Chapter VIII

Educational Informatics Systems:
Social Approaches

Introduction

This chapter concentrates on a number of educational informatics systems that focus explicitly on social, collaborative, and community-based aspects of learning. These aspects arguably align better with the social and knowledge creation perspectives on learning introduced in Chapter III. In some ways, the systems presented here bring into relief some of the limitations of the relatively individual-focused approaches introduced in the previous chapter.

Ultimately, however, educational informatics is essentially a social collaborative enterprise, since one of its key defining features is a concern with the discovery, sharing and reuse of learning resources within and between learning communities. The difference between systems included in this and the previous chapter is relative rather than absolute, relating to the degree of emphasis on collaborative features built into the systems.

Alternative Pedagogies

There are a number of well-rehearsed criticisms of educational systems predicated on the use of learning objects and metadata as described thus far. Allert (2004), for example, considers current educational metadata schemes to be severely limited in terms of the type and range of pedagogical knowledge they can express. Schemes such as learning object metadata (LOM), although claiming to be neutral, in fact display epistemological and ontological assumptions that restrict them to particular pedagogic perspectives.

Schemes such as LOM seek to describe features of a learning object created for use in a particular context, in such a way that it can be discovered and reused by others in other contexts. The intention is to encapsulate the *aboutness* of the object, and characteristics of it that may determine its potential educational usefulness and learnability, in its metadata. This metadata can then be used as input variables to an equation whereby learners are matched with learning resources that are *about* the topic the learner wishes or needs to learn about, and which are suitably matched with learner characteristics such as learning style and prior knowledge. LOM describing the topic which the learning object is designed to teach can be mapped onto ontologies which may indicate, for example, prerequisite topics. The result of the equation is a personalised selection and sequence of learning objects designed effectively and efficiently to teach the learner the required knowledge.

As Allert (2004) notes, LOM:

aims at an absolute description of an object and assumes de-contextualization. Meaning is completely deduced from the object itself, which means that the entire meaning lies within the object. LOM 's concept of semantics is based on epistemological and ontological assumptions comparable to those of the acquisition metaphor of learning.

This is at odds with a view of learning in which the broader context where learning takes place affects the nature and effectiveness of that learning. The same learning resource may be differentially effective when used in different contexts. From this perspective, the notion of decontextualisation in relation to learning objects and their metadata is less than helpful. Rather than representing "noise" to be factored out so that the essential content of a learning object can be more accurately described, context is central to meaning.

Mwanza and Engeström (2005) note that:

we considered the task of understanding and describing activities in context as an integral part of the metadata abstraction. This is due to the fact that acquired