

Learning Objects and Standards: Pedagogical Neutrality and Engagement

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Abstract

This paper challenges the familiar claim that e-learning standards and systems can be pedagogically neutral. In the place of "neutral" standards, this paper advocates the development of pedagogically "engaged" or "committed" conceptions of content and systems that serve specifiable educational purposes, situations and methods.

The development of technical standards in educational software can be understood as a part of the maturation of the emergent field, sector or industry of "e-learning." Before and especially since the popular emergence of the Internet and the World Wide Web, digital technologies have been used widely in education; but these technologies have typically been applied in ad-hoc and divergent forms: Innumerable courses, course components and systems for managing and delivering these courses have been developed independently of one another, often at great expense. Moreover, this content and these management systems are often created in a manner that makes it very difficult if not impossible to support their interchange or their successful interoperation. Standards in e-learning seek to address these problems by ensuring the interoperability, portability and reusability of this content ("learning objects") and of the systems that deliver and that manage its use by learners ("repositories," "learning management systems," etc).

Explanations such as these imply that e-learning standards and specifications --and by extension the systems and generic notion of learning objects compliant with them-- are not allied with any one pedagogical approach, methodology or paradigm. Just as the protocols and standards ensuring interoperation on the Web (e.g. http or HTML) can support many kinds of documents and types of information and interaction, e-learning standards and specifications and related conceptions of content are expected to be able to support multiple forms and practices of learning. Accordingly, they are frequently described as "pedagogically neutral" [e.g. 5].

One prominent specification effort that emphasizes this type of neutrality is the "SCORM" (Shareable Courseware Object Reference Model): It describes itself as providing "a pedagogically neutral means for designers and implementers of instruction to aggregate learning resources for the purpose of delivering a desired learning experience" [1]. The standard for systematically describing learning objects --and by extension, the conception of the learning object itself-- itself is said to "aim at instructional neutrality" [2; 4]. Related claims of "medium neutrality," and even "cultural neutrality" are also readily made --but less readily explained or explored-- in documents describing "meta-models" and "high level architectures" [12; 9].

However, "pedagogy," when considered as a whole, is a remarkably heterogeneous and "unstructured field" [3]. There are innumerable ways of understanding and practicing teaching and learning: as an instrument of emancipation, self-actualization or oppression, or as taking place through situated, embodied, distributed, evolutionary and other processes. In addition, ways of learning and teaching, and understandings as to how these are to be best fostered, as Earle argues, "are not the exclusive remit of educators" [7]. Earle emphasizes that these understandings are intimately connected with often unarticulated beliefs and "epistemological values." And engineers or designers, as Earle further emphasizes, are not excluded from these values and beliefs:

Even if – or arguably precisely because – systems designers are not able to articulate their own pedagogical stances, their beliefs will, by default, be articulated into the systems design process. More importantly, by construing pedagogical issues as outside of the remit of systems development, such designers will not be able to recognise the unintended pedagogic effects of other, apparently unrelated design decisions. [7]

Pedagogy, in other words, can be said to have the pervasive but simultaneously elusive character of "deeply-rooted" cultural beliefs or

ideology: Ideology can be defined as "a body of ideas characteristic of a particular social group or class" --or also, a society, nation or culture [6]. And like ideology, it can be asserted that the more explicitly pedagogical engagement and bias is denied, the more "non-neutral" and powerful its reality becomes.

This does not mean, however, that e-learning standards and specifications, and reusable content cannot be fruitfully applied to learning situations and educational purposes. However, in most cases, these standards, specifications, and instances of content need to be conceptualized in terms of their pedagogical *engagement* and *relevance*, not in terms of their neutrality.

One example of such a specification is provided by the IMS "Question and Test Interoperability" data model. It has been developed with very specific and contextualized pedagogical purposes in mind: "The specification has been produced to allow the interoperability of content within assessment systems" [11]. And it has been deliberately "structured so that it is very easy to support the classical multiple-choice question (which accounts for the large majority of computer based learning questions)" [10]. Such a specification has clear pedagogical applications and equally salient limitations.

References:

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A second example of such a pedagogically engaged standardization effort is presented by the "Asynchronous Collaborative Learning Forums" work that is beginning in WG2 of the ISO sub-committee on "Information Technology for Learning, Education and Training." It proposes the development of an abstract model that focuses specifically on the behaviours and structures of what are often called "discussion forums" or "computer conferences." Such a data model would allow interoperable systems to represent (in alternate/graphical forms), analyze and preserve the content or structure of these forums [8].

It is further important to note that the reusable data that is produced through such "engaged" standards are probably not best understood in terms of generic learning objects, reusable and repurposable across any range of contexts. Instead, these resources would be explicitly conceived to be used in specific situations and for very particular pedagogical purposes. While perhaps less glamorous than "meta-models" and "high level architectures," such standardization work does not deceive itself as to its active pedagogical engagement and also its pedagogical bias and limitations.