Chapter 13
Formative E-Assessment: Case Stories, Design Patterns and Future Scenarios

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ABSTRACT

This chapter presents findings from the JISC funded project ‘Scoping a vision for formative e-assessment’ (FEASST). The project was motivated by the increasing recognition of the importance of formative assessment and the need to identify effective strategies for incorporating it into e-learning. This chapter is particularly interested in the human-centric, social dimensions of e-assessment. The project used the participatory pattern methodology to engage a group of practitioners in developing case studies of formative e-assessment across a range of settings (from Primary to Higher Education) through a series of Practical Enquiry Days. Next, the design patterns were extracted from these cases and the outcomes were analysed against the literature. Patterns were subjected to the scrutiny of a group of software developers who used them as the basis for pedagogical and technical scenarios of use. Finally, the case studies and the design patterns were mapped to a domain map. This chapter provides an overview of the project and highlights an illustrative number of patterns.

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The project entitled ‘Scoping a vision for formative e-assessment’ (FEASST—http://feasst.wlecentre.ac.uk/) was commissioned by the UK Joint Information Systems Committee (JISC) (for the project report see Pachler, Mellar, Daly, Mor, Wiliam, & Laurillard 2009). It was led by the WLE Centre for Excellence and the London Knowledge Lab at the Institute of Education, London, and ran from June 2008 to January 2009. The project adapted the participatory pattern methodology (Winters & Mor, 2009; Finley et al, 2009; Mor & Winters, 2008), combining a desk-based review of the theory and practice in the field of formative e-assessment with a series of practical enquiry days (PEDs). These PEDs brought together educational practitioners from various higher education institutions in the UK, and guided them through a process of collaborative reflection. The main outcomes of this process were a series of ten case stories and ten design patterns (though the relationship between cases and patterns is not one-to-one as we also incorporated a number of other case studies and patterns from outside the project into our analysis as we will describe below).

We initially identified ten potential case stories, each illustrating a different aspect of the domain. Five of these were chosen to be further elaborated. The choice was driven partially by the quality of the cases, partially by the issues that the literature indicated as critical, and partially by PED participants’ preferences. These cases are described in Pachler, Daly, Mor and Mellar (2009), and will not be discussed further in this chapter.

Four design patterns were derived directly from these case stories: Classroom Display, Feedback on Feedback, Showcase Learning and Try Once, Refine Once. Apart from the first, these were all identified and articulated by PED participants and only later refined by the project team. The names of the original authors are noted below. Six more previously published patterns were found to resonate with the case stories and interact with the four new patterns: Narrative Spaces, Objects to Talk With, Soft Scaffolding (Mor, in press), Round and Deep (Eckstein, Manns, Sharp and Sipos, 2003), Wear Your Skills on Your Shirt (Schadewitz, 2008) and Use My Stuff (Kohls, 2008).

Theoretical rationales for the design patterns called on a range of literature, particularly on work in the area of formative assessment by Black and Wiliam (2009) and on Laurillard’s Conversational Framework (Laurillard, 2002)

**BACKGROUND**

**Formative E-Assessment**

There are widely differing theoretical emphases in the literature on formative assessment and, within e-assessment, a tendency to conflate formative and summative assessment, within a view of ‘adaptivity’ as a core component of e-assessment processes. Some examples of formative e-assessment can be argued to be simply serial summative assessment, and formative assessment appears often to be equated with ‘low stakes’ assessment, or ‘practice’ assessment.

However, for the purposes of our study we define formative e-assessment 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. Black and Wiliam (2009) conceptualise formative assessment in terms of five key strategies:

- Clarifying and sharing learning intentions and criteria for success;