

Chapter IV

Opportunities, Achievements, and Prospects for Use of IMS LD

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ABSTRACT

The IMS LD specification is internally complex and has been used in a number of different ways. As a result users who have a basic understanding of the role of the specification in interoperability may nevertheless find it difficult to get an overview of the potential of the specification, or to assess what has been achieved through its use. This chapter seeks to make the task simpler by articulating the modes of use of the specification and analysing the work carried out in each. The IMS LD specification is briefly introduced. Four aspects of the IMS Learning Design specification are identified and described: modeling language, interoperability specification, modeling and methodology, and infrastructure. The different opportunities provided by each mode of use are explored and the achievements of work so far carried out are assessed. A number of valuable contributions are identified, but the practical and widespread use of the specification to exchange learning activities has not so far been achieved. The changing technological and organisational environment in which IMS LD operates is discussed, and its implications are explored. Conclusions are offered which summarise achievements with IMS LD to date, with comments on prospects for the future.

INTRODUCTION

The Questions Addressed by This Chapter

Within the field of learning design and learning objects, IMS Learning Design (IMS LD) (IMS Global Learning, 2003) is the only interoperability specification which enables users to implement learning activities for multiple users while maintaining the flexibility to implement a wide range of pedagogical structures. Because of this, IMS LD based approaches and systems have rightly received a great deal of attention as a possible solution to a number of different challenges facing education in the early years of the twenty-first century. This multifaceted relevance, however, creates its own problems. The experience of the authors is that many people when they first come to IMS LD see it in terms of the problems which they themselves would like to solve. For example, they may see it as being a modeling language, or as a data format, or as “what you do when you use an IMS LD compliant application?” As a result, it is often difficult for users to get an overview of the full potential of the specification, or to assess what has been achieved with it. This chapter does not provide an introduction to IMS LD, as this is available in Koper (2005b) and Olivier and Tattersall (2005). Nor does it focus on classifying and describing tools for IMS LD, as analysed by Griffiths, Blat, Garcia, Vogten, and Kwong (2005). Rather it seeks to support relative newcomers to the specification in understanding the opportunities which IMS LD offers, the achievements which have been made, the constraints under which it operates, and the prospects for the future. It also aspires to offer reflections which will provide some new perspectives for those who have worked with the specification for some time.

From one perspective, it might seem that the contribution made IMS LD and its predecessor educational modelling language (EML) is

straightforward, as described in the preface to Koper and Tattersall (2005, p. viii):

The basic idea of EML and LD...is in essence simple. It represents a vocabulary which users of any pedagogical approach understand, and into which existing designs can be translated. The core of LD can be summarised as the view that, when learning, people in specific groups and roles engage in activities using an environment with appropriate resources and services.

In the same volume, Koper sets out the requirements for a learning design language (Koper, 2005b). These include that it should provide sufficient detail for the teaching–learning activities to be carried out, be sufficiently flexible to be able to describe learning designs based on all kinds of theories, and should provide a formal language for learning designs that can be processed automatically. Thus, IMS LD is a language which can be used to define designs for teaching and learning activities. Nevertheless, the specification itself is not as straightforward as this might suggest. As Olivier and Tattersall (2005, p. 21) point out: “To be usable by computers, this language has to be given a concrete syntax and semantics, and this is provided by the Learning Design specification. The documents which make up the specification can be quite daunting.”

IMS specifications are typically composed of a set of three documents: a *best practice and implementation guide*, an *information binding*, and an *information model*, and in the case of IMS LD, these documents are considerably more extensive and complex than most of those produced by IMS. According to Olivier and Tattersall (2005, p. 23) who were involved in the authorship of the documents, they are “intended to be read by technical domain specialists, learning technologists and learning and instructional designers.” It should be noted that end users, such as teachers, learners, and those running educational institutions, are

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