e-learning developments and transformational change in further and higher education in Scotland include the new JISC e-Learning Programme.⁵ This is a major programme of activities from October 2003 until September 2006, and has the following aims:

- to provide the FE and HE community with accurate, up-to-date and research- or evidence-based information about effective practice in the use of e-learning applications;
- to promote the application and development of e-learning tools and standards to better support effective practice;
- to develop and evaluate a framework to facilitate interoperability across learning, teaching, research and their supporting systems; and
- to consider and promote the use of innovative technologies and models to support e-learning.

There are four strands to the programme, each of which has potentially significant implications for the support of e-learning developments in institutions:

- e-Learning and Pedagogy
- e-Learning Frameworks and Tools

³ Circular letter HE/09/04, <http://www.shefc.ac.uk/library/06854fc203db2fbd000000fb16724f80>

⁴ A Changing Landscape for Tertiary Education and Research in Scotland. A Consultation Paper on the Merger of The Scottish Further Education Funding Council and The Scottish Higher Education Funding Council, The Scottish Executive, April 2004, <http://www.scotland.gov.uk/consultations/education/cltes-00.asp>

⁵ The programme website is at http://www.jisc.ac.uk/index.cfm?name=programme_elearning

- e-Learning and Innovation
- Distributed e-Learning

2.2.2 In September 2004, the Higher Education Funding Council for England (HEFCE) published the report on their e-learning strategy consultation.⁶ HEFCE is currently revising its strategy in the light of the consultation responses, also taking account of the UKeU experience. These developments will have implications for the development of e-learning across UK FE and HE, for example through programmes of activity supported by the JISC, the HE Academy and the Leadership Foundation.

3 Methodology

3.1 Approaches

3.1.1 HETNA involved the following key elements:

- a full-scale web-delivered survey open to all staff, academic and non-academic, working in Scottish higher education institutions;
- an enquiry into institutional e-learning aspirations, current provision for staff development of e-learning support skills and staff training needs, involving key informants at within in each Scottish higher education institution; and
- four in-depth case studies of approaches and aspirations of institutions representing the diversity of Scottish HEIs.

This combination of broad sweep and narrow focus provided a breadth and depth to the study, leading to the development of recommendations which most accurately reflect the HE landscape with respect to ICT skills and their interface with e-learning support.

3.1.2 A letter from SHEFC to Principals and Vice-Chancellors in April 2004 alerted the community to the forthcoming HETNA web-based survey. This was followed in May 2004 by notice through Universities Scotland to all Scottish HE Principals giving detail of the full HETNA work plan and requesting support for its implementation.

3.2 Web-based survey

The background, approach and methodology for the HETNA web-based survey are set out in the introduction to the report on this aspect of the study, produced by the JISC Regional Support Centres for Scotland in August 2004.

3.3 Key informant enquiry

3.3.1 The instrument used to enquire into the e-learning aspirations and staff development requirements of each Scottish higher education institution was derived and adapted from the matrix of eleven distinct institutional activities or processes identified in the joint e-learning report. These processes relate to the potential impact of ICT on different aspects of students' educational experience, including enrolment, course information, the delivery of study materials, support for tutorials and lectures, assessment, project and laboratory work, careers advice and guidance (see Appendix A).

⁶ http://www.hefce.ac.uk/pubs/rdreports/2004/rd04_04/

- 3.3.2 Each institution was asked to nominate a key informant with senior management responsibility for the development of e-learning to respond on behalf of the institution. The key informants were then sent the enquiry matrix with an accompanying note clarifying its context and purpose. The information was requested from the nominated key informant within each Scottish HEI, with an invitation to seek additional responses from other members of staff able to supply an institutional perspective on sections of the matrix that were relevant to their institutional role. Additional copies of the documents were made available on a website for downloading as required. Key informants were also asked to supply further information, questions or commentary on additional pages if appropriate.
- 3.3.3 Key informants were asked to respond within a timeframe of two weeks. Response times in fact varied from a few days to six weeks. Responses were finally received from 18 institutions.
- 3.3.4 The enquiry instrument set out potential institutional processes within which e-learning could be influential, with examples of the scope for e-learning and of potential impact. Key informants were asked to outline the staff development provision to support e-learning and ICT initiatives that is currently available in their institutions, and to identify additional staff development requirements to meet institutional aspirations.
- 3.3.5 Responses on current provision and perceived additional requirements were collated under each institutional process heading. A simple ranking procedure was applied to accounts of provision as follows:
- 3 – considerable activity in this area
 - 2 – some activity in this area
 - 1 – little current activity, some intention to develop
 - 0 – no provision, or response not applicable

This ranking was for the purpose of profiling overall provision, rather than drawing conclusions for individual institutions. Indications of staff development need were collated more generally, under the type of additional resourcing that respondents identified.

- 3.3.6 Following up from the key informant feedback, a desk-based study was conducted, through web-search, email and telephone contact with human resource and staff development representatives, on existing accredited training provision for staff in the HE sector with relevance for e-learning support (see Appendix B).

3.4 Case studies

- 3.4.1 Four institutions were identified for in-depth case studies of approaches to e-learning. The case study institutions, selected to be broadly representative of the sector as a whole in terms of size, scope and geographical location, were as follows:
- University of Abertay Dundee
 - University of Edinburgh
 - University of Paisley
 - University of Stirling

- 3.4.2 Each institution involved was sent a copy of the case study brief, which identified the broad areas of focus for the case studies. The programme for the visit was arranged in consultation with the institutional key informant, as the person best placed to identify those members of staff who could contribute to discussions. Appendix C is an example briefing note and case study visit programme.
- 3.4.3 Following the visit, a report on the discussions was sent to the institution for comment and the correction of any factual errors. The actual case studies were then produced from the corrected text with institutional approval.

4 Reports on the Web-based Survey of Individual Staff

Please see separate reports published by the RSCs in Scotland.

- 4.1 Introduction
- 4.2 Report on survey of academic staff
- 4.3 Report on survey of library staff
- 4.4 Report on survey of senior management staff
- 4.5 Report on survey of networking staff
- 4.6 Report on survey of administrative staff
- 4.7 Summary analysis of web-based survey
- 4.8 Comparisons with ETNA

5 Report on Institutional-level Enquiry

5.1 Introductory comments

- 5.1.1 There was considerable variation in the ways in which different institutions treated the key informant enquiry. Most were able to identify quickly the appropriate person with senior management responsibility for e-learning development who should respond on behalf of the institution. Some of the identified respondents were able to draw on institutional policy and position in formulating their responses; others gave a more subjective and personal account of what they thought was the institutional position.
- 5.1.2 As a consequence of these variations, approximately one third of the responses received were able to provide a comprehensive, insightful and detailed account of institutional plans for e-learning and the accompanying staff development implications. A further third described a more patchy use of ICT to support learning and teaching across the institution. The remaining responses reflected limited institutional aspirations and were rather weak in terms of detail about provision, although some more specialist institutions noted that some aspects of the enquiry were not applicable to them.

5.2 Current staff development provision for e-learning

- 5.2.1 Responses to the enquiry indicate that institutions are most interested in, and have existing provision to support, the development of self-study materials, assessment, course management and tutorials. More than half of those who responded also reported activity in online enrolment, careers and guidance, and lectures. However, responses indicate that there is less staff development available to support the use of ICT for projects, laboratory work and collaboration.

- 5.2.2 Approximately half of those who responded have a strong commitment to the development of learning materials in a comprehensive, pan-institutional context. This is underpinned by both technical training in the use of the VLE and dedicated units supporting teaching and learning development. Of the remaining respondents, most were able to identify a range of developments across the institution, but were able to supply little detail about these activities or the extent to which they are grounded in institutional policy and strategy. Three institutions reported little activity in the development of self-study materials at the moment.
- 5.2.3 Around half of the responding institutions described a range of approaches to online assessment, including the use of dedicated tools and assessment engines. Of the remainder, all but two have online assessment under active investigation and plan further development. Two specialist institutions felt that online assessment was too mechanistic to be appropriate to their disciplines.
- 5.2.4 Nearly half of those who responded demonstrated a clear understanding of the potential for supporting course management through the integration of institutional systems. This is evidenced by the availability of information to both staff and students either directly in the VLE or via an institutional portal. However, the responses from some institutions did not present a clear picture regarding technical integration, and some provide no training in this area at all.
- 5.2.5 One third of the institutional respondents describe the use of VLE-based tools to support tutorial discussion and collaboration within a student cohort. A further third are currently exploring the use of these tools. For the remaining third, online discussion tools are not considered relevant at the moment, and there are no plans to explore their potential for tutorials and seminars.
- 5.2.6 Half of those who responded outlined the availability of guidance and support through the VLE and via email, with appropriate supporting policies in place relating to issues such as guaranteed response times and confidentiality. One institution specifically mentioned the use of e-portfolios to support PDP. The rest did not identify any ICT-related guidance initiatives or corresponding staff development provision.
- 5.2.7 Around one quarter of respondents cited a track record over many years of institutional commitment to systems integration leading to streamlined enrolment procedures and single-entry registration. Most institutions make ad hoc arrangements for staff development as systems change. Four of the institutions that responded are currently in the process of implementing new student record systems, and have integrated staff development provision with the implementation process.
- 5.2.8 Around a quarter of institutions described well-developed ICT-based systems to support the provision of careers advice, including advertising careers guidance and employment opportunities in the VLE. A further quarter was working towards better provision, particularly through the implementation of a new student record system. However, nearly half of those who responded appear to have no provision in this area, and no plans to develop.
- 5.2.9 Only a small number of institutions described any staff development available for the development of online lectures. These, sensibly enough, reflected institutions with courses running across campus sites or involving learners across HE institutions. A number of key informants made no response at all in

this category, or cited difficulty with a lack of audio-visual facilities in lecture theatres.

- 5.2.10 A quarter of responding institutions use the VLE to provide students with project work space. The remainder cite little or no interest in this provision, and correspondingly have little staff development activity to support this area.
- 5.2.11 Staff development provision in the use of ICT in laboratory work was interpreted entirely in the context of science laboratories. One quarter of respondents indicated the use of computerised laboratory spaces and specialist systems. There was little evidence of interest in the use of ICT in non-science laboratory contexts such as language laboratories, digital mixing studios, printmaking workshops or other technically equipped specialist areas.
- 5.2.12 Three institutions outlined the use of ICT in support of collaborative activities. Some identified staff development provision to support collaboration, but the majority declared little activity in this area.

5.3 Identified development needs

- 5.3.1 In general terms, key informants did not identify many additional staff development requirements to meet their aspirations for e-learning that they felt could not be provided in-house.
- 5.3.2 For many, staff development in emerging areas was in line with the implementation of new systems and in some cases relating to an institutional e-learning strategy. However, some of the smaller, more specialist institutions were keen to learn more about how ICT can be used to support learning and teaching in specialist contexts. Several institutions emphasised a desire for a greater focus on pedagogy and new educational methods rather than on the mere availability of technological systems.

5.4 Desk-based study of current training provision

- 5.4.1 Enquiry into ICT-related staff development provision indicated that most institutions offer basic ICT training in common office applications to all staff, with the ECDL as the most frequently-cited qualification. Such provision is usually made through central institutional Information Service support units. Many arrange for IT and Network service support staff to engage in certificated vendor-training.
- 5.4.2 Accredited training in teaching and learning support, to postgraduate certificate level at least (in many cases validated by the HE Academy under its former name as the Institute for Learning and Teaching in Higher Education), is available to staff in many Scottish HEIs. In several cases this training can extend to Postgraduate Diploma or indeed to Masters level. In the main these are provided in-house through the agency of specialist units or departments.⁷ Some institutions provide (and charge for) accredited courses which are open to other local HEIs. Others 'buy in' specialist skills to support their own provision.
- 5.4.3 Although such programmes are sometimes stated as including content and example relevant to e-learning support, as yet there are few accredited programmes specifically designed to provide for 'e-learning support'. This is changing, however. At least one large institution already provides an accredited

⁷ Academic Practice Unit, Centre for Academic Practice, Teaching and Learning Service, Centre for Learning and Teaching, Educational Development Unit, Centre for Learning and Development are examples from a range of diverse Scottish Higher Education Institutions.

short course in e-learning and another in e-assessment, another opens a Masters programme in e-learning next session, and others are piloting specialist courses this year. A reason for this current rapid change is the increase in VLE uptake by Scottish HEIs, most of whom indicate a plan for 'how to use' basic courses to underpin more pedagogically-based training support.

- 5.4.4 Uptake is not high amongst institutional staff as yet, but this is expected to increase over the next two or three years. The need to get provision in place and piloted with current applicant groups is perceived as critical, as staff awareness grows. Quoting one correspondent illustrates a general understanding that "e-learning is gradually becoming much more mainstream and, suddenly, there is realisation that quality in this area matters; therefore staff development is being given a much higher priority".

6 Case Studies

Each of the case study visits focused on the following broad areas:

- Institutional aspirations and vision for e-learning, and related strategies and policy initiatives;
- Staff development needs relating to these aspirations, including non-academic and research staff;
- Technical issues and developments;
- Specific subject areas with a particular interest in e-learning initiatives, or lack of interest; and
- Issues which may require further support from the Funding Council.

Institutions were also asked to comment on the extent to which students were actively and explicitly involved in discussions about e-learning developments and the impact of new technologies on learning and teaching from their perspective.

6.1 University of Abertay, Dundee

This case study is based on an initial meeting with two members of senior staff with responsibility for learning, teaching and quality assurance and enhancement, followed by a round table quasi focus group discussion with around fifteen members of University staff from various departments and services who had expressed interest in e-learning developments in the institution.

6.1.1 *Institutional aspirations and vision for e-learning, and related strategies and policy initiatives*

- 6.1.1.1 Five years ago, Abertay had an explicit strategic vision to become an e-learning university. The current five-year vision foresees technology in regular use supporting management information through the VLE (WebCT) on the desktop, and as a tool for supporting teaching, learning and assessment. The institution views staff development as critical to this process. Abertay was among the first institutions in Scotland to implement a unified desktop strategy using a single platform, and management identify making full use of this strategy for e-learning as a key challenge.

- 6.1.1.2 Originally, Abertay established e-learning group as a separate entity from the main teaching and learning strategy group, but this was subsequently revised as it was found to keep e-learning separate from mainstream developments.

Currently, e-learning is integrated with the University's general teaching and learning enhancement strategy, helping to bring educational technology developments into the mainstream.

- 6.1.1.3 The University is taking a long term approach to its development of e-learning. Only recently is the big picture and institutional vision being articulated at senior management level. Initial developments were the work of committed individuals, and the aim is to put these on a more strategic footing, with the key aims of using e-learning to improve retention and achievement, and making provision for undergraduates in part-time employment. Abertay has a strong widening participation and access agenda, with 60% of undergraduates coming from under-represented groups. It is anticipated that the reconstruction of the university's modular scheme and its new Widening Participation Strategy will lead to more opportunities for e-learning. Abertay is currently collaborating with the University of Stirling on the development of a web-based tool to support Personal Development Planning (PDP).
- 6.1.1.4 There is a recognised need to incorporate the student voice into strategic initiatives and developments, particularly given the increasing levels of IT literacy of students on entry.
- 6.1.2 *Staff development needs relating to these aspirations, including non-academic and research staff*
- 6.1.2.1 University managers acknowledge that difficulties have been encountered with planning staff development and support initiatives that meet individual needs. Current staff levels of IT competence vary, and there are concerns that some of the available support provision assumes a relatively high level of prior competence that does not suit the needs of all staff members. Staff recognise that there is huge potential for developing e-learning to meet current course and curriculum requirements, if they were able to access just-in-time training adapted to their working context.
- 6.1.2.2 Management recognises that there will be some staff development requirements linked to the strategic implementation of PDP provision in session 2005/06. The tool that is being piloted is relatively simple, but the key to its success is raising awareness of its purpose and potential.
- 6.1.2.3 Staff expressed some concerns about potentially confusing students through a proliferation of different e-learning tools. In this context, improving sophistication in developing online content and the choice and use of tools for e-learning is a staff development priority. Consideration has to be given to design issues, how much content to make available online, technical training requirements, pedagogical transformation and managing student expectations.
- 6.1.2.4 Staff suggested that more use could be made of existing expertise within the institution, supporting IT experts in the development of advanced skills to help drive the university's learning and teaching strategy. There is interest in sharing good practice in the use of the VLE and creation of materials. Specialists could also be identified to help develop pedagogical skills for e-learning at a departmental or subject level, and subject-oriented examples could be showcased in the VLE.
- 6.1.3 *Technical issues and developments*
- 6.1.3.1 While advances have been made in Registry systems, there has been little systematic development in electronically facilitated teaching and learning across

the institution. One possible reason for this is the removal of dedicated support for e-learning development, which has put an increasing burden onto staff.

6.1.4 *Specific subject areas with a particular interest in e-learning initiatives, or lack of interest*

6.1.4.1 The VLE is widely used by the School of Computing and Creative Technologies, but is not used to full capacity across the institution. A revamped study skills programme includes elements on accessing materials in the VLE.

6.2 **University of Edinburgh**

This case study is based on an initial meeting with three members of senior staff with responsibility for knowledge management strategy and e-learning, followed by an informal meeting with two members of staff involved in the use of technology to develop learning and teaching innovation across the institution.

6.2.1 *Institutional aspirations and vision for e-learning, and related strategies and policy initiatives*

6.2.1.1 Over the past ten years or so, e-learning at the University of Edinburgh has developed organically, with several independent e-learning and online learning initiatives across the institution. Following significant organisational restructuring and a long consultation phase, these activities are now being synthesised in the three main Colleges, and are informing the strategic development of pan-institutional functions.

6.2.1.2 The University has a range of interlocking strategies, including a new Knowledge Management strategy. The e-learning strategy is part of the Knowledge Management strategy and also relates to the (not fully articulated) teaching and learning strategy. The Knowledge Management strategy includes a vision for the integration of university digital administrative systems through the ongoing development of the staff, student and alumni portals.

6.2.1.3 Students are actively involved in the consultation for all the University's strategies, including the Knowledge Management strategy, and in particular recently about their expectations with regard to e-learning and online provision. Their identified priorities were examination and assessment, online matriculation, broadband access in student accommodation and appropriate study spaces.

6.2.1.4 The pace of growth is steady and incremental. The University recognises that academics are not keen to engage in large-scale experiments with their students' learning, and proceed with caution and small steps towards change. Nevertheless, the majority of modules at Edinburgh now contain some use of e-learning, and in many there is considerable application of a variety of e-learning tools and options.

6.2.1.5 Edinburgh is a research-oriented university and there is no difference in the library holdings for undergraduate and postgraduate provision. In this context, the development of e-learning resources specifically supports the research agenda and vice versa. The University recognises the potential impact of e-learning in developing knowledge management and research skills as students engage with online environments and resources from an early stage in their academic career.

6.2.2 *Staff development needs relating to these aspirations, including non-academic and research staff*

6.2.2.1 There is general interest across the institution in the development of content for use in a VLE. Considerable interest and demand for support in the use of ICT for assessment have also been identified, particularly in courses with high student numbers. Feedback from students indicates that they would welcome the provision of more online opportunities for formative assessment.

6.2.2.2 Non-academic staff who are involved in supporting courses identify staff development requirements in using e-tools, for example for maintaining course handbooks, study guides and other documentation online, managing e-portfolios, and mounting content in the VLEs. The University is currently redeveloping its corporate website and moving to a web content management system, which will improve the accessibility and availability of tools for developing and maintaining online materials.

6.2.3 *Technical issues and developments*

6.2.3.1 There are several VLEs in operation. WebCT is provided centrally for use by any course across the institution, and Medicine & Veterinary Medicine have their own VLEs. In addition, there are assessment engines (eg Perception) and weblogs, portfolios, PowerPoint packaging, workbins and fileservers spaces, audio and video production and streaming. Many courses have an independent web presence using local or central web servers.

6.2.3.2 No substantive technical issues impacting on the use of ICT and development of e-learning are currently identified. The biggest driver for scalable e-learning developments is the need for simple tools to help academic staff to engage with technologies. National initiatives such as the TOIA advanced online assessment management system and JORUM online learning materials repository (developed by EDINA in the university for JISC) are seen as a useful way forward.

6.2.3.3 The integration of university administrative systems such as human resources and finance is envisioned in the Knowledge Management strategy. The University is currently developing quality of service standards for e-learning systems and tools as part of the elaboration of its e-learning strategy.

6.2.4 *Specific subject areas with a particular interest in e-learning initiatives, or lack of interest*

6.2.4.1 There is some online provision across most subject areas of the University, and no major black holes or 'no-go' areas. The greatest uptake is in science-based and numerate subjects such as medicine and veterinary medicine. The management school is also developing its online provision, but on average health and social sciences subjects make less use of e-learning developments.

6.2.4.2 Subject areas with strengths in particular areas are collaborating with e-learning provision, for example staff in the medical school are working with informatics staff on the management of learning content. The Principal's e-learning strategy group helped start some generic, institution-wide projects, including the development of a central reusable learning objects catalogue and repository.

6.2.4.3 Distance course development is aligned with research strengths in niche areas at M level, for which there is significant international demand. However, distance M level provision is not easily scalable in terms of the University's capacity to offer research dissertation supervision to large numbers of distance

students. Portfolio-based approaches at M level are being considered as a means of addressing this market; and at doctoral level for professional doctorates. Opportunities are seen for developing the collaborative and social aspects of online learning without compromising the quality of the student experience, and the University's reputation as a leading provider.

6.3 University of Paisley

This case study is based on an initial meeting with senior staff responsible for the strategic development of learning and teaching, followed by a round table meeting also involving key staff involved in promoting e-learning innovation across the institution.

6.3.1 Institutional aspirations and vision for e-learning, and related strategies and policy initiatives

- 6.3.1.1 Senior staff in learning and teaching at the University of Paisley recognise that the institution currently stands at a watershed in its development of e-learning. Paisley has been able to draw on its considerable experience of distance delivery in the development of its on campus e-learning provision, and recent internal surveys indicate that 93% of all academic staff know how to access the VLE (BlackBoard) and use basic tools for e-learning provision. Key issues are therefore developing more markets, and encouraging more sophisticated use of the VLE.
- 6.3.1.2 Concerted efforts are being made to encourage more strategic thinking and functional planning across the institution. The University restructured into seven Schools in 2003, with Associate Deans for Learning and Teaching responsible for the development of teaching and learning plans within the overall Teaching and Learning strategy. There is active collaboration between the central units and Schools in managing change. Cross-institutional working groups have been established for PDP, induction, and other transformational change processes.
- 6.3.1.3 The current e-learning strategy is a framework document, with clear objectives to facilitate flexible operation. This approach is designed to enable the University to build on the work of early adopters and enthusiasts in developing a strategic approach to e-learning across the institution. There are longer-term plans to embed e-learning within the overall Learning and Teaching strategy. The e-learning strategy is dependent on other strategic developments, such as infrastructure, the emerging MLE concept and changing library services. University managers recognise that informal learning spaces need to be part of the wider strategic vision, including longer-term strategies for estates development.
- 6.3.1.4 Paisley has large numbers of part-time students on accredited courses. With growing levels of student employment while on course, the distinction between full and part-time is increasingly blurred. The institution recognises that e-learning developments need to consider the needs of key groups and not be driven by a conventional post-school full-time HE student model. Already there is evidence of communities of part-time students forming in the VLE, and increasing numbers of students in employment using the VLE to access materials while they are off campus.
- 6.3.1.5 In broad terms, the Paisley agenda for e-learning is regional rather than global. Through part-time students, community and FE links the university has an important relationship with the region in the south and west. Potential value is

seen in catering for the needs of the SME market. Paisley has a widening participation agenda, and is planning for demographic change as part of a risk management strategy. Traditional semester structures and campus timetabling may have to change radically to cater for CPD requirements and lifelong learning.

6.3.2 *Staff development needs relating to these aspirations, including non-academic and research staff*

- 6.3.2.1 The Centre for Learning & Teaching provides training and support in the use and development of learning technologies and e-pedagogy. Priorities are informed by University Strategies (notably Learning & Teaching, and e-Learning), School Plans and annual staff and student VLE user surveys. The VLE is used both for delivery of learning materials and communication with students. Its use as an organisational learning tool is being considered, particularly to support project work for PDP development.
- 6.3.2.2 There are some e-pedagogy elements in the University's PgCert for Learning and Teaching, but currently no certificated course in e-pedagogy. Training and support in e-tutoring and e-moderating is provided by the Centre for Learning and Teaching. There is a growing utilisation of interactive features such as virtual seminars and online assessment
- 6.3.2.3 The ongoing development of the VLE has been strongly supported by student demand, particularly for the availability of downloadable quality learning materials (including hand-outs and presentations) and opportunities for online assessment. Tutors are increasingly concerned about the format of online materials and how that impacts on learning and teaching, and recognise that having the material available to students beforehand means that better use can be made of class contact time. The emphasis in support for staff training and support in e-pedagogy is shifting towards more sophisticated uses of the technology within a blended learning model.
- 6.3.2.4 There is growing demand for online assessment from staff and students, and considerable potential for the use of online diagnostic self-assessment. BlackBoard has a limited quiz tool. It is recognised that significant staff development is required to make effective use of sophisticated online assessment tools for summative assessment at HE level.
- 6.3.2.5 Changes in the student skills set are recognised in an e-learning environment, as they need to be able to evaluate sources of information from day one. Search skills, referencing skills and awareness of how to avoid plagiarism are increasingly important skills requirements.

6.3.3 *Technical issues and developments*

- 6.3.3.1 The staff portal, which is much used, includes policies, a document store, area sites, service sites, a bulletin board, the university calendar, and a link to the VLE. Videoconferencing is used for meetings between sites, but not for teaching.
- 6.3.3.2 The University's strategic commitment to the development of an MLE impacts on the selection of new administrative systems. Paisley has recently procured a new Student Information System (SCT-Banner), scheduled to go live in 2006. This is key to a whole series of systems changes, including the eventual development of online enrolment and matriculation. New interfaces with the University's Finance system (Agresso) are anticipated by the end of the decade

Communication to staff is currently primarily focused on the development and implementation of business processes associated with the new Student Information System.

6.3.4 *Specific subject areas with a particular interest in e-learning initiatives, or lack of interest*

- 6.3.4.1 The VLE is widely used by staff to support campus-based learning and teaching, and successful fully online courses are delivered through BlackBoard in education (Chartered Teacher course), nursing, and some postgraduate and undergraduate provision in the business.
- 6.3.4.2 There is a range of collaborations across Schools in support of curriculum and pedagogical development, such as successful collaboration between the Business and Education Schools in the development of the Chartered Teachers programme. The School of Health, Nursing & Midwifery also uses learning materials provided by other HEIs. In the provision of bridging programmes between FE and HE, there is growing collaboration in the development of learning support and materials, but to date limited exploitation of the potential of shared e-learning solutions. The potential to develop a digital repository of resources is currently being considered.
- 6.3.4.3 Staff developers highlight important levers in the development of on-campus e-learning provision as opportunities for better assessment procedures, and the use of online tools to save time, improve efficiency, relieve examination and marking pressure, and enhance quality. There is also a perceived value in the VLE reducing the administration burden on academic staff.

6.4 **University of Stirling**

This case study is based on a semi-formal meeting with eight members of the Principal's Advisory Strategy group, followed by three separate meetings with the director of training and development, the University's disability officer, and members of the specialist e-learning development unit.

6.4.1 *Institutional aspirations and vision for e-learning, and related strategies and policy initiatives*

- 6.4.1.1 The University has integrated strategic statements about ICT and e-learning into the current Learning, Teaching and Quality Enhancement Strategy (2003-2005). A separate e-learning strategy is in preparation, in the context of internal debate about whether it is better to separate e-learning or to produce a generic teaching and learning strategy that incorporates all aspects of provision.
- 6.4.1.2 A key aspiration is to be a significant niche player in areas with major e-learning potential where the University has a particularly strong academic profile, such as health and welfare.
- 6.4.1.3 Management recognise that 95% of undergraduate provision continues to be on campus, and opportunities are seen for academic staff to make more general use of resources initially developed for distance delivery. Academic Council has stated that all units should have a basic web presence. Assessment processes are currently under review, and opportunities for online assessment may be considered.
- 6.4.1.4 The Centre for eLearning Development (CeLD) has been in operation since August 2003, and is now a recognised resource across the institution. CeLD is a multi-disciplinary unit that has developed from an initial research and

development project. The unit plays an increasing role in awareness raising and the provision of specific training in using the VLE (WebCT) as well as the development of online content, but is not currently resourced to provide mainstream staff development in online pedagogy.

6.4.2 *Staff development needs relating to these aspirations, including non-academic and research staff*

- 6.4.2.1 Staff development needs are generally identified through the biennial appraisal process, with specific training attached to the implementation of new systems. Heads of department and managers are provided with a guide to identifying training needs. However, it is recognised that there are considerable resource issues attached to staff development, and managers may not prioritise the training needs identification process in the context of their annual planning.
- 6.4.2.2 There is a delicate balance between teaching and research across the institution, and both tend to be seen as separate activities. However, there is growing recognition that e-learning skills are basic research skills, and provide early research skills development in undergraduate programmes.
- 6.4.2.3 Research degree students receive training in generic research skills, including the use of databases and other ICT applications, and there are plans to develop generic research training modules. The development programme for Teaching Assistants includes an optional Introduction to WebCT, but to date little interest has been shown by this group in learning to use the VLE for teaching.
- 6.4.2.4 Online notes are provided for each course as part of the University's SENDA compliance measures. This may be the responsibility of administrative staff in the departments, and one of the reasons behind the identification of training needs in web page development. Courses in Dreamweaver are available. The university has a new webmaster, and the web pages have recently been redesigned. There are plans to move towards a content management system, with a central web page design service and peripheral maintenance and updating procedures.
- 6.4.2.5 The VLE is used for in-house staff development in areas of new legislation such as SENDA, the Data Protection Act, and Freedom of Information. Generic resources in areas such as committee skills and management are also available in the VLE for staff to access at their convenience. Where possible, courses and materials are adapted and contextualised for application at the University of Stirling.

6.4.3 *Technical issues and developments*

- 6.4.3.1 Stirling has quite a sophisticated MLE. The current student information system has advanced functionality, developed in-house and tailored to the needs of the institution. A new system is planned for implementation in 2006, and a key part of the tender for the new system is interoperability with the other University systems. Management anticipates that the new system should maintain and enhance current levels of functionality, but running costs should be significantly reduced. It is intended that there should be one institutional system, and that staff should use this rather than their own individual databases of students.
- 6.4.3.2 Information Services are exploring online registration procedures. Currently there is single entry registration, linking student enrolment data to the library and the VLE. All students are required to use the online system to choose their

courses, and there are plans to make this process more efficient and less demanding on students and staff.

- 6.4.3.3 Class lists are provided for staff. Results can be uploaded and confirmed online. PDP provision is being developed and will be available with the new student information system for session 2006/07.
- 6.4.3.4 All students have access to the VLE, and user data indicates increasing numbers of students are actively using the platform (50% of the student body accessed the VLE more than 10 times last semester). Most of the large first-year courses are in the VLE.
- 6.4.4 *Specific subject areas with a particular interest in e-learning initiatives, or lack of interest*
- 6.4.4.1 It is anticipated that of the 21 university departments, two-thirds could make significant developments in e-learning and online provision.
- 6.4.4.2 Stirling has developed a particular expertise in e-learning and distance learning provision for CPD in nursing through the nursing contract for the Highlands and Western Isles. The institution is also involved with a World Health Organisation pilot programme to provide top-up training for family health nurses in both geographically and socially marginalised areas.
- 6.4.4.3 Another key area of strength is education, where staff have considerable expertise in lifelong learning and technology enhanced learning. Stirling was involved in a joint development with an Australian partner and is continuing to offer distance provision in educational development. There are potential synergies with the development of an e-learning component in the current TQFE course, and developing TQHE provision, and further potential for the development of the learning support provision that Stirling offers through partnership agreements with some FE colleges.
- 6.4.4.4 Stirling is renowned for the breadth and quality of its provision for students with additional needs, and attracts a critical mass of visually impaired students. This has been one of the drivers for the use of technology in general, and online developments in particular. It is University policy that students can record any lecture as a right. Staff are informed before the start of the session if there are sensory impaired students on their courses, and are increasingly providing course materials for the VLE so that students can have tailored induction sessions in the use of relevant resources.
- 6.4.4.5 The University's disability unit has produced accessibility indicators to provide the academic community with points of good practice regarding the design and delivery of units of study. These relate to course, instructional and departmental materials, and constitute good practice for all provision, not just for additional needs.

7 Overall Analysis of HETNA Outcomes

This section discusses the themes and issues that emerged as a result of the key informant enquiry, the desk-based study and the case visits. Following the visits, a summary thematic diagram was produced (see Appendix C). This section discusses emergent themes from the analysis and interpretation of data drawn, relating these where appropriate to outcomes from the web-based survey of ICT-related staff development needs conducted by the RSCs. Issues are clustered within four key themes:

- Drivers for e-learning development
- Barriers to e-learning development
- Institutional factors
- e-Learning and pedagogy

7.1 Drivers for e-learning development

- 7.1.1 The key informant enquiry, the desk-top study and the in-depth case studies suggest that institutional transition is a key factor in institutional implementation of e-learning. Many institutions are currently undergoing or have recently undergone significant organisational restructuring, with new senior management teams, functional re-organisation and the emergence of new strategic approaches to institutional development and staff training. New or replacement systems to support these functions are being procured, in a context of long-term planning for e-business developments and systems interoperability. In the longer term, these processes of transition should facilitate organisational transformation, but the current picture is by no means clear.
- 7.1.2 In most cases, the development of e-learning provision in the institution has until recently been the domain of a small number of dedicated enthusiasts, or confined to areas where there was a specific contextual need for e-learning or distance delivery. Institutions are now recognising the potential value of e-learning to enhance the mainstream on-campus student experience, and to meet key institutional requirements in terms of improved recruitment, retention and reputation. This awareness has still to percolate across the broader staff groups, as was reflected in the web-based survey outcomes. Although some VLE-type systems had been put in place, a large proportion of staff who responded to the survey appeared to be unaware of their presence.
- 7.1.3 Student expectations regarding the use of technology to enhance their learning experience are increasing, along with levels of student IT literacy on entry and PC ownership. There is growing awareness of the need to consult students about e-learning developments.
- 7.1.4 Academic staff are increasingly interested in using technology to reduce their administrative burden, which in turn can enhance teaching quality. The web-based survey findings indicate high levels of confidence in the use of technology, particularly for standard applications such as word processing, email and Internet search. While it might be suggested that respondents to an online survey are de facto confident users of standard ICT applications, the developing demand for e-pedagogy training indicates an increasing awareness of the possible benefits of technology in other aspects of professional life.
- 7.1.5 Changing student demographics, the widening participation agenda, increasing levels of student employment while on course, and the needs and potential of part-time, SME and CPD markets are all recognised drivers in the development of e-learning provision. There are strong indications that Scottish HEIs view e-learning provision less as a global commodity and more as an opportunity to develop a regional agenda for HE in their areas.
- 7.1.6 Institutions have taken different approaches to strategic recognition and planning for e-learning development and training. Some include e-learning as an integral element in the institution's general teaching and learning strategy. Others have developed or are developing a separate e-learning strategy. The

responses to the institution-level enquiries, backed by the four in-depth case studies, indicate that the latter approach is seen as a necessary transition step on the road to full integration and embedding of e-learning in mainstream strategic approaches to learning, teaching, assessment and quality enhancement.

7.2 Barriers to e-learning development

- 7.2.1 The key barriers highlighted by institutions to the development of e-learning are resource-based, relating mainly to concerns about cost-effectiveness and the need for a demonstrable return on investment. However, institutional capacity, individual confidence and staff time also emerged as principal concerns, and these clearly have implications for staff development. The staff age profile also has a bearing on e-learning development, with at least one institution revising its recruitment strategy to ensure a better balance of experience and innovation in its staff profile.
- 7.2.2 Barriers to e-learning development are also perceived in the residual perception that institutions value research outputs more highly than teaching innovation. A clear and transparent system for rewarding innovation and good practice in teaching is required if staff are to invest time and resources in developing their ICT skills and learning to use e-learning tools.
- 7.2.3 There appears to be a certain weariness in the sector around accommodating change in teaching practice. The web-based survey of individual staff development needs identified insufficient time to learn new techniques as a principal barrier to e-learning development. The impression from both the case study visits and the institution-level enquiries is that the sector is struggling with the pressure to use technology in their apparently constrained environments.
- 7.2.4 To some, e-learning was seen as the panacea to many of the sector's ills. However, whilst the enthusiasts continue to evangelise its strengths, sceptics point to the weaknesses of cost, unproven benefits, and the investment needed to learn how to use technology effectively. This is further compounded by the recent demise of the UKeU in England, and continuing confusion over the status of the Interactive University in Scotland. It is not that staff are unwilling to change their practice, they just need to see a good reason for doing so.

7.3 Institutional factors

- 7.3.1 The institutional-level enquiries and the case studies suggest that in this process of transition towards cultural change and organisational transformation, staff development needs and priorities are only now starting to emerge and to be considered from a strategic perspective. Small pockets of organic activity across institutions are now being mainstreamed, and senior managers are engaged in a process of determining and implementing both central and devolved structures to support e-learning and the use of technology to improve internal business processes.
- 7.3.2 Institutions recognise the value of individual enthusiasts in helping to generate more generic cultural change, and staff themselves suggest that more use could be made of existing subject expertise to promote institutional e-learning developments. In this context, however, it was noted that academic subject expertise is often channelled externally, valued in a national or international context, rather than used to develop internal skills and knowledge in the institution.

- 7.3.3 There is a sense in some of the institutional responses that all academic staff should be able to produce quality e-learning materials through having simple tools available to them. This might have correspondence in the evidence from the web-based survey that 'web page development' is a skills need identified widely across staff categories. However, there is an emerging divergent model of technical support and pedagogical expertise in the sector. Three of the four case study institutions have dedicated units supporting learning and teaching in general and e-learning developments in particular. These are mainly multi-disciplinary teams providing staff development opportunities and technical support, with some pedagogical guidance where appropriate. In this context, the main staff development issues are to do with learning design – the appropriate use of technology in a course, the appropriate proportion of ICT-supported elements – and the effectiveness of the online provision in enhancing the quality of the learning experience. Individual responses to the online survey seem to be in agreement with this, with academic staff requesting more training in e-pedagogy, and use of such complex resources as multimedia, web design and assessment tools.
- 7.3.4 From the institutional-level enquiries and the case studies, there is little evidence of cross-sectoral collaboration in an e-learning context, and little uptake of national resource banks and learning object databases. Staff are more likely to use materials developed by colleagues in the same department. There is some intra-institutional collaboration, often brokered by multidisciplinary central learning technology units but also arising from serendipitous relations, movement of staff between departments, or organisational restructuring.
- 7.3.5 A number of institutions are in the process of redesigning their web presence. In many instances this includes the provision of a content management system that should facilitate collaborative developments and the repurposing of learning materials. These initiatives may account for the identification of web page development as a key support need across many staff categories in the web-based survey.
- 7.3.6 In some cases, use is being made of the VLE for internal staff development. As well as institutional documents, policies and papers, staff can access training materials and modules on their desktop as and when required. This provision may develop further as IT and network service, and educational support staff, become familiar with resources and opportunities. Staff awareness of the VLE, which the web-based survey indicates as presently low, will increase alongside this.
- 7.3.7 The use of technology to support learning impacts on the staff development requirements of administrative staff who are increasingly required to mount materials in the VLE or content management system, and undertake the online maintenance and updating of materials. Responses to the web-based survey from the administrator group indicate little awareness of the possible relevance of VLEs to administrative staff duties such as uploading content, or in relation to management information needs.
- 7.3.8 High levels of student PC ownership have corresponding implications for on-campus provision of informal learning spaces with wireless and broadband access. These e-learning developments are therefore also impacting on longer-term estates planning. This also has implications for training IT and networking

staff, who name wireless technologies in their top three staff development priorities in the web-based survey responses.

- 7.3.9 Despite the apparent lack of engagement with e-portfolio activity reflected in the institutional-level enquiries, the case studies indicate that there is ongoing work in this area. Furthermore, growing interest in the sector in developing student employability is apparent, and there are indications of increasing involvement with the work of the HE Academy in Scotland in this regard.
- 7.3.10 Disability awareness is flagged in the institutional and case data both as an area of existing provision and one where there is an identified need for further development. The web-based survey indicates that information and training on the Special Educational Needs Disability Act (SENDA) is required in most staff categories.

7.4 e-Learning and pedagogy

- 7.4.1 One of the most significant pedagogical implications of e-learning in HE that emerged from the case studies lies in the recognition of changing student skills requirements for the effective use of online resources. Increasing online learning elements in undergraduate programmes are facilitating the early development of independent research skills.
- 7.4.2 The institutional-level enquiries and the case studies also underline the interest in the use of technology to support and improve assessment that is highlighted in the web-based survey of individual staff support needs.
- 7.4.3 The key informant enquiry, the desk-top study of current training provision for e-learning support, and the four case studies confirm the conclusion of the web-based survey that audio is a currently underused technology. They also confirm that institutions are aware that they are underusing their videoconferencing facilities. Where these facilities are used, this is mainly for course management, meetings, or for the remote delivery of specialist vocational courses. However, this does not mean that staff require further development in the use of videoconferencing to support delivery, as it is now becoming apparent that videoconferencing is not necessarily the most appropriate medium for learning and teaching. VLEs, desktop conferencing and video streaming increasingly provide a more flexible, reliable and cost-effective means of communicating between individuals in real time.
- 7.4.4 Both the case studies and the institutional-level enquiries reflect a strong sense among academic staff that what is required for meaningful e-learning is support in the development of staff skills and techniques rather than the provision of tools and systems. This also corroborates the findings of the web-based survey of individual staff development needs. Staff highlight the need to understand, appreciate and apply pedagogical approaches for online delivery, particularly course design skills and techniques for supporting online learning. There is some awareness of the opportunities presented by technology to improve on-campus learning experiences, not just in catering for different learning styles and meeting accessibility requirements, but also in improving student engagement in classroom-based seminars and lectures through opportunities to access lecture notes and supplementary materials online.
- 7.4.5 Institutional provision of training in e-learning development and support, with options for professional qualifications through accredited training programmes, is as yet light but clearly on the increase. Staff awareness, and uptake, will

follow if training provision is seen as relevant to both staff and student needs, and if programmes are available on an open and flexible basis. Some institutions already conduct internal surveys of staff training needs, and current instruments could be adapted to better draw out e-learning development needs and issues of accreditation and CPD within overall provision. The presence of such agencies as the HE Academy is seen as influencing this development; more influential, however, is the increasing use of VLE resources by institutions across the HE sector.

8 Recommendations

The findings from HETNA underpin a number of recommendations for further action by the Funding Council and by individual institutions.

8.1 Considerable emphasis is being placed on the drive towards **transformation** of higher education, specifically the use of technology to improve business process efficiency and enhance the quality of learning and teaching. In the context of staff development provision, there should be some explicit recognition of the processes of transition that institutions are currently undergoing and the steps that they are taking to effect meaningful transformation in a timeframe and cultural context that is appropriate to their needs.

- The Funding Council should therefore continue to monitor developments in e-learning and provide support as appropriate on an ongoing basis.
- This would best be engaged in articulation with institutions' own self-monitoring processes, which with development support could provide inter-institutional as well as intra-institutional information on activity and change.
- Using such data, studies on the impact over time of ICT-related staff development initiatives should be commissioned, at two-yearly intervals.
- Universities should ensure that communication of e-learning strategies appropriately targets all levels and categories of institutional staff.
- Institutional expectations of staff with respect to any VLE use for e-learning support should be clear, and appropriate training programmes for relevant categories of staff should be supported.

8.2 Each institution has adopted an approach to the **strategic development of e-learning** that is appropriate to its institutional context and aspirations. The Funding Council should not require institutions to take any one specific approach to the development and implementation of an e-learning strategy, but should encourage attention being paid to the development and implementation of the use of technology for learning, teaching, research and other business activities of the institution.

- Institutions should be able to present a clear vision and strategic plan for the development of e-learning to suit their own purpose and context.
- Institutions should ensure that the needs and aspirations of students are captured and reflected in their plans for online and e-learning development.
- Existing internal surveys of staff training needs should address e-learning support development, and articulate more closely with institutional learning

and teaching strategies. Indexing 8.1 and 8.3, consultation support should be available to institutions to enable capture and sharing of useful information across the sector.

- 8.3 Technological innovation provides opportunities for **collaboration and sharing** of good practice at local, departmental level, across institutions, across the sector and nationally/internationally.
- The Funding Council should continue to support the development of a culture of collaboration and sharing materials, approaches and expertise across institutions and the sector as a whole.
 - The Funding Council should encourage the use of national resource banks such as JORUM, as appropriate to institutional needs.
 - Institutions should ensure that appropriate staff development is in place for the creation and implementation of reusable resources.
 - Issues of the relative perceptions of the value of digital resources and printed texts should be kept under review by individual practitioners as well as at a national level.
- 8.4 Staff development initiatives and interventions should reflect the **diversity of institutional approaches** to the provision of technical support and pedagogical development.
- Funding Council interventions should recognise this diversity and encourage each institution to develop support structures appropriate to its particular context and aspirations.
 - The sharing of relevant resources and expertise across institutions, however, should be encouraged and supported.
 - Institutions should keep their provision for staff development and support for e-learning under review, and ensure that staff have access to appropriate sources of technical support and advice on pedagogical approaches and learning design.
 - Staff development provision should be designed to encourage a range of access opportunities both at and away from the workplace, whilst taking into account consideration of work-life balance. The willingness of all staff categories to engage in a blend of face-to-face sessions and e-learning should also be reflected in provision.
- 8.5 While library, IT and administrative staff report that they are reasonably well served by current programmes and provision overseen by their professional bodies, **structured professional development opportunities for academic staff** are less apparent.
- The Funding Council should continue to consult with other national agencies such as the HE Academy and the Association for Learning Technology (ALT) on appropriate initiatives to encourage teaching innovation, and explore the potential benefits of developing and implementing national award schemes to recognise and reward innovative teaching practice in Scotland.
 - Institutions should maintain an awareness of developments and opportunities for academic staff in e-learning and pedagogy, and explore

the potential benefits of recognising and rewarding teaching innovation in e-learning and online provision.

8.6 Technological innovation provides opportunities to review and refine all aspects of professional activity in institutions, and the sector continues to need and request provision for the development of **good practice in supporting all aspects of the learning experience**.

- Institutions should be encouraged to engage with the ongoing activities and outputs of the organisations such as the HE Academy and ALT, the JISC Regional Support Centres and initiatives such as the JISC e-Learning Programme.
- The Funding Council should continue to promote and raise awareness of e-learning and pedagogy initiatives taking place on a UK level.
- Institutions should recognise the role of library and learning resource professionals in enhancing student information literacy skills. The critical role of such staff for ensuring standards of provision and practice for accessibility should be acknowledged and supported.
- Institutions should plan for the longer-term implications of student early development of online research techniques for course design and the impact on taught research provision.
- Staff development priorities are only now emerging for some of the recent technology-based developments such as online enrolment, PDP, e-portfolios and online assessment, and should be kept under active review on a national basis.
- The issue of accreditation for e-learning support training programmes should be addressed within overall provision and support for the continuing professional development of all categories of university staff, at all levels.

Name:	Position:
Institution:	

Institutional process	Examples of scope for e-learning/ICT	Examples of potential impact on institutions	Broadly, what staff development does your institution currently have to support this area?	What additional staff development will be needed to meet institutional aspirations?
Enrolment and matriculation	Single-entry registration (library, fees, email, etc) Online enrolment Online fee paying	Changes to 'back office' operations		
Course management	Online access to student handbook, FAQs and course administration Email/text alerts for timetable changes Email access to tutors Online reservation of library books Personalised desktops	Technical integration of institutional systems Easy access to and use of PCs for all staff and students Policies on data entry		
Guidance and support	Email access to tutors Booking system to arrange meetings with tutors or counsellors	Policies on 'service philosophy' such as turnaround times for replies		
Tutorials	Discussion groups Video-conferencing	Different place/different time; Different place/same time support issues		
Lectures	Web access during lectures Pop quizzes/instant surveys Access to video-streamed lectures	Information overload potential; privacy; copyright; plagiarism		
Laboratories	Data analysis Automated logging/recording of data	Redesign of laboratory practice; opportunities to link data resources		

Appendix A – Key informant enquiry matrix

Institutional process	Examples of scope for e-learning/ICT	Examples of potential impact on institutions	Broadly, what staff development does your institution currently have to support this area?	What additional staff development will be needed to meet institutional aspirations?
Self-study course materials	Course-specific web sites Simulations Learning materials on VLE	Curriculum design Content re-purpose		
Formative and Summative Assessment	Self-assessment materials on VLE Email submission/return of essays	Reduction in staff administrative burden New provision skills Systematic policies and practice on design and delivery of assessment instruments Security		
Projects	Virtual space for project work Computer-aided design tools	May require high level of moderation skills by staff Re-use of research tools for learning		
Collaborative teaching across institutions	Email, video-conferencing, discussion groups	Requires well-established structure of institutional co-operation and clear processes for allocation of costs and fee income		
Careers guidance Alumni contact	Email/web contact with careers service Online questionnaires Email alerts of relevant vacancies Ongoing advice to graduates	Interfaces between teaching/learning and student support services		

Appendix A – Key informant enquiry matrix

Following up from the Key Informant Enquiry, the following questions were asked of senior representatives of Human Resources and/or Staff Development units within each of the Scottish HEIs, through email, phone or at a face-to-face meeting.

As an issue for our reporting on the recent Higher Education Training Needs Analysis (HETNA) we would like to produce a broad profile of accredited training provision for staff in the HE sector, which has relevance for 'e-learning support'. Your input to this would be valued, through response to three questions and a comment on a statement. Please be sure that no individual institution will be identified in our profile description.

1) Does your institution provide accredited training for staff in Teaching and Learning? In IT service support? In Information Technology? If so, please indicate the course(s) by title, with detail of qualification(s).

2) Who (in-house or externally) provides such training?

3) How widespread is the uptake across your institution?

From our study so far, it would seem that the following conclusion might be drawn: "Although several institutions offer training in teaching and learning skills, or ICT support, and some provide accredited courses for staff, few available programmes explicitly include 'e-learning support' skills."

Do you believe this is an accurate reflection of the current situation in Scottish Higher Education? Why?

HETNA Case Study**University of [wherever]****[date] July 2004, [location]**

The Scottish Centre for Research into On-Line Learning and Assessment (SCROLLA), in partnership with e-learning consultants Glenaffric Ltd and the JISC Regional Support Centres in Scotland, have been commissioned by SHEFC to undertake an analysis of ICT-related training needs across the Scottish HE sector, entitled HETNA.

HETNA has conducted a web-delivered survey of all academic, academic-related, management, administrative and service staff, and a further investigation of staff development needs from an institutional perspective.

Following these activities, four institutions have been selected for case study visits with the purpose of producing a detailed profile of how the institution addresses its staff development needs in relation to e-learning and ICT. The case studies will inform and enhance the HETNA project with real experiences from the sector. The institutions have been chosen to be broadly representative of the sector as a whole in terms of size, scope and geographical location.

The case study visits will be undertaken by Veronica Adamson and Jane Plenderleith of Glenaffric Ltd, and will focus on the following broad areas:

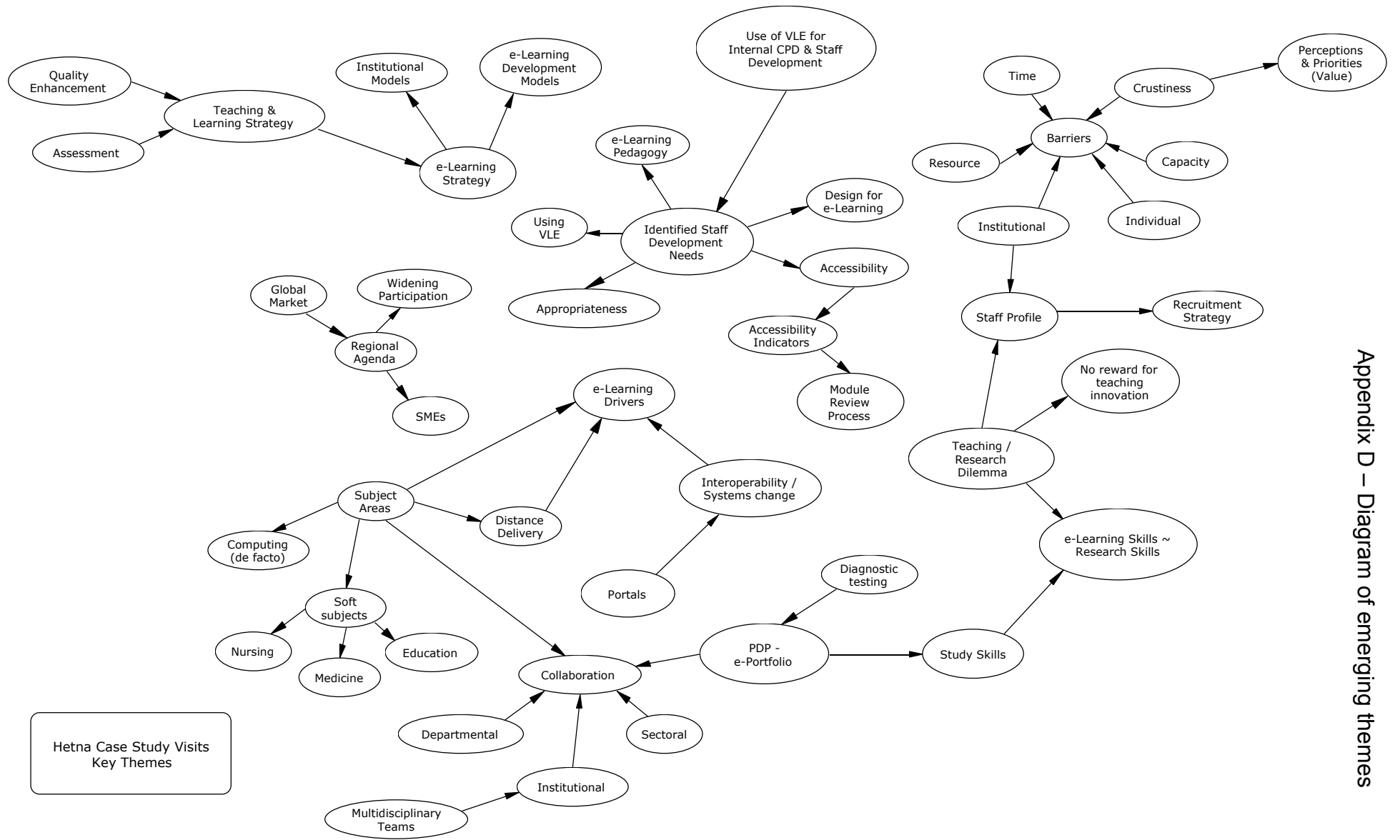
- Institutional aspirations and vision for e-learning, and related strategies and policy initiatives
- Staff development needs relating to these aspirations, including non-academic and research staff
- Technical issues and developments
- Specific subject areas with a particular interest in e-learning initiatives, or lack of interest
- Issues which may require further support from the Funding Council

Schedule

10.30 – 12.30	Meeting with Assistant Principal Learning and Teaching, and Director of Centre for Learning and Teaching
12.30 – 13.30	Sandwich Lunch
13.30 – 15.00	Round table discussion with members of the e-Learning Strategy Group

Following the visit, Glenaffric Ltd will produce a summary note of the proceedings, which will be sent to the institution for information and clarification. The institution will also have an opportunity to comment on the draft text for the case study prior to its inclusion in the final report to SHEFC.

Please contact Jane Plenderleith on 01456 459106 if you have any queries.



Appendix D – Diagram of emerging themes