SREB

Educational Technology Cooperative

Evaluation Criteria for SREB-SCORE Assets

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Evaluation Criteria for SREB-SCORE Assets

Introduction

The SREB-SCORE (Sharable Content Object Repositories for Education) initiative of the Southern Regional Education Board is designed to improve teaching and learning and achieve costs savings through a multistate K-12 and higher education effort that promotes sharing digital learning content among colleges, universities and schools in the 16 SREB states.

SREB has developed this document (and its companion document, *Evaluation Criteria for SREB-SCORE Learning Objects*) to help participating state agencies review and confirm the quality of digital learning content. Following the review and confirmation process, digital learning content that is to be shared is deposited in SREB states' repositories (or databases) to which all participating states have access through a centralized SREB-SCORE catalog. These modular pieces of course content are then available for teachers and faculty to use to improve the quality of their courses.

What is an asset? There is general agreement that assets are the simplest and smallest discrete components of digital learning content.[1]

> Assets are electronic representations of media, text, images, sounds, Web pages and other pieces of data that can be delivered via the Web.

While SREB-SCORE supports this definition, it is recognized that users of digital learning content will place additional resources in SREB-SCORE repositories. Digital learning content comes in many forms, from finished course modules to the ancillary resources used to create them. For more information about the categories of digital learning content that SREB-SCORE has identified, including assets, see Appendix A.

Assets, like the learning objects in which they appear, are highly reusable. In order to be reused, assets must be described using metadata so that they are both searchable and discoverable in online content repositories.

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[1] Assets correspond to Level 1 of IEEE's Learning Object Metadata-controlled vocabulary for the aggregation element (1.8). A nonprofit technical professional society, IEEE develops electronic and computer standards that are widely accepted around the world for creating digital content.

Criteria for Evaluating SREB-SCORE Assets

- **Content Quality** — *The content is accurate and grammatically correct, and the scope is sufficient for the intended use.*
  - The content is accurate.
  - The writing is clear and concise.
  - The writing is fair and unbiased, and it conveys no overt or implied bias.
  - The content is sequenced logically and effectively.
  - The content has been reviewed by an external subject-matter expert in addition to the developer.

- **Learning Goal Alignment** — *Learning goals and objectives are provided to outline learning expectations and are applicable and relevant to the subject matter and the audience.*

  This criterion cannot be applied to assets, because assets frequently may be used in multiple manners to address multiple learning goals and objectives.

- **Feedback** — *Learners are provided with constructive, relevant and frequent feedback based on their activities within the asset.*

  This criterion also might not be applicable to assets, because assets are frequently developed without including feedback within the asset itself or as part of the intended use.

- **Motivation** — *The learning environment is engaging, interactive and relevant to the intended learner.*
  - The asset is engaging and relevant to the intended user.
  - When applicable, learners are provided with adequate directions and supports to engage successfully in the use of the resource. If the asset is a picture, for example, there may be no directions or support.

- **Presentation Design** — *Visual and auditory information enhances and facilitates learning.*
  - The materials are attractive and appropriate for the content and the intended audience.
  - Content can be viewed with minimal scrolling.
  - When applicable, the presentation design reflects a clear and consistent plan and provides instructions for navigation and interaction that are appropriate to the intended end-user.

- **Interface Usability** — *The ease of navigation, predictability of the user interface, and quality of the interface enhance the learner's experience.*
  - Interface elements implicitly inform learners how to interact with the object, or there are clear instructions guiding use.
  - The behavior of the interface is consistent and predictable.
  - Common elements, navigational buttons and text are consistently placed.
  - The interface actions and elements are consistent with directions that are clear and concise.
  - The progress of file loading and downloading is graphically or textually displayed.
  - Navigation provides users a way to return to the start, navigate within and exit from the asset.
  - If animations, audio and video components are used, user control should be allowed. If the medium is designed to play automatically, the user can replay, stop and control volume.
  - Appropriate file formats are provided to accommodate various download speeds.
  - Hyperlinks or buttons function correctly.

- **Accessibility** — *The asset provides accommodation for learners with sensory and/or motor disabilities.*
  - As appropriate, resources are assessed to determine conformance with the WAI Priority 1 specification checkpoints for accessibility[2].
  - Graphs and charts are labeled and free of clutter.
  - Animated or video-recorded events are described by audio narration (or text alternative).
  - If all technologies used to develop content are not accessible, the areas of inaccessibility are noted in the meta-tagging.

- **Reusability** — *The asset can be used in varying learning contexts with learners from diverse backgrounds.*
  - Software requirements to use the content are identified and, when possible, are at no cost.
  - When appropriate and applicable, assets are standards-based. (See Standards Compliance criteria on next page for minimum requirements.)
  - The content includes all of the resources necessary to complete the activity.
  - External contextual dependencies are avoided (e.g., textbooks, references and resources). The content does not refer to a specific course, module or page.

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[2] Web Accessibility Initiative information can be viewed at http://www.w3.org/WAI/.

- **Standards Compliance —** *The asset uses international standards and specifications.*
  - The SREB-SCORE adopted metadata are provided in tagged code within the asset and are available to users.
  - The asset conforms to IMS Global Learning Consortium's Content Packaging Specification[3] or SCORM[4].

- **Intellectual Property and Copyright —** *The asset metadata addresses the rights of the owner and the conditions for use.*
  - Permission to use copyrighted materials has been obtained.
  - All quoted materials are cited correctly by adhering consistently to one of the commonly accepted styles for citations.
  - The Metadata Rights element clearly states what usage is allowed, including rights for aggregation, disaggregation, or modification.
  - Full contact information for the copyright holder or asset owner is provided.
  - If the content is developed and owned by the person submitting the asset, a Creative Commons[5] or similar license is included in the metadata.
  - If the asset contains third-party intellectual property that was developed and owned by the submitter's institution or system, and written permission was obtained to publish and share that content in perpetuity, a copy of the license or permission letter is included in the metadata filed for copyright.
  - If the asset contains third-party intellectual property that is in the public domain, a justification for attributing the intellectual property to the public domain, the date of development, and the person or entity that developed it are included in the metadata filed for copyright.
  - If the asset contains third-party intellectual property for which a Creative Commons license or similar model was obtained from the copyright holder, a copy of the license is included in the metadata filed for copyright.
  - If the asset contains third-party intellectual property for which permission was obtained from the copyright holder to publish and share that content in perpetuity, a copy of the license is included in the metadata filed for copyright.
  - Third-party content that does not allow for free sharing may be referenced by an asset by attaching the following information in the metadata: 1) a non-reproducible copy of the work (e.g., streaming media, PDF with full protection, or low resolution thumbnail image); 2) complete, current contact information for the copyright holder; and 3) current cost, term and conditions of licensing. This information must be updated annually and tagged in the metadata as requiring permission.

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[3] The IMS Global Learning Consortium's Content Packaging Specification can be viewed at http://www.imsglobal.org/content/packaging/.

[4] Information on SCORM can be viewed at http://www.adlnet.gov/scorm/index.aspx.

[5] Creative Commons information can be viewed at http://creativecommons.org/.

Appendix A

Digital learning resources are categorized by their size, complexity and ability to be aggregated or disaggregated. The four categories identified by SREB-SCORE are listed below from smallest to largest:

- **Assets** are electronic representations of media, text, images, sounds, Web pages and other pieces of data that can be delivered via the Web. Assets, like the learning objects in which they appear, are highly reusable. In order to be reused, assets are described using metadata so that they are both searchable and discoverable in online content repositories. This document establishes criteria for evaluating assets.

- An **Information Object** may be composed of assets that focus on a single piece of information. Examples of information objects are pieces of digital learning content that:

  - illustrate a principle;
  - explain a concept; and
  - describe a process.

  Single exercises often are considered to be information objects.

- **Learning Objects** may be assembled using assets and information objects to teach a single concept or lesson. Learning objects are digital learning content that can be used and reused for teaching and learning, and they possess other adaptable characteristics that extend many learning activities. They are modular, flexible, portable, transferable (interoperable) and accessible. Learning objects may be used to teach a particular skill or concept, or to provide stimulating thinking and learning experiences for the teacher or student. Examples of learning objects are:

  - objectives;
  - assessments;
  - practices; and
  - concepts.

  The companion document, *Evaluation Criteria for SREB-SCORE Learning Objects*, establishes criteria for evaluating learning objects.

- A **Learning Component** is a generic term for lessons, modules and courses that typically have multiple learning objectives. These components can be disaggregated into reusable learning objects. It has become increasingly apparent in the K-12 virtual school community that the sharing of full courses is a priority. This type of resource will facilitate these initiatives. For evaluation criteria, SREB has developed guidelines for course quality.