Personalized Adaptive Learning Environments

Role Of Open Standards

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Smart

A Value Added Educational Services Platform

- Provides instant anytime, anywhere access to

- 50,000+ eTextbooks & digital course materials for

- 50+ higher education publishers

Universal Reader, Today

- HTML5 reader for desktop, laptop, iOS and Android browsers

- Maximum reuse through responsive design

- Seamless integration using LTI and other open standards

- Support for Industry standard EPUB, rich with videos, simulations, low stake assessments and much more

- Engaging experience that drives student learning outcomes

- Analytics and dashboard provide customers with insights into student engagement

Universal Reader, Tomorrow

- Capture and store results from assessments and interactive widgets

- Send detailed results instantly or as and when requested by the LMS

- Retain usage and learning patterns during offline study, transmit results when reconnected

- Enhance analytics dashboards with insights into student use of interactive element

- Create a personalized, adaptive and accessible learning system

A Way Forward

- Establish widget spec for EPUB 3

- Officially extend LTI to support additional outcome types

- Increase EPUB 3 adoption and implementation

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Q & A

APPENDIX

Additional Outcome Types

- Suggestion: Officially extend LTI to support data exchange between a tool provider and tool consumers related to use of interactive elements within a reading system that renders EPUB, XML or XHTML content. Examples of parameters that need to be supported are listed below:

  - Location – Identifies where interactive element is located (i.e. the table of contents label or page label a human could use to navigate to the object)

  - HREF – Identifies how to navigate to the interactive element location via the http protocol (e.g. .../section_name.html#anchor)

  - Activity ID – Content specific. The unique identifier for the interactive element

  - Activity Label – Publisher specified short description or title of the interactive element. This should be human readable text similar to a figure label or title of the element.

Additional Outcome Types

- – Activity Description (optional) - Publisher specified short description or title of the interactive element. This should be human readable text similar to a figure description or alternate text for accessibility.

- – Activity type – Industry standard set of short descriptions that convey the type of interactivity included in the element (e.g. true/false, multiple choice, drag-n-drop, video, flash card, simulation, spinning object, etc.)

- – Activity type ID – Industry standard code that signifies the type of interactivity included in the object

- – User Event ID – Reading system unique identifier for the user initiated activity with the interactive element

- – Start date-time – Reading system time stamp representing when the user initiated activity with the interactive element

- – End date-time (optional) - Reading system time stamp representing when the user completed the activity with the interactive element

Additional Outcome Types

- Graded – 1 if graded. 0 if not graded. Note: This would indicate the content publisher's intent for the interactive element. 1 indicates that it may be useful as an evaluative assessment. 0 indicates that it is useful only as a formative assessment.

- Result type (optional) – Industry standard values that define the outcome (e.g. decimal, percentage, ratio, letteraf, letterplus, passfail, freetext)

- Result type description (optional) – Industry standard description of the Result types. See http://developers.imsglobal.org/ext_outcomes.html for more.

- Result value (optional) – Computed score for the interaction (e.g. 90% or 9/10 or A or Pass)