



## **e-Assessment 07/08**

### Training and Support Initiatives

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[Cover: Snapshot from Second Life]

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## 1. Introduction

This paper sets out the various training and support initiatives that are being developed by the JISC Regional Support Centres (RSCs) in the area of e-Assessment. These initiatives draw upon the findings of the e-Assessment (2007)<sup>1</sup> and ETNA Vol. III (2007)<sup>2</sup> surveys and are separated into eight categories:

- General Initiatives
- Assessment Systems
- e-Portfolios
- Web 2.0
- COLEG On-Line Assessments (COLA)
- Solar Project
- JISC
- Future Developments

A second survey, planned for 2008, will judge the effectiveness of resulting actions based on these initiatives. For further details on any of the initiatives listed in this report, please contact your local RSC.

## 2. General Initiatives

The RSCs are working on a range of initiatives over the next session that will impact on the use of e-Assessment. Details are outlined below:



1. Develop visit programme with institutional contacts.  
Support offered in the context of the institutions supported to ensure maximum take-up and practical application.
2. Offer presentations to regional conferences and forums, or contribute to college/university staff development programmes.
3. Attend RSC-led forums as required to raise awareness of initiatives and issues.
4. Provide support to managers concerned with the effective integration of e-Assessment into local strategy and procedures.
5. Deliver a series of brokered and self-developed workshops related to e-Assessment.
6. Develop train-the-trainers support which can be adapted locally according to curriculum areas.
7. Promote the ways e-Assessments can be designed with accessibility in mind.
8. Highlight the work being carried out by JISC in the area of e-Assessment.
9. Maintain a working relationship with COLEG and the SQA with regards to COLA, the Solar project and other e-Assessment initiatives.

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<sup>1</sup> "The Use of e-Assessment in Scottish Further Education" (2007). Available from [www.rsc-sw-scotland.ac.uk/eAssessment/eAssessment.htm](http://www.rsc-sw-scotland.ac.uk/eAssessment/eAssessment.htm)

<sup>2</sup> "Electronic Training Needs Analysis (ETNA) Volume III" (2007). Available upon request from [www.rsc-ne-scotland.ac.uk/etna/](http://www.rsc-ne-scotland.ac.uk/etna/)

### 3. Assessment Systems

Virtual Learning Environments (VLEs) remain a common mechanism for the delivery of e-Assessment, though some institutions have invested in stand-alone assessment systems (such as Questionmark Perception). These systems allow staff to author tests, edit existing ones and import ready-made question sets from external sources. It's also possible to develop assessments using third-party packages (such as Course Genie).

Many institutions also take advantage of online tests such as the European Computer Driving Licence (ECDL) offered by the British Computer Society (BCS)<sup>3</sup>, or the Global On-Line Assessment offered by City & Guilds.

Perhaps the most important feature of VLEs, that sets them apart from content management systems, is their ability to track the progress of students as they complete course material and assessments.

#### 3.1 In Practice



BlackBoard, WebCT and Moodle are some of the most popular VLEs, but there is still a range of other systems found in the sector. There are also cases where multiple VLEs are used within the same institution.

The ETNA survey revealed that the majority of staff receive a basic level of VLE training, and that many go on to produce online content for their courses. However, when asked in the e-Assessment survey how many had made use of the tracking features in their VLEs, less than half reported doing so.

There are now a variety of question types available to assessment developers, but tests often lack the interactivity or multimedia elements that can engage learners.

#### 3.2 Training & Support Initiatives

1. Offer a series of workshops focussing on:
  - Authoring (including the area of feedback)
  - Adding multimedia elements
  - Tracking performance
  - Sharing assessments
2. Deliver workshops on creating formative assessments with Course Genie.
3. Provide institutions with train-the-trainers support to enhance in-house staff development.
4. Advise institutions of effective e-Assessment tools for teaching and learning.
5. Contribute advice/support to RSC-led forums, including the VLE forums.

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<sup>3</sup> British Computer Society's ECDL site, [www.bcs.org/server.php?show=nav.5829](http://www.bcs.org/server.php?show=nav.5829)

## 4. e-Portfolios

An 'e-Portfolio' is a system that allows students to record evidence of progress made. This evidence can take the form of plans devised, assignments completed, and grades achieved. It should encourage feedback from the recipients of shared assets and promote greater self-awareness through reflection.

The DfES in conjunction with JISC and BECTA have identified the following key features of e-Portfolios<sup>4</sup>:

- Concept: multi-user, multi-component
- Users: learners, teachers, employers, examining boards, parents
- Components: learning space, record, plan, CV
- Transactions: planning learning, assessment, admissions
- Features: accessibility, secure, portable

### 4.1. In Practice

The use of e-Portfolios is not yet widespread, but more institutions are looking at the options available to them. VLEs like BlackBoard offer their own portfolio solutions, and there's a lot of interest in Moodle's new MyStuff module<sup>5</sup> which has been developed for the Open University.

Elgg<sup>6</sup>, the open source social networking platform, offers a level of e-Portfolio functionality through its Presentation feature. This gives students more of a personal flavour to their portfolio, by embedding it within their own social network.



There are stand-alone offerings too, JISC has recently funded a study<sup>7</sup> at the University of Wolverhampton using PebblePad's Flash-based system to evaluate how e-Portfolios can support transitions between learning episodes and to employment.

### 4.2 Training & Support Initiatives

1. Trial the use of a concept map as an e-Portfolio solution.
2. Identify e-portfolio options, particularly open source opportunities. Make providers aware of these, with an emphasis on SQA-approved e-portfolio systems.
3. Disseminate examples of best practice through the RSCs' publicity channels.

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<sup>4</sup> See JISC infoNet for a more comprehensive definition, <http://tinyurl.com/39jkc2>

<sup>5</sup> MyStuff Blog, [www.open.ac.uk/mystuff/?page\\_id=11](http://www.open.ac.uk/mystuff/?page_id=11)

<sup>6</sup> ELGG, <http://elgg.org/>

<sup>7</sup> ePistle project, [www.jisc.ac.uk/whatwedo/programmes/programme\\_edistributed/epistle.aspx](http://www.jisc.ac.uk/whatwedo/programmes/programme_edistributed/epistle.aspx)

## 5. Web 2.0

The term 'Web 2.0' is used to refer to a 'second generation' of online services that focus upon user-generated content, sharing and collaboration. The rise of social networking sites, blogs, wikis and podcasts are all examples of the way the Internet is changing. Not everyone thinks of this as a revolution though, more an evolution of existing services.

Whatever the case, there is certainly a lot of scope for Web 2.0 technology to have a positive impact on teaching and learning, as highlighted in JISC's "What is Web 2.0?" publication<sup>8</sup>. In terms of assessment, these new tools allow staff to explore different ways to measure progress and guide learning.

### 5.1 In Practice



Blogs have been used with students who have benefited from input from classmates and lecturers. Feedback is provided through comments posted to the blogs. Work carried out by the Re-Engineering Assessment Principles (REAP) project<sup>9</sup> report positive responses to this method of peer assessment, but have warned that extra workload from monitoring several blogs can become problematic if not managed sensibly.

There are examples of lecturers using Web 2.0 tools to manage group work activities. Wikis can allow several students to work together on an assignment, while letting the lecturer know how much each student is contributing to the project. This helps address the problem of 'freeloading', where students take credit for a project's success without having actually contributed much.

Podcasting has made it easier for students to access materials 'on-demand' and provides teaching staff another format by which evidence of learning can be collected. One of the main advantages to this form of assessment is that it makes learning exciting, as well as engaging students with technology that they use outside of their institutions.

Many VLEs now incorporate Web 2.0 tools such as blogs and wikis, but require training for staff looking to take advantage of these functions.

### 5.2 Training & Support Initiatives

1. Deliver Web 2.0 workshops demonstrating the practical applications of Web 2.0 tools.
2. Disseminate examples of best practice through the RSCs' publicity channels.
3. Identify and publicise Web 2.0 services that can be used for e-Assessment.

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<sup>8</sup> "What is Web 2.0?" (2007), available from [www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf](http://www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf)

<sup>9</sup> REAP Project website, [www.reap.ac.uk/](http://www.reap.ac.uk/)

## 6. COLEG On-Line Assessments (COLA)

COLEG launched the COLA project<sup>10</sup> (funded by the Scottish Funding Council) in March of 2003. The aim of the project was to create a bank of formative assessments for Further Education that could be disseminated in a format compatible with the main VLEs of the time (Blackboard, WebCT, Virtual Campus and Learnwise). All of the materials were peer reviewed and quality assured according to content, technical and production issues. Currently, around 500 assessments have been written and shared across the sector. Surveys have indicated that there is widespread awareness of COLA, but little actual use of these resources.

### 6.1 In Practice

Interoperability has been one of the key obstacles that the project has had to seek to address. The question sets are made available in IMS Question & Test Interoperability (QTI) standard compliant format, which only Virtual Campus natively supports. Guidelines on how to convert the resources (using tools such as Respondus) for the remaining VLEs are available, but technical difficulties are still evident with particular question types, tracking and scoring<sup>11</sup>.

The situation is not simplified by the fact that VLEs have come and gone since COLA was made available. Moodle, a relative newcomer, is being widely adopted by Scottish colleges, but does not support the QTI format. COLEG is currently working on ways to import the COLA resources into Moodle and have recently launched a Moodle site<sup>12</sup> that showcases available question sets. However, they are still working towards making converted files available to institutions.



Another difficulty, identified by authors, is that new HN frameworks were introduced shortly after completion of the assessments, potentially making the material appear redundant.

### 6.2 Training & Support Initiatives

1. Assist COLEG to promote awareness of the organisation's Moodle site to preview COLA resources.
2. Provide advice to colleges on using COLA materials with local VLE installations.
3. Deliver workshops on how to enhance and extend existing question sets.
4. Help colleges make COLA materials available in alternative formats to suit the local college environments.

<sup>10</sup> COLEG On-Line Assessments (COLA), [www.coleg.org.uk](http://www.coleg.org.uk)

<sup>11</sup> See "Effective Practice with e-Assessment" (p15) for further details, [www.jisc.ac.uk/assessment](http://www.jisc.ac.uk/assessment)

<sup>12</sup> COLEG Moodle, <http://194.83.70.9/>

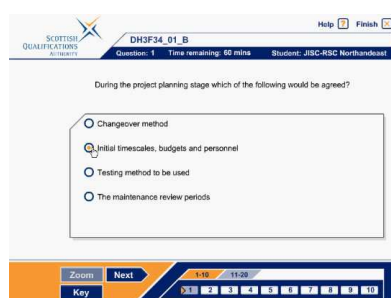
## 7. Solar Project

Through the Solar Project, the Scottish Qualifications Authority is leading the development of summative e-Assessment materials for a range of Higher National Qualifications at certificate and diploma level. Over 400 assessments are currently available, mostly in the area of Computing, though other subjects such as Languages and Care are covered.

One major difference in the Solar Project assessment delivery model is that students and teaching staff access centrally hosted tests via an online interface. This avoids the interoperability issues associated with catering for individual VLEs that has been found with COLA materials (see Section 6).

### 7.1 In Practice

The Solar Project has been widely publicised in Further Education, and receives a generally positive response from those who have used the system. However, the limited range of subject areas covered means that the project is relevant to only a minority of teaching staff.



This shortfall continues to be addressed by the SQA, who will shortly be releasing assessments for Sports, Engineering and Dental Technology courses. There are also plans for additional courses to be covered towards the end of the year<sup>13</sup>.

The SQA also plans to increase the functionality of the Solar platform, by allowing staff from colleges to author and deliver formative assessments. This feature was highlighted at the Scottish Learning Festival (September 2007). It is expected that the project will offer staff development in the writing and use of these assessments.

### 7.2 Training & Support Initiatives

1. Promote the use of Solar assessments within colleges.
2. Inform colleges of new subject areas as they become available.
3. Help to co-ordinate the development of assessments among colleges.

<sup>13</sup> For more details see the presentation "Planning the use of ICT in learning and teaching" available from [www.solarproject.org/SLIP\\_110607.pps](http://www.solarproject.org/SLIP_110607.pps)

## 8. JISC

JISC recognised the importance of e-Assessment for the UK education and research community in the late 1990's as part of the groundbreaking work on Managed Learning Environments and work on standards. JISC realises that it has an important role to play through its work in this area. As more software suppliers and developers become involved in producing assessment products, so JISC is bringing the issues associated with this increasingly complex area to the attention of the communities that it serves.

### 8.1 In Practice

The e-Assessment section on the JISC website<sup>14</sup> contains useful information on current activities. Of particular interest will be the "Effective Practice with e-Assessment" publication, which highlights a collection of case studies that provide an overview of e-Assessment in further and higher education.



The e-Portfolio section<sup>15</sup> of the JISC website highlights the work being carried out in that area, while JISC infoNet offers useful information through its infoKit<sup>16</sup> on the subject.

JISC CETIS<sup>17</sup> (Centre for Educational Technology & Interoperability Standards) follows developments in standards and specifications, while the JISC e-Learning capital programme funds a number of projects relevant to e-Assessment. Three examples are:

- *ASDEL*: an assessment delivery engine that can be deployed as a stand-alone web application or as part of a VLE or portal framework.
- *AQuRAte*: a tool to enable the authoring of question items conforming to the current IMS QTI 2 specification.
- *Minibix*: an item banking system for the management of assessment items.

These projects<sup>18</sup> will deliver open source applications that can be combined to create a full e-Assessment lifecycle, providing an alternative to commercial assessment systems.

### 8.2 Training & Support Options

1. Promote and distribute JISC publications related to e-Assessment.
2. Highlight the output of JISC-funded projects through the RSCs' publicity channels.
3. Assist institutions interested in bidding for JISC projects.

<sup>14</sup> JISC e-Assessment pages, [www.jisc.ac.uk/assessment](http://www.jisc.ac.uk/assessment)

<sup>15</sup> Overview of JISC's e-Portfolio work, [www.jisc.ac.uk/whatwedo/themes/elearning/eportfolios.aspx](http://www.jisc.ac.uk/whatwedo/themes/elearning/eportfolios.aspx)

<sup>16</sup> JISC infoNet's e-Portfolio infoKit, [www.jiscinfonet.ac.uk/InfoKits/effective-use-of-VLEs/e-portfolios](http://www.jiscinfonet.ac.uk/InfoKits/effective-use-of-VLEs/e-portfolios)

<sup>17</sup> JISC CETIS assessment website, <http://wiki.cetis.ac.uk/Assessment>

<sup>18</sup> Minibix website, <http://tinyurl.com/2s8gdu>; AQuRAte website, <http://tinyurl.com/2u9w2m>; ASDEL website, <http://tinyurl.com/2a65zo>

## 9. Future Developments

Advances in technology mean that staff now have a wide range of options when it comes to delivering assessment. There are examples of tests being taken on mobile phones, lecturers quizzing students during lessons with portable voting systems, virtual worlds in which learners complete assignments, and even games where the objectives are to pass learning outcomes.

### 9.1 In Practice

Ultralab, in cooperation with the QCA and with funding from JISC, used mobile phones to deliver formative assessments for the eVIVA project<sup>19</sup>. Students dial a freephone number to answer questions posed by computer. A voiceprint checks their identity to prevent cheating. Answers are stored centrally and can be marked at any time by examiners.

Voting systems can be used to check students' understanding during lectures. This introduces a new level of interactivity, with lecturers able to adjust their delivery according to the feedback that is returned in real-time.



Second Life is a persistent 3-D virtual world where users interact with each other and the environment through their online avatars. This simulation can provide an accessible setting that can enhance experiential learning. Students can apply real-life skills to their second lives, and be assessed on their performance. Eduserv recently published a report<sup>20</sup> highlighting HE and FE activity in Second Life that makes for interesting reading.

Games are another area where assessment can be delivered. BioWare's popular *Neverwinter Nights* was used by West Nottinghamshire College to teach and assess Key Skills<sup>21</sup>. The environment is designed to encourage learners to complete work by stimulating their desire to achieve. Many lack the motivation to complete conventional paper-based assignments to evidence qualifications. The game makes learning exciting and interactive.

### 9.2 Projected Training & Support Initiatives (post 2008)

1. Disseminate examples of best practice through the RSCs' publicity channels.
2. Offer advice and guidance with respect to electronic voting systems, simulations and gaming technology.
3. Deliver workshops on mobile technology and its applications.

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<sup>19</sup> eVIVA Project, <http://tinyurl.com/38ofb4>

<sup>20</sup> "Snapshot of HE and FE developments in SL", [www.eduserv.org.uk/foundation/sl/uksnapshot072007](http://www.eduserv.org.uk/foundation/sl/uksnapshot072007)

<sup>21</sup> Altered Learning, [www.alteredlearning.com/](http://www.alteredlearning.com/)