

Research Briefing Nº 26

Scoping a Vision for Formative E-Assessment (FEASST)

This research aimed to delineate a domain map for formative e-assessment. At a conceptual level this includes a description of key processes involved, and at a practical level this includes examples of existing practice as well as some technical system requirements.

Key words: assessment; e-assessment; formative assessment; formative e-assessment; design patterns



Key findings

Technology can add the following to formative assessment:

- speed of response can contribute to the effectiveness of feedback and enables the learners' next problem solving iteration to begin more quickly;
- storage capacity allows for access to rich, multimodal forms of evidence;
- processing: enables the automation of responses, their scalability and adaptivity to individual learners;
- communication: enabled across a range of audiences; with a degree of semi-permanence; supporting the sharing of digital artefacts;

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Formative e-assessment is defined in this project as the use of ICT to support the iterative process of gathering and analysing information about student learning by teachers, as well as learners, and of evaluating it in relation to prior achievement and attainment of intended, as well as unintended learning outcomes, in a way that allows the teacher or student to adjust the learning trajectory.

- construction and representation: ability to represent (own) ideas in a variety of ways and to move and translate between these representations thus enabling concepts to be 'shaped', helping learners develop their meaning; through digital artefacts learners 'open up a window' on their thinking; and
- mutability: shared (learning) objects are not fixed, they can change/be changed easily enabling them to contribute to 'contingent' processes in learning and teaching. Mutability is essential to formative assessment.

What we did

Assessment is integral to teaching and learning. Two types of assessment are normally distinguished: formative assessment, which supports learners to improve and make progress by focusing on how and why learning is taking place; and summative assessment that takes place at the 'end' of learning activities.

There is recognition that work on formative and assessment for learning should be more widely embedded in post-16 pedagogy. This project, funded by JISC and carried out between 1 June 2008 and 1 January 2009, delineated a set of key processes involved in effective formative eassessment practice for post-16 practitioners, in order to support them in making more effective use of formative assessment. It also outlined a small number of technical requirements for the development of formative assessment systems: i.e. the components and processes intended for software developers looking to integrate formative e-assessment with existing e-learning technologies.

Outcomes include a set of recommendations, a brief literature review as well as a set of case

studies of existing practice in formative eassessment.

How we did it

The domain map for formative e-assessment was developed following a review of relevant literature as well as an analysis of aspects of prevailing assessment practice in technology-enhanced post-16 contexts.

It adopted a mixed approach in which conceptual and theoretical frameworks from the literature were brought into a fruitful relationship with patterns emerging from practice. Practitioners were prompted to recount their experiences of using formative e-assessment as case stories, and discuss these with their peers. The construction and discussion of these narratives was scaffolded by a set of tools and activities (explored during a series of workshops) to extract transferable and verifiable elements of design knowledge in the form of design patterns. These patterns were then applied to novel problems from real situations by both teachers and software developers to develop use scenarios.

Further information

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See link to further information on the project: <u>http://www.jisc.ac.uk/whatwedo/projects/feasst.aspx</u>

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