Chapter 6
Evaluating Learning Designs through the Formal Representation of Pedagogical Patterns

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ABSTRACT
In recent years, technological advancements have raised expectations of teaching in HE, but these have not been matched with support or provisions for teachers to meet those expectations. This chapter presents the thinking and the work behind the three-year research project titled ‘A Learning Design Support Environment for lecturers’ (LDSE – www.ldse.org.uk), which aims to understand what kind of support is needed by teachers in this regard, and to offer it in the form of digital tools and resources.

The fast pace of technological change and innovation demands a change in the way of thinking about the models of its use. A generic model for the use of technology in teaching practice is needed that is focused on the fundamentals of pedagogy, and an understanding of what it takes to learn. In effect, the model that is conceptualised around providing guidance for teachers in their analysis and facilitation of what it takes to learn, as well as support for planning, exemplars of learning designs, and advice on the use of the model for providing pedagogical-evaluative insight into a piece of learning design.

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This chapter looks at two sources for informing this approach: i) learning theory, as embodied in the pedagogic design principles found in literature, and, ii) the learning design patterns, found in several learning design collection projects online. Neither in isolation offers what is needed; learning theory is overly generic and hard to interpret in practice, and learning designs tend to be overly specific, and too dependent on the contexts they were developed for, making it hard to reinterpret them for evaluation and reuse.

Instead, a midway solution is identified in order to enable the rich pool of instances of practice (found in several pattern collections projects) to be evaluated against theory. For this, we used the Conversational Framework. By bringing together a combined representation of theories of learning, the Conversational Framework models the principal teaching and learning activities that are critical for high-level learning, offers insight into the pedagogical properties of the different activities, and thereby guides the teacher’s thinking on the ways in which they can be productively mediated, where the mediating solution (digital or otherwise) not only carries out the pedagogical design, but contributes to it.

To test the approach, in this chapter, we present the way in which several learning theories can be mapped onto the Conversational Framework, and use this to provide the means by which instances of learning design practice can be pedagogically evaluated in a systematic and computationally interpretable way. The chapter concludes with the early findings from the thinking-prototype tests of evaluative capability of the framework.

EVALUATING LEARNING DESIGNS THROUGH THE FORMAL REPRESENTATION OF PEDAGOGICAL PATTERNS

This chapter describes the work in progress of the three-year research project titled Learning Design Support Environment (LDSE – www.ldse.org.uk), which began in October 2008. The aim of the LDSE project is to develop the means for helping teachers to get to grip with learning design, both, conceptually and technologically. The problem is that the teachers have been neglected in terms of developing the kinds of digital online tools that would help them to benefit from what technology now offers, and what is demanded of them in terms of how they make use of technology (HEFCE, 2005; HEFCE, 2006).

Over the years there has been a lot of focus on developing technologies to address student needs, so the LDSE project is setting out to develop support for educators, as they are critical to mediating between what students want and how they actually get what they want out of higher education. As part of the LDSE project, we are trying to figure out what would make it as easy as possible for teachers to discover how best to use the technology. In this sense the LDSE is aimed at enabling the teaching community to act rather like the research community (Laurillard 2008): to build on colleagues’ work, to discover new things for themselves, to share learning designs with the community, to collaborate, and, essentially, to problematise teaching. Building the support environment that would instigate, nourish, promote, and, ultimately achieve this transformation is the ambition of the LDSE project. The research character of the LDSE project limits the amount of actual development towards that goal; however, we are hoping to make research inroads into the complexity that such ambition entails.
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