

Syntax and Semantics of Learning Object Metadata

Jennie L. Mitchell
Saint Mary-of-the-Woods College
Saint Mary-of-the-Woods, IN

jmitchel@smwc.edu

Nicholas Farha
Indiana State University
Terre Haute, IN

nfarha@isugw.indstate.edu

Abstract

Initially, many repositories developed their own tools to facilitate the indexing of learning objects, adopting the standard that best fit their users at the time. Although metadata should be the common language of learning objects, without a common standard compliance system, one repository may not interact well with another. With the increased emphasis on sharing learning objects, metadata schemas are being asked to do more than just index a learning object at a local level. This chapter reviews some of the leading object repository software, the push for RSS services, federated search capability, a clear interpretation of the fields, and the need to count usage as well as the impact on learning.

Part of the difficulty found in the *language of learning objects* started with the differences in models developed by IEEE, ADL, ARIADNE, Dublin Core, IMS and other organizations. Every organization would agree on the importance of a common standard and often emphasize that common standards like TCP/IP, HTML and XML have contributed to revolutionary changes. But just like the beta and VHS controversy of the 1970s, some organizations have years invested in their specific standard and may have difficulty buying into another standard. Campus Alberta Repository of Educational Objects (CAREO) located in Canada, overcame this difference by creating multiple metadata sets. Why would a repository go to this effort? In effect, repositories are working together to find ways to make the learning object easier to find regardless of the standard used to create it or catalog it. Repository experts recently served as guest experts at a teleconference hosted by the WCET's EduTools team. At this teleconference, two repositories agreed on five required fields that should be common regardless of the learning object software used. Flora McMartin (MERLOT) and Mike Mattson (CAREO) agreed on the following five fields: 1) title; 2) URL; 3) material type; 4) subject/discipline; and 5) object description. Any agreement by large repositories on common fields is a step closer to federated search capabilities, but there are still problems. For example, imagine that you have created a learning object that you wish to share. You go to CAREO to contribute a newly created learning object but your first step requires you to complete the metadata that will link to the learning object. In the general field, you are unsure of the "aggregation level" and "structure." Your interpretation of these fields may be different and at CAREO, you have 50 more fields to complete. At MERLOT, some of the syntax

Material published as part of these proceedings, either on-line or in print, is copyrighted by Informing Science. Permission to make digital or paper copy of part or all of these works for personal or classroom use is granted without fee provided that the copies are not made or distributed for profit or commercial advantage AND that copies 1) bear this notice in full and 2) give the full citation on the first page. It is permissible to abstract these works so long as credit is given. To copy in all other cases or to republish or to post on a server or to redistribute to lists requires specific permission from the publisher at Publisher@InformingScience.org

problems were eliminated by the use of drop-down boxes in fields that cause difficulty for object contributors. But not all repositories handle syntax problems the same way. Users or searchers of learning objects face an even greater dilemma because there is no single definition of a learning object. There is a vast difference in

Syntax and Semantics of Learning Object Metadata

learning objects. They can vary from a one-page single diagram, to a full simulation with a built-in assessment. Some learning objects contain design flaws, no reference to peer review, and no way to determine the success of their use (learning).