

## JISC e-Learning Team

### Briefing paper on current and previous JISC-funded work relevant to institutional and cross-institutional implementation of e-learning

#### Contents

|   |   |
|---|---|
| Contents .....  | 1 |
| MLEs for lifelong learning programme .....  | 1 |
| Distributed e-learning regional pilots .....                                      | 2 |
| Cross-institutional collaboration .....   | 3 |
| Cultural and institutional issues .....   | 3 |
| Pedagogical issues .....  | 4 |
| Issues to do with the learners' experience .....                                  | 4 |
| Technical issues .....  | 5 |
| Other issues .....  | 5 |
| e-Learning tools and toolkits .....   | 6 |
| Cross-institutional use of e-learning to support lifelong learners: round 1 ..... | 6 |
| User-owned technology demonstrators .....   | 6 |
| HE in FE projects .....   | 6 |
| Design for learning .....   | 7 |
| Learner experiences .....   | 7 |
| Scottish Funding Councils' e-learning transformation programme .....              | 7 |

This briefing paper provides information on current and previous JISC programmes which are of relevance to the institutional and cross-institutional implementation of e-learning, especially to support lifelong learners. It was originally written to support the e-learning call within the Capital Programme circular, to be released at the end of April 2007.

For an overview of current JISC e-portfolio activity, please see:

[http://www.jisc.ac.uk/publications/publications/pub\\_eportfolio\\_overview.aspx](http://www.jisc.ac.uk/publications/publications/pub_eportfolio_overview.aspx)

For an overview of current JISC e-assessment activity, please see:

[http://www.jisc.ac.uk/publications/publications/pub\\_eassess\\_overview\\_v1.aspx](http://www.jisc.ac.uk/publications/publications/pub_eassess_overview_v1.aspx)

For further information about the wide range of work taking place under the e-Learning programme, see the JISC e-learning focus site at <http://www.jisc.ac.uk/elearningfocus>.

#### MLEs for lifelong learning programme

The three-year MLEs for lifelong learning programme completed in July 2005. The programme explored the issues associated with developing learner environments to support the seamless movement of the learner between and across education sectors and institutions. The key lessons from the programme are summarised in three briefing papers, which are available from [http://www.jisc.ac.uk/pub\\_lifelonglearningbps.html](http://www.jisc.ac.uk/pub_lifelonglearningbps.html). These offer an overview of the programme and the projects; information on the work carried out on e-portfolios and personal development planning; and advice on managing cross-institutional partnerships.

All project outputs, including final reports, case studies, scenarios and briefing papers are available from the programme outputs site at <http://www.jisc.ac.uk/elearningfocus/mle>.

It was identified early in the programme that there were issues around data protection, intellectual property rights and consortium agreements that needed attention. A legal study was commissioned to provide advice and guidance on these issues which other projects are likely to find useful. This advice is available from [http://www.jisc.ac.uk/project\\_learner\\_records\\_legal\\_study.html](http://www.jisc.ac.uk/project_learner_records_legal_study.html).

The formative evaluation report<sup>1</sup> for the programme highlights, among other lessons, the following recommendations for projects and institutions:

- Institutions applying for project funding should recognise the need for a careful balance of aspiration and ambition with a realistic assessment of what a development project can actually achieve in context.
- Developments must be driven by organisational need and based on a thorough analysis of business processes and stakeholder requirements.
- Confirm and maintain institutional buy in – the aims of the project must be consonant with explicit institutional strategic priorities and operational plans for all consortium partners.
- Projects should implement management approaches appropriate to exploratory development projects. Consideration should be given to the interfaces between the strategic role of the project director and operational responsibilities of the project manager.
- Address the people issues first – ensure there is a shared understanding among key stakeholders of the scope, objectives and intended outcomes of the project.
- Conduct a thorough audit at the outset of project team skills, knowledge and capacity, including technical skills and requirements, avoiding assumptions about capacity and capability in consortium institutions.
- Address legal issues of data protection, copyright and IPR at an early stage.
- Ensure that the project activities encompass evaluation and dissemination on an ongoing basis and not just at the end of the project. Consider establishing a process of peer evaluation or review with other projects in a programme.
- Embrace the potential of technology to transform institutional processes to take account of the lifelong learning agenda, rather than simply to replicate existing systems and traditional ways of working.

Additional recommendations for other projects, synthesised from the projects' final reports, are available at [http://www.jisc.ac.uk/uploaded\\_documents/MLerecs.doc](http://www.jisc.ac.uk/uploaded_documents/MLerecs.doc)

### **Distributed e-learning regional pilots**

The aim of the regional pilot projects was to explore the use of e-learning systems and tools across a number of institutions across higher and further education within a region to facilitate wider participation in higher education and provide better opportunities for lifelong learners. These pilots focussed on three themes:

- Facilitating progression
- Collaborative teaching and sharing of resources across institutions
- Supporting the independent lifelong learner

The projects started in January-April 2005 and completed their activities as originally planned at the end of March 2006. The projects were given the opportunity to propose a further phase of activity in order to increase the impact of their original project, and most continued, finishing or planning to finish between October 2006 and July 2007.

A list of the regional pilots, with an indication of the area they are working in, is available at <http://www.jisc.ac.uk/pilotsdetail.html>. This page links to individual project pages offering a summary of the project aims and planned activities, and an interim or final report. There is also a link to the projects' own websites for further information and outputs.

Glenaffric Ltd have carried out a study to synthesise the lessons learned from the regional pilots, and the final report from the first phase of this study (covering project activity to March 2006) is available at [http://www.jisc.ac.uk/uploaded\\_documents/DELFinalevalReport.pdf](http://www.jisc.ac.uk/uploaded_documents/DELFinalevalReport.pdf)

---

<sup>1</sup> Available from [http://www.jisc.ac.uk/uploaded\\_documents/0103FinalRep2.pdf](http://www.jisc.ac.uk/uploaded_documents/0103FinalRep2.pdf)

Guidance was produced for the regional pilot projects on risk assessment for e-learning projects. This can be found at [http://www.jisc.ac.uk/uploaded\\_documents/risk\\_assessment\\_guidance.doc](http://www.jisc.ac.uk/uploaded_documents/risk_assessment_guidance.doc).

Some of the lessons emerging from the projects include:

#### *Cross-institutional collaboration*

- Inter-institutional and inter-sectoral use of educational technologies has profound implications for the management and governance of student information.
- Although there are differences in personal development planning (PDP) practice between universities and FE colleges, it is often the different language used to talk about common practices which can cause most difficulty in providing a common solution.
- Cross-institutional working can deliver rewards, such as helping to enable student progression and widened participation, as well as enabling staff at participating institutions to learn from and be inspired by each others' experiences, providing momentum to work towards a vision, helping knowledge transfer, increasing networking opportunities and building a closer working relationship for future collaborative activities.
- By engaging key regional stakeholders, projects were able to shape and inform the development of the lifelong learning networks in their region.
- However, cross-institutional working on a project does impose challenges. Some of the key challenges are around turning the agreements between key individuals at the bid-writing stage into working projects, which involves negotiating appropriate access to staff and students at the various institutions, and ensuring that all partners are committed to a shared vision and able to deliver their part of the project.

#### *Cultural and institutional issues*

- The social and organisational issues around the design and implementation of information systems should not be underestimated, and projects should seek to learn from existing work in this area. Buy-in to the project is needed at all levels, particularly senior management, all teaching staff involved, and relevant IT support departments. They should be consulted before institutions commit to participation, to ensure that the proposed innovations fit with their strategies and that they have the resource to support them.
- Ideally, projects need to be sufficiently lightweight and nimble to change and adapt the project plans in the light of experience, yet keep enough institutional buy-in and visibility to fit into and inform institutional strategy. This can be a difficult balance to strike, as it is easier to plan how a more rigidly defined project will impact on the institution.
- There is generally a willingness and interest among practitioners to share resources, but unless a culture of sharing already exists (for example, among writing teams or communities of trust), this does not transfer to sharing taking place in practice. In order to promote this, a better understanding of the actual practices of content sourcing, management and sharing within and across institutions is needed, looking at the use for example of shared drives and VLEs. Institutional (e-)learning strategies which promote sharing are key. A certain amount of proactive support and 'hand-holding' for practitioners sharing and reusing resources is also needed.
- Apart from cultural issues, other key factors in the reuse of learning materials are the availability and searchability of context-rich metadata, and the ease with which the resources can be reused and repurposed.
- Projects should seek to work in harmony with the academic timetable and the rhythms of the academic year, taking account of when teaching staff and students are most likely to be carrying out certain tasks. Failure to introduce an innovation at the appropriate point during the year (such as before the start of term) can have a big impact on project success.

*Pedagogical issues*

- Projects need to be clear on what the pedagogical aims and potential of the intervention are, in order to engage teaching staff. It can be useful to get the learning and teaching message right in a small trial before rolling out to larger trials with partners.
- The role of tutor support in the use of e-portfolios and other online support and development tools was key. Where tutors or other teaching and support staff (including workplace mentors) understood and appreciated the strengths of the approach and integrated it into their other teaching and assessment activities, students were much more likely to use the resource. Where tutors did not see the innovation in this way, its introduction was much less successful, though in some cases the learners valued and used a resource despite tutor indifference. Achieving buy-in to the project from teaching staff, and providing appropriate staff development and support, are therefore key.
- Tutor input is also important in learners' use of learning design sequences for study skills development, especially at the start and end of a sequence. Their participation in online chat sessions also increases the quality of these. Many study skills are best taught in a face to face classroom, with optional online support.
- Skills development practice in FE can be largely quantitative, whereas HE tends to be more reflective. This can present challenges to learners transferring between the sectors, and to initiatives designed to smooth this transition.
- There is a need for clear description of the various processes and activities involved in personal development planning, and mapping of existing and desired practice in courses and modules against these. This helps the course teams concerned to be clear about what they are trying to support, and is a prerequisite for any technical implementation, as any e-portfolio should support the pedagogical model used by the programme, rather than imposing a different one.
- Suitable areas for embedding e-portfolio use are those in which learners have an existing need to bring together information from a wide range of different sources.

*Issues to do with the learners' experience*

- Learners often need to be able to engage in activities such as reflection from a wide range of locations and at different times, so need as much flexibility as possible in terms of offline and location- and device-independent access.
- Learners value having remote access to their files through a portal, and appreciate functionality for storage and sharing.
- Many non-traditional learners found the concept of reflection difficult, but with a meaningful and well-integrated task, and appropriate tutor support, learner engagement with reflection was not dependent on educational level, age or gender.
- Mature learners such as adult returners were often more receptive to the potential benefits of e-portfolios than other groups.
- Learners at schools and FE colleges who used e-portfolios to reflect on their skills and aspirations before applying to university found this helpful in making decisions and applying to HE.
- Learners differ as to whether they prefer to store their personal e-portfolio data on an artefact such as a data stick, or on a server so they can access it whenever they have access to the internet. However, some learners struggled with the idea that their e-portfolio was theirs rather than something that belonged to their institution, and were suspicious of the concept of a lifelong learner record.
- Since it is often difficult to engage learners in personal development planning, systems need to offer as much added value as possible to the data entered by students. This could be provided by interactive tools such as a skills audit, by providing personalised signposting to resources, or by populating some areas of the skills audit automatically from the outcomes of completed modules.

- More work, and work over a longer term, is still needed to understand how personal development planning and e-portfolios will be used by lifelong learners as they move between episodes of work and study. It is technically feasible for learners to move their personal records and portfolio data from one system to another, but more studies are needed on how, when and why learners want to do this.
- Learners found creating and sharing 'learning pathways' - timelines consisting of educational and career choices, critical decision steps, and factors or events that have influenced individual learner's progression and professional development – a useful way of planning and reflecting on their educational and career development.

#### *Technical issues*

- The use of Shibboleth for access management was found to be challenging by many of the projects, though it was recognised that some solution such as this was necessary to achieve single sign-on for students and to avoid maintaining a system with multiple passwords.
- The importance of standards in enabling longer term storage, transfer and use of e-portfolio data was recognised. Although UK LeaP can be made to work for interoperability, it was found to be rather cumbersome, so a more lightweight solution is needed. Particular work is needed in the area of moving more complex PDP data between institutions. In the light of this lack of a single stable standard, the importance was recognised of middleware applications which can map the different interpretations of standards onto each other.
- There is a need to formalise the description of learning modules to include the skills developed by undertaking the module, so that these can be linked with PDP and other systems.
- Although learners may be accessing the system from a wide range of devices, it is important to ensure early on that the screen design works in at least the most likely access scenarios, as issues to do with layout and the amount of information presented per screen can take a long time to resolve later on.
- Building on the outputs of other projects and incorporating different technical tools takes time, and often requires further development. Projects should ensure that they have allocated sufficient time and funds to this and have discussed any need for support or further development with the originators of the work. The user and support communities of open source software tools are a very important resource and implementation of open source software is much easier where these are available and projects make good use of them.
- System design based on usage scenarios was found to be a successful approach.
- A couple of the projects successfully implemented the e-Framework's model of aggregating component web services within a user interface, though incorporating web services from third-party tools did present problems.

#### *Other issues*

- Greater engagement with vendors is required to address many of the issues to do with joining up different systems within and between institutions.
- Employer adoption of e-portfolios in recruitment is one of the key drivers for their use by learners, but many employers do not have the human resources processes in place to deal with this richer information source during recruitment. Employers in the creative industries reported that they could only deal with 'one side of A4' of information on an applicant.
- Engagement with employers can be difficult and time-consuming, and tends to suffer when personnel change, or other work takes priority, at the employer end.
- Evaluation methodologies need to be selected with care. Although time-consuming, one to one discussions with users can reveal more than focus groups.

- The decision-making groups for the project should contain members with technical, pedagogical, and project management expertise, as well as including those with responsibility for curriculum development and day to day support of learners. The roles and responsibilities of all members of the project team need to be made clear from the outset.

### **e-Learning tools and toolkits**

The JISC-funded e-Learning Framework Toolkits provide software libraries that enable developers to create applications that provide and consume services defined within the e-Framework<sup>2</sup>. Further information on the toolkits is available at:

[http://www.jisc.ac.uk/whatwedo/programmes/elearning\\_framework/toolkit.aspx](http://www.jisc.ac.uk/whatwedo/programmes/elearning_framework/toolkit.aspx)

JISC has also funded the development of a number of online tools for use in learning and teaching. These include a chat system which provides structured prompts to aid academic debate, and tools to support reflection, assessment, and structuring courses. An article on the tools work can be found at:

<http://www.elearning.ac.uk/features/etools>

Lists of the tools funded under the two rounds of Distributed e-learning tools are available at:

<http://www.elearning.ac.uk/del/etools1> and

<http://www.elearning.ac.uk/del/etools2>

Many of these tools can be downloaded from Sourceforge.net<sup>3</sup>.

Anyone considering making use of the toolkits or tools within their own projects are strongly encouraged to trial the software first and make contact with the original developers to discuss the maturity and robustness of the software, and agree how support may be provided by the developers.

### **Cross-institutional use of e-learning to support lifelong learners: round 1**

Thirteen projects were funded under the call for the first round of cross-institutional projects, released in April 2006. A number of these projects are linking with the HEFCE-funded lifelong learning networks. Further information on the projects funded is available at:

[http://www.jisc.ac.uk/el\\_xinstit](http://www.jisc.ac.uk/el_xinstit).

### **User-owned technology demonstrators**

JISC has funded five projects to demonstrate and explore the issues around the integration of user-owned technologies with institutionally-owned educational systems. The projects will implement a small-scale demonstrator of the use and integration of student- and/or practitioner-owned technologies in order to do this. The projects started in March 2007 and will run until late February / early March 2009. Further information on these projects is available at:

[http://www.jisc.ac.uk/whatwedo/programmes/programme\\_elearning\\_capital/el\\_tsle.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_elearning_capital/el_tsle.aspx)

### **HE in FE projects**

These projects are implementing, piloting and evaluating a range of technologies with HE learners in FE colleges. These projects will all be piloting existing technologies, with an emphasis on evaluating the learners' experience of the implementation. The projects started in March 2007 and will run until the 31st March 2009. Information is available at:

[http://www.jisc.ac.uk/whatwedo/programmes/programme\\_elearning\\_capital/el\\_heinfe.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_elearning_capital/el_heinfe.aspx)

---

<sup>2</sup> The e-Framework for Education and Research: <http://www.e-framework.org>

<sup>3</sup> Sourceforge is available at <http://sourceforge.net/project/>.

**Design for learning**

The Design for learning projects are funded from 2006 to 2007/8, and aim to support practitioners in the process of designing, planning and orchestrating learning activities, and promote the development and implementation of tools and standards to support the process of design for learning. Further information on the projects is at:

[http://www.jisc.ac.uk/elp\\_designlearn](http://www.jisc.ac.uk/elp_designlearn)

**Learner experiences**

Two rounds of projects have been funded to review and investigate how learners participate in learning in technology-rich environments. The outcomes of the first round of projects are summarised in four briefing papers, available from

[http://www.jisc.ac.uk/elp\\_learneroutcomes](http://www.jisc.ac.uk/elp_learneroutcomes)

Information on the second round of projects, funded from March 2007 for 18 months to two years, is available at:

[http://www.jisc.ac.uk/elp\\_learnerexperience](http://www.jisc.ac.uk/elp_learnerexperience)

**Scottish Funding Councils' e-learning transformation programme**

The SFC-funded transformation projects have been carrying out large-scale interventions to embed e-learning in mainstream institutional practice, promote a step change in the functionality of technology in institutions, and develop and implement sustainable and scalable solutions for institutions to enhance their efficiency, their organisational effectiveness, and the quality of the learner experience. Information on the projects is available at: [http://www.jisc.ac.uk/elearning\\_sfc.html](http://www.jisc.ac.uk/elearning_sfc.html).