

## **E-Learning Metadata Issues: an Overview**

**Neil McLean, Director IMS Australia**

This brief overview of E-learning metadata issues is based on several strategic assumptions, namely:

- The conceptual framework for deploying digital resources to support learning is still in an embryonic state.
- The principal issue is not about one standard or another but the need to develop taxonomies which connect learning objects to instructional design theory.
- Standards in themselves are of little value – it is the agreement on application profiles that matters.
- Common sense should prevail in what is likely to be a long evolutionary journey.

I should add that I am referencing several important sources that will be acknowledged in a more formal way shortly.

### **Learning object definitions**

There are many definitions of learning objects. The Learning Technology Standards Committee (LTSC) defines learning objects in the following way:

*“Learning objects are defined here as any entity, digital or non-digital which can be used, re-used or referenced during technology supported learning. Examples of technology-supported learning including computer-based instruction systems, interacting learning environments, intelligent computer-aided instruction systems, distance learning systems, and collaborative learning environments.*

*Examples of Learning Objects include multimedia content, instructional content, learning objectives, instructional software and software tools, and persons, organisations or events referenced during technology supported learning (LOM 2000).”*

*This is probably too inclusive to be truly useful in practice. David Wiley proposes a more restricted definition:*

*“Any digital resource that can be reused to support learning”.*

*This is a subset of the LTSC definition and is, therefore capable of being referenced in the LOM standard and may prove a useful way forward.*

### **Concept of interoperability**

Metadata is one of the primary mechanisms for achieving interoperability.

The overall aim is to facilitate the development of large-scale distributed learning frameworks and new models for learning resource design and discovery.

### **Specific standards issues**

- The aligning of DC and LOM in application profiles is unfinished business.
- The two standards use different information models which makes mapping difficult.
- DC elements live in a flat-space, whereas LOM is a hierarchical model.
- LOM tends to “hard-wire” three distinct object types namely, content, knowledge and context.
- Much more attention is required to the description of data elements in LOM and how they relate to content vocabularies and value domains.
- Finding common elements to facilitate discovery is probably the top priority.

### **Conclusion**

More concerted action is required at two ends of the metadata spectrum

1. High level conceptual modelling.
2. Analysis of use cases to develop the “art-of-the-possible”.

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