

The Tucson Framework – Background and Justification

Federal legislation and state pressure to improve accountability in the education process have led to significantly increased demands for education resources that are aligned to state adopted academic standards and benchmarks. Education resource providers, such as publishers and content aggregators, have responded, but the manner in which the information is made available to the end-user is problematic; both resource providers and resource consumers struggle with useful implementation. Similarly, colleges and universities, foundations, professional organizations, and content providers are conducting research to understand the relationship of standards to teacher effectiveness and, ultimately, student outcomes. Each organization typically collects and develops its own version of state and national standards at considerable duplication of cost and human resources.

This class of information is ideally suited for incorporation within available cataloging methods, including both GEM (US Department of Education Gateway to Education Materials) and MARC (Library of Congress Machine Readable Catalog Record format) which are complementary schemas for electronically encoding bibliographic information about a resource. A significant barrier to use of the available elements for academic standard or benchmark within both the GEM and the MARC metadata schemas, however, is the lack of a common agreement on the appropriate choice of element qualifiers and a standardized approach to encoding element values.

Although the text of the benchmark might appear to be a logical and open approach, the lack of consistency in printed versions of state documents, the lack of meaningful numbers or codes, and the need for basic additional identification information such as declaration of the state or district, grade level, and hierarchy position within the state standards documents make this an unattractive choice.

Publishers, content aggregators, commercial catalogers and research centers have resorted to proprietary representations of state academic standard and benchmark data for in-house systems designed for alignment, correlation and other curricular and cataloging uses. Because this represents a significant investment of funds and because these databases often contain other valuable intellectual property such as alignment and correlation data, owners of these databases have been reluctant to expose any portion of them for public consumption.

Although it would be possible to code academic standards and benchmarks within a catalog record to a private key that could be used to tie back to the proprietary database for the value-added information, the value of the resulting catalog record is minimal for general consumption.

Most publishers and other content providers want their potential and active customers to have alignment information on their resources, but they rightfully want to protect the intellectual property and proprietary processes that were used to achieve the result.

The most practical approach to resolving these issues would be to treat the collection of state academic standards and benchmarks, along with their immediate identification metadata, as a controlled vocabulary. The controlled vocabulary would be maintained by a non-commercial consortium or non-profit standards body and made available in a common, agreed upon format at the lowest possible cost that would initially fund the collection effort and provide for continued maintenance and updating. Ongoing access to the information would be through a subscription model with subsidization of educator, non-profit and public school use by higher commercial fees. State academic standards and benchmarks are public documents and although there is value in the process of collecting and managing a repository, there is no intellectual property issue per se.

This controlled vocabulary would provide a public or common key to anyone wishing to maintain proprietary databases of statements, alignment processes, or proprietary key word lists.

For example, assume that a resource has been aligned to a particular standard in a particular state. That information can and should be entered into a GEM or MARC catalog record in such a way as to be useful to an end-user with access to the catalog record. Those with access to the catalog record should know which state and standard and text apply.

However if the person reviewing the catalog record wishes to know what other standards, either in that state or another, might apply, then that is something that companies can provide as a value added service or subscription to various intermediaries or private databases. By passing the common key controlled vocabulary value to the service, the end user can subscribe to and retrieve the additional information.

Similarly, a resource provider may wish to use a proprietary process to align a resource to the standards of many different states. By placing only the end results in the form of common key controlled vocabulary entries in a GEM or MARC record, the structure behind the value added process is not compromised.

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