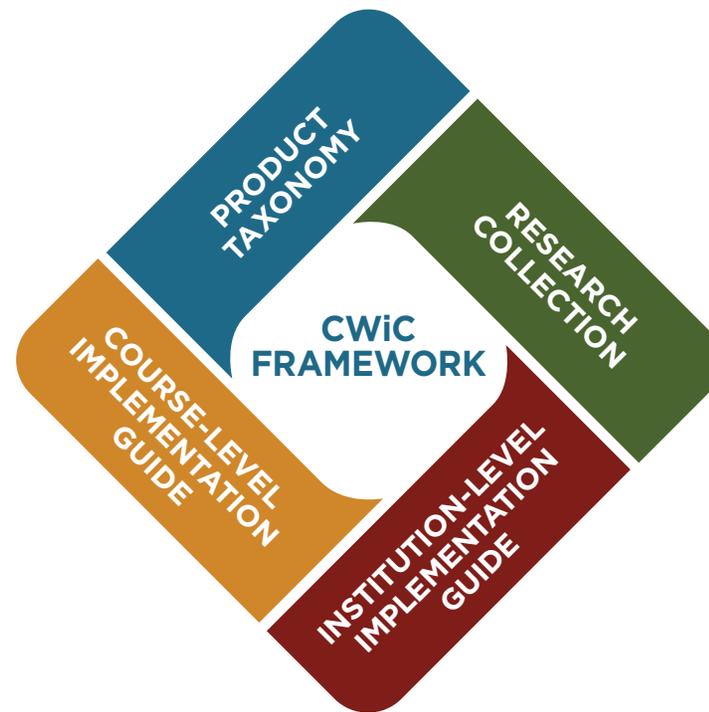


COURSEWARE

IN CONTEXT



HOW TO USE THE CWiC FRAMEWORK: FRAMEWORK

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INTRODUCTION

BACKGROUND

We believe that the use of high-quality digital courseware at scale in higher education has the potential to improve access and outcomes for postsecondary students.

Research suggests that a primary hurdle in the ongoing expansion of digital courseware adoption, however, is the inability to identify and implement a quality courseware product within a dynamic sea of evolving digital learning solutions. The CWiC Framework was developed in response to this challenge by a working group comprised of Tyton Partners and the Online Learning Consortium (OLC) through funding from the Bill & Melinda Gates Foundation. In addition, SRI International provided critical input to the working group in aligning the Framework to efficacy research.

WHAT IS THE CWIC FRAMEWORK?

The CWiC Framework supports postsecondary decision-makers in effectively navigating the market of courseware solutions. It is designed to help you make better-informed adoption and implementation decisions with the goal of advancing the adoption of high-quality digital courseware in higher education and ultimately achieving improved outcomes for students. As a guide for broadening your awareness and equipping you with helpful decision making tools, the Framework offers an inventory of product capabilities, as well as implementation considerations foundational to enhancing and improving blended and online teaching and learning with digital courseware.

WHAT IS DIGITAL COURSEWARE?

*Digital courseware is **instructional content that is scoped and sequenced to support delivery of an entire course** through **software built specifically for educational purposes**. It includes **assessment to inform personalization of instruction** and is equipped for adoption across a range of institutional types and learning environments.*

Specifically, digital courseware has three core elements:

1. Instructional content that is scoped and sequenced to support delivery of an entire course
2. Purpose-built software
3. Assessment to inform personalization of instruction

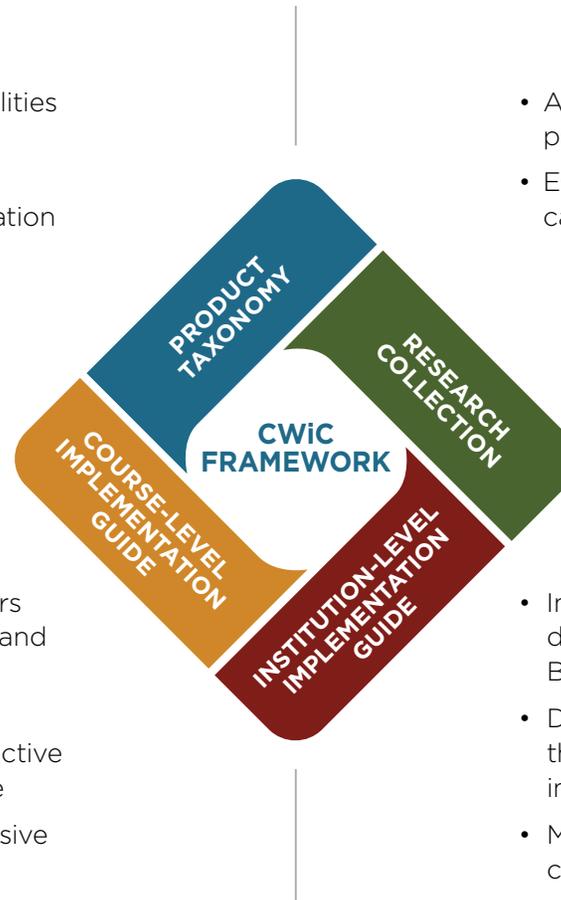
These three elements can be delivered in a single product or by the thoughtful integration of different products that collectively deliver a complete course.



COMPONENTS OF THE CWiC FRAMEWORK

- A collection of courseware product capabilities and attributes
- Designed to aid in the understanding of product functionality to support differentiation among solutions
- Includes teaching and learning capabilities in addition to considerations related to courseware procurement and delivery

- A list of published research tagged to selected product capabilities identified in the Taxonomy
- Establishes connections between courseware capabilities and efficacy research



- Includes selected **course-specific** indicators derived from indicators in the OLC Online and Blended Learning Scorecards
- Designed to assess selected practices and policies that impact the conditions for effective courseware implementation in your course
- May serve as an “on-ramp” for more extensive course reviews using OLC Scorecards

- Includes selected **institution-specific** indicators derived from indicators in the OLC Online and Blended Learning Scorecards
- Designed to assess selected practices and policies that impact the conditions for effective courseware implementation at your institution
- May serve as an “on-ramp” for more extensive course reviews using OLC Scorecards

ONE FRAMEWORK, MANY USE CASES

The components of the Framework can be used individually or collectively to help instructors, instructional designers and administrators to achieve their goals for courseware implementation. Based on user feedback, a light version of the Product Taxonomy, called the “Product Primer” was developed to help with initial product exploration. Common use cases for the CWiC Framework and its components are shown below.

USE CASE	SUGGESTED USER	CWiC FRAMEWORK TOOL	CWiC FRAMEWORK COMPONENT				ACCESS
		PRODUCT PRIMER	PRODUCT TAXONOMY	RESEARCH COLLECTION	COURSE-LEVEL IMPLEMENTATION GUIDE	INSTITUTION-LEVEL IMPLEMENTATION GUIDE	
Explore courseware products	Educators, instructional designers and administrators	X					Coursewareincontext.org, LearnPlatform
Select or evaluate a courseware product	Instructional designers and tech-savvy instructors		X	X			Coursewareincontext.org, LearnPlatform, EdSurge Product Index
Better understand the learning science behind courseware	Educators, instructional designers and administrators			X			Coursewareincontext.org
Perform a course or program review	Administrators		X	X	X	X	Coursewareincontext.org, LearnPlatform

GETTING STARTED WITH THE CWiC FRAMEWORK

You may use CWiC Framework to conduct a formal courseware product review and assessment of a courseware implementation. Typically, this process begins with completing all (or relevant portions) of the **Product Taxonomy**, one of the components of this CWiC Framework.

The Product Taxonomy includes three types of capabilities, Functional, Procurement and Delivery Platform, each with underlying product attributes. Capabilities are listed below, along with a description of each of the Functional Capabilities, which are the primary focus of the taxonomy.

FUNCTIONAL CAPABILITIES

 <p>DEPTH OF INTERACTION</p> <p>The presence of variety and higher-order learning skills in instruction</p>	 <p>MEASUREMENT & STRUCTURE</p> <p>The presence of academic structures and the capacity to assess learning in relation to them</p>	 <p>SCAFFOLDING</p> <p>Support structures to help learners achieve and grow beyond their current proficiencies</p>
 <p>ADAPTIVITY</p> <p>The adjustment of presentations of content in relation to knowledge of learners</p>	 <p>FEEDBACK</p> <p>The deployment of reports, notifications, or visualizations to learners or educators</p>	 <p>LEARNER AUTONOMY</p> <p>The ability for learners to impact or augment instruction based on their choices</p>
 <p>COLLABORATION</p> <p>Collaboration is a requirement or opportunity for learners to engage with other people in the context of learning: peers, mentors, or educators</p>	 <p>CUSTOMIZATION CONFIGURATION</p> <p>The ability for educators or course designers to alter learning or assessment content</p>	 <p>USABILITY</p> <p>Features of software and user-centered design that support sustained engagement</p>

PROCUREMENT CAPABILITIES

- ACCESSIBILITY
- BROWSER / OS COMPATIBILITY
- INTEROPERABILITY
- PRIVACY & SECURITY
- SCALABILITY

DELIVERY PLATFORM CAPABILITIES

- CONTENT MANAGEMENT
- COURSE ADMINISTRATION
- REPORTING

- **Functional Capabilities** include aspects of instructional design, software interaction design, and user experience design. There are 9 capabilities and 47 corresponding product attributes. Capabilities in this category describe practices that attempt to maximize student engagement and enhance educator support of learning. For instance:
 - Depth of Interaction, Learner Autonomy, and Collaboration represent varying contexts for learning activities and experiences
 - Scaffolding, Adaptivity, and Feedback all work to sustain student engagement and support progress toward learning outcomes
 - Measurement and Structure helps to define the course and enable adaptations, feedback, and scaffolding
 - Customization and Configuration enables educators to adjust courseware to fit their courses
 - Usability supports ease of use and keeps students and educators on task
- **Procurement Capabilities** include technical considerations to support product selection, including accessibility features and interoperability. There are 5 capabilities and 38 corresponding product attributes.

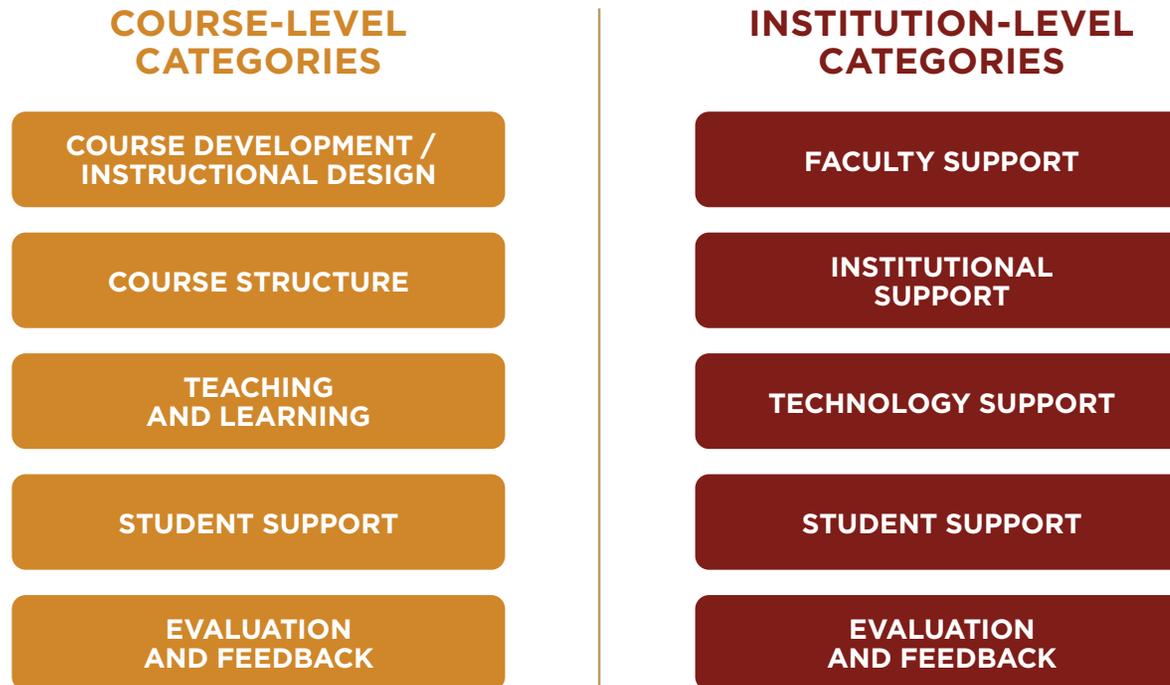
- **Delivery Platform Capabilities** include selected attributes related to course management. There are 3 capabilities and 28 corresponding product attributes. For the purposes of completing the CWiC Framework, delivery platform capabilities are included for informational purposes only and are not factored into the final results of a product review.

Emphasis in the CWiC Framework is placed on Functional Capabilities, as these are driving teaching and learning activities.

The Framework includes Course- and Institution-Level Implementation Guides with 10 categories and 20 indicators derived from the OLC Online and Blended Learning Scorecards.

Guides support assessment of select practices and policies in place that impact the conditions for effective courseware implementation, and are an ideal “on-ramp” for faculty and administrators completing reviews of online and blended courses using the Online Learning Consortium Scorecards.

COURSE- AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES



For more information or to gain access to the full version of the quality scorecards, visit onlinelearningconsortium.org/consult/quality-scorecard. Faculty members seeking to learn more about improving their instructional practices when using courseware are invited to check out OLC’s Digital Courseware Instructional Practice Scorecard, available here onlinelearningconsortium.org/consult/olc-digital-courseware-instructional-practice.

GOALS

The purpose of the CWiC Framework is to help you:

- Understand areas of emphasis of a courseware product (e.g., adaptivity vs. depth of interaction) across 9 Functional Capabilities
- Understand the connection between product capabilities and evidence of efficacy from peer-reviewed research
- Assess the fit of a courseware product against your needs for a course
- Gain insight into the quality of your courseware implementation as compared to best practices

ACCESS AND RESOURCES

The CWiC Framework is embedded in the LearnPlatform and the EdSurge Product Index. The Framework is also available for download in PDF and Excel formats on the CWiC website at www.coursewareincontext.org. See the table on [page 5](#) to determine which version is right for your needs.

In addition to housing the CWiC Framework documents, www.coursewareincontext.org also features a range of resources for courseware decision-makers and institutions looking to implement digital learning. Examples include an Adoption Checklist, links to relevant research reports and interviews with leaders in postsecondary digital learning. To find these resources and more, go to www.coursewareincontext.org/resources.

PDF / EXCEL CWIC FRAMEWORK INSTRUCTIONS

Before using the CWiC Framework, which can be accessed [here](#), we recommend you first:

1. **Select a courseware implementation for review.** Review the implementation of a single course delivered at your institution that uses courseware, such as Introductory Psychology. Ensure that the product under review is “course complete,” meaning that it is sufficient to serve as the primary content source for the course regardless of the modality of the course (online or blended). If you do not have an offering or implementation in mind, or want to learn more, refer to the CWiC Product Primer, LearnPlatform Product Library, and the Edsurge Product Index to continue exploring courseware.
2. **Build your review team.** Identify 1-2 colleagues to assist with this process. Colleagues may include, for instance, an instructional designer / technologist / instructor who is familiar with the course under review and the courseware product. Others who may be helpful include program-leads or department-heads leading online and blended course review efforts, or academic administrators with awareness of issues related to student, educator, and technology support.
3. **Gather relevant information.** Ensure that you have access to product documentation such as contracts, feature sets, and documented use cases. You may also wish to refer to notes from demos and product reviews.
4. **Gain demo-level or complete access to the courseware instance under review.** It is helpful to be able to view the courseware experience both from a student and an instructor perspective.
5. **Confirm product details.** Ensure you have the name of the product under review, when it was implemented, and whether any or all content was developed internally.

When you are ready to complete your review of the courseware implementation:

1. Download the Excel version of the CWiC Framework [here](#).
2. Go first to the in the Product Taxonomy - **Functional Capabilities tab** and select “yes” or “no” for each attribute.
3. Navigate to the Product Taxonomy - **Procurement tab** and select “yes” or “no” for each attribute.
4. Navigate to the Product Taxonomy - **Delivery tab** and select “yes” or “no” for each attribute).
5. Navigate to the **Course-Level Implementation tab** and select a score of 0-3, based on your assessment of performance for each indicator.
6. Navigate to the **Institution-Level Implementation tab** and select a score of 0-3, based on your assessment of performance for each indicator.
7. Navigate to the **Results tab** to review the product’s coverage across the Functional Capabilities, as well as implementation guide results and a selected number of product application scenarios.

Please provide responses for all questions; if you do not know the answer, please provide an educated guess based on your familiarity with the product and implementation.

Note: If you are looking to evaluate or select a courseware product only, use just the Product Taxonomy to complete steps 1-4 and 7 above.

VIEWING AND INTERPRETING YOUR RESULTS

Upon completion of the CWiC Framework in Excel, you will receive an output on the Results tab, which includes the product's:

- **Functional Capabilities Coverage:** Presented as a grid aggregating results from inputs in the Functional Capabilities tab, these results describe your product's coverage of attributes that maximize student engagement and enhance educator support of learning.
- **Implementation Guide Results:** Presented at the course- and institution-level only and as an overall combined assessment, these results are based on inputs to the instrument and shown as a % based on a total of 60 possible points. Results of < 25% describe the implementation as emerging, followed by developing (25-49%), accomplished (50-74%), and exemplary (>75%). A statement offering a brief assessment of the perceived progress / quality of the implementation based on this framework is also included.
- **Scenarios for Application of Courseware:** Provides further context for product review (and potential next steps) by enabling you to select a desired application of courseware, which may then be used to evaluate against the results of a product's Functional Capabilities coverage.

Results of this process will help to build transparency into product features and functions, and courseware quality and performance. It will also provide a framework for decision makers to make better-informed decisions related to the adoption of courseware products and improvements to online / blended courses. Results may also be a useful input for product reviews and demos, for facilitating peer review and quality assurance practices, and for building awareness and consensus around the use and benefits of courseware.

PRODUCT TAXONOMY

FUNCTIONAL CAPABILITIES

Details: Instrument is completed by selecting “yes” or “no” for each attribute of the courseware product under review.
The Product Taxonomy is also available in Excel on coursewareincontext.org and online at learnplatform.com

CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Adaptivity	Does the courseware adapt the goals or standards for learner completion based on more inputs than a single correct response to the previous item or activity?	
Adaptivity	Does the courseware adapt the presentation of content based on learner-declared goals?	
Adaptivity	Does the courseware adapt the complexity or presentation of content based on a learner pre-test?	
Adaptivity	Does the courseware adapt the complexity or presentation of content based on a learner's affective state?	
Adaptivity	Does the courseware adapt the scope of instruction (breadth and depth of content) based on more inputs than a single correct response to the previous item or activity?	
Adaptivity	Can educators or course designers override or change the parameters of adaptive protocols?	
Collaboration	Are learners prompted to act as a tutor or mentor?	
Collaboration	Can learners interact with peers during learning activities?	
Collaboration	Are learners prompted to provide or receive feedback on or from peers?	
Collaboration	Can educators or mentors and learners initiate contact with one another within the courseware interface?	
Customization & Configuration	Can educators or course designers create and edit learning content and assessments?	
Customization & Configuration	Can educators or course designers re-order and delete learning content and assessments?	

PRODUCT TAXONOMY CONTINUED

FUNCTIONAL CAPABILITIES		
CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Customization & Configuration	Can educators or course designers create and edit learning objectives or outcomes?	
Customization & Configuration	Can educators or course designers re-order and delete learning objectives or outcomes?	
Customization & Configuration	Is there a repository of additional content that can be accessed and incorporated by educators or course designers?	
Customization & Configuration	Is there a repository of additional assessments / assessment items that can be accessed and incorporated by educators or course designers?	
Depth of Interaction	Are game-based activities or motivational strategies (e.g., competitions, rewards, level-based experiences) a part of the learner experience?	
Depth of Interaction	Do learners need to make predictions or explain their reasoning in order to complete one or more learning activities?	
Depth of Interaction	Are learners prompted to recall or apply prior learning?	
Depth of Interaction	Does the courseware offer varying means of learner action and expression (e.g., physical actions, use of multiple media, interactive objects, and executive functions)?	
Depth of Interaction	Do learners have the option to select from different representations of the same content in learning modules?	
Depth of Interaction	Does the courseware UI expose learning content or assessments from third party APIs?	
Feedback	Do educators or mentors receive notifications of learner performance that could trigger an intervention?	
Feedback	Do learners receive gradation (or multiple-try) feedback within a single activity?	
Feedback	Does the learner receive diagnoses of likely missing skills or knowledge components?	
Feedback	Can an educator track the progress of student cohorts and individual students in a single view?	

PRODUCT TAXONOMY CONTINUED

FUNCTIONAL CAPABILITIES		
CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Feedback	Can a learner track one's progress and remaining tasks in the same interface?	
Learner Autonomy	Are learners prompted for self-reflection or evaluation?	
Learner Autonomy	Can learners markup content and save these markups to support their own learning?	
Learner Autonomy	Do learners have on-demand access to assessments, simulations, or interactive objects that are not a required element of planned instruction?	
Learner Autonomy	Can learners share their work or evidence of learning outside of the course (e.g. digital badges, e-portfolio artifacts)?	
Learner Autonomy	Can learners associate external resources with assessments, learning content, objectives, or outcomes in the courseware?	
Measurement & Structure	Do one or more modules include a pre-test that results in feedback to the learner?	
Measurement & Structure	Is there content that is intended for use as a summative assessment and is explicitly associated with the course's learning objectives?	
Measurement & Structure	Have learning outcomes been mapped to learning objectives?	
Measurement & Structure	Are there assessments in most or all learning modules?	
Measurement & Structure	Are there measurements of a learner's confidence or disposition in relation to learning?	
Measurement & Structure	Does the courseware return grade and other performance data to the LMS and other enterprise systems as configured?	
Measurement & Structure	Does the courseware have the ability to instrument (or generate) new or alternate assessment items or activities based on learner experiences or performance?	
Scaffolding	Are there hints or prompts that support learners during learning activities or assessment items?	
Scaffolding	Are there prompts for mental practice?	

PRODUCT TAXONOMY CONTINUED

FUNCTIONAL CAPABILITIES		
CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Scaffolding	Are there narrative structures that act as guidelines or organizers of learning activities?	
Scaffolding	Are learners prompted to generate explanations of how they have approached an activity?	
Scaffolding	Does the courseware incorporate social / emotional interventions designed to improve learner study skills, work habits, and attitude?	
Usability	Are there design features or assets to help users orient themselves with the interface and software in general?	
Usability	Can a learner save one's partial progress within a module and return to that point in a subsequent session?	
Usability	Is there a glossary of terms specific to the learning content of the course?	

PRODUCT TAXONOMY CONTINUED

PROCUREMENT CAPABILITIES

Details: Instrument is completed by selecting “yes” or “no” for each attribute of the courseware product under review.

CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Accessibility	Alternate assessment options (mode of representation)	
Accessibility	Alternate assessment options (mode of response)	
Accessibility	Ability to download learning content for offline access	
Accessibility	Tools for minimizing distractions in the user interface	
Accessibility	Alternate language support for UI elements	
Accessibility	Alternate language support for some or most learning content	
Accessibility	Is a completed Voluntary Product Accessibility Template (VPAT) available for this product?	
Browser / OS Compatibility	Explicit support of most recent version of Google Chrome	
Browser / OS Compatibility	Explicit support of prior versions of Google Chrome	
Browser / OS Compatibility	Explicit support of most recent version of Apple Safari	
Browser / OS Compatibility	Explicit support of prior versions of Apple Safari	
Browser / OS Compatibility	Explicit support of most recent version of Internet Explorer	
Browser / OS Compatibility	Explicit support of prior versions of Internet Explorer	

PRODUCT TAXONOMY CONTINUED

PROCUREMENT CAPABILITIES		
CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Browser / OS Compatibility	Explicit support of most recent version of Mozilla Firefox	
Browser / OS Compatibility	Explicit support of prior versions of Mozilla Firefox	
Browser / OS Compatibility	Native mobile iOS application	
Browser / OS Compatibility	Native mobile Android application	
Browser / OS Compatibility	Native Windows Mobile application	
Browser / OS Compatibility	No browser plug-ins or extensions required	
Interoperability	IMS Global LTI tool provider	
Interoperability	SCORM compatibility	
Interoperability	IMS Global LTI tool consumer	
Interoperability	IMS Caliper Learning Sensor API integration	
Interoperability	xAPI Learning Relationship Store	
Interoperability	ePUB support	
Interoperability	SAML 2.0 Identity Provider or Service Provider	
Interoperability	Oauth 2.0 or OpenID ConnectService Provider or Relying Party	
Interoperability	LDAP authentication	

PRODUCT TAXONOMY CONTINUED

PROCUREMENT CAPABILITIES		
CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Interoperability	LTI 2.x Tool Consumer	
Interoperability	LTI 2.x Tool Provider	
Privacy & Security	FERPA compliance certification by a third party	
Privacy & Security	US / EU Safe Harbor certification by a third party	
Privacy & Security	Ability to ensure that data will not reside in foreign data centers	
Privacy & Security	Documented disaster recovery procedures	
Privacy & Security	Documented security policies and training programs for vendor staff	
Scalability	Documented support of peak concurrency levels	
Scalability	Clustering elasticity (i.e. the ability to add or remove nodes from a distributed data store)	
Scalability	NoSQL data store that supports data model elasticity	

PRODUCT TAXONOMY CONTINUED

DELIVERY PLATFORM CAPABILITIES		
Description: Instrument is completed by selecting “yes” or “no” for each attribute of the courseware product under review.		
CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Content Management	Resource sharing among educators, mentors, or course designers	
Content Management	Batch file uploads	
Content Management	Support of multimedia content in assessment items	
Content Management	Content discovery and sharing among courses	
Content Management	Learner portfolio tools	
Content Management	Ability to add ALT tags for uploaded media	
Content Management	Ability to upload SCORM learning objects	
Content Management	Combination of templates and customizable interactions	
Content Management	Ability to parse uploaded files into learning or assessment content	
Content Management	More than 1GB of storage per student / course	
Content Management	Integrated cloud storage for end users to manage	
Course Administration	Online submission of assignments	
Course Administration	Flexible group assignments (e.g. the ability to assign work to specific individuals)	

PRODUCT TAXONOMY CONTINUED

DELIVERY PLATFORM CAPABILITIES		
CAPABILITY	ATTRIBUTE	RESPONSE (YES / NO)
Course Administration	Calendar links to assignments	
Course Administration	Calendar standard protocol compliance (e.g. .ics file)	
Course Administration	Real-time progress monitoring during assessments	
Course Administration	Ability to tag content as required or optional	
Course Administration	Ability to generate or analyze a syllabus based on collected course content	
Course Administration	Ability to support educators, mentors, or course designers interacting in relation to shared students	
Reporting	Single views of learner performance or grades among courses	
Reporting	Support of standards- or rubric-based grading	
Reporting	Competency-based reporting	
Reporting	Ability to view student workload	
Reporting	Views of course, program, and institutional information in the same software system	
Reporting	Reports on learner or educator evaluations of course content or administration	
Reporting	Reports on usage or performance of external and integrated software systems	
Reporting	Reports on performance of curriculum objects by author or source	
Reporting	Ability to add data from external systems and create single-view reports	

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES

Description: Instrument is completed by selecting a score of 0-3, based on your assessment of performance in each category. Indicators are a sub-set of indicators from the complete Online Learning Consortium quality scorecards. For more information or to gain access to the full version of the quality scorecards, visit <http://onlinelearningconsortium.org/consult/quality-scorecard>.

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Course	Course Development / Instructional Design	1	Online / blended course design promotes both faculty and student engagement.		No evidence exists that courses are designed to promote faculty and student engagement.	The program / institution includes faculty student engagement in the course design process. Faculty receive little to no training for course design.	The program / institution includes faculty-student engagement in the course design process. Training is provided, but no evaluation occurs for levels of faculty and student engagement.	Appropriate training is provided to showcase strategies that promote both faculty and student engagement and a process is in place to evaluate / assess levels, methods and frequency of engagement.
Course		2	A development process is followed that ensures online / blended courses are designed so that students develop the necessary knowledge and skills to meet measurable learning outcomes at the course and program level.		There is no indication courses are designed to ensure learning outcomes are met.	Online / blended courses are designed to meet learning outcomes, but no consistent mechanism exists to ensure course and program learning outcomes are met.	Online / blended courses are designed to meet learning outcomes and a mechanism exists to ensure course and program learning outcomes are met; however, adherence varies across courses and programs.	All online / blended courses are designed to ensure students develop the necessary knowledge and skills at both the course and program level; emphasis is placed on both formative and summative assessment criteria.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Course	Course Structure	3	Online / blended course structure ensures that all students, regardless of location, have access to library / learning resources that adequately support learning.		The program / institution has no plan to ensure online / blended students have access to the necessary library / learning resources.	The program / institution has a plan and is in the process of gaining the necessary access to library / learning resources (e.g., tutoring, writing center) for online / blended learners.	The program / institution is building out its access to ensure online / blended students have access to library / learning resources (e.g., tutoring, writing center).	The program / institution ensures all online / blended students have access to all library / learning resources (e.g., tutoring, writing center) no matter their geographic location.
Course		4	The online / blended course include a syllabus outlining objectives, learning outcomes, evaluation methods, books and supplies, technical and proctoring requirements, and other related course information, making requirements and course schedule transparent.		No evidence exists that the program / institution has syllabi requirements or standards.	Textbook and any required material / resources are made available to students in advance of their course registration; the use of syllabi requirements or standards varies across the courses or program.	Syllabi parameters / standards are provided to all faculty members and all online / blended courses include a syllabus; textbook and any required material / resources are made available to students in advance of their course registration.	Training and syllabi parameters / standards (based on program / institutional requirements) are provided to all faculty members; all online / blended courses include a syllabus; textbook and any required material / resources are made available to students in advance of their course registration; the program / institution ensures consistency in syllabi placement in the LMS for all online courses.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Course	Teaching and Learning	5	Feedback on student assignments and questions in online / blended courses is constructive and provided in a timely manner.		The program / institution provides no policy or recommendation to faculty members concerning providing online students constructive and timely feedback.	Faculty members work independently to ensure feedback is constructive and provided in a timely manner.	Faculty members receive training concerning providing timely (what are the recommended timeframes) and constructive feedback (use of rubrics, etc.); most course syllabi provide an overview of feedback timelines.	Faculty members receive training concerning providing timely (what are the recommended timeframes) and constructive feedback (use of rubrics, etc.); all course syllabi provide an overview of feedback timelines.
Course		6	Student-to-student and faculty-to-student interaction are essential characteristics and are encouraged and facilitated in online / blended courses.		No evidence is provided which supports the use of opportunities / tools to encourage student-student and / or student-faculty collaboration.	Entrepreneurial faculty members are exploring various opportunities / tools to encourage student-student and student-faculty interaction on a class-by-class basis.	Training is provided to faculty to showcase opportunities / tools available to encourage student-student and student-faculty interaction and the program / institution encourages and facilitates interaction.	Training is provided to faculty to showcase opportunities / tools available to encourage student-student and student-faculty interaction; the program / institution encourages and facilitates interaction; students are provided requirements or standards for interaction; interaction is assessed; support is provided as needed to assist faculty members in evaluating and adopting new technologies.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Course	Student Support	7	Efforts are made to engage students in online / blended courses in order to minimize feelings of isolation and alienation.		There is no evidence that the institution makes efforts to engage students outside the classroom.	Efforts are made to engage students but efforts are sporadic and inconsistent.	The program or the institution engage students.	Both the institution and the program engage students; engagement is integrated into all activities and is intentional.
Course		8	Before starting an online course, students are advised about the program to determine if they possess the self-motivation and commitment to learn online.		There is no evidence to suggest students are advised about online / blended program readiness.	A defined advising process is in place and embedded into business processes before a learner starts online / blended classes.	A defined advising process is in place and embedded into business processes before a learner starts online / blended classes; develop processes for learners to self-assess their motivation and commitment.	A defined advising process is in place and embedded into business processes before a learner starts online / blended classes; processes are developed for learners to self-assess motivation and commitment; tutorials and checklists are provided; 'test drives' or other decision support tools are offered.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Course	Course-Level Evaluation	9	A variety of data (academic and administrative information) are used to regularly and frequently evaluate online / blended course effectiveness and to guide changes toward continual improvement.		No evidence exists that the program / institution evaluates its online / blended program using a variety of data.	Online / blended program evaluation is just beginning and limited academic or administrative measures are used to assess program effectiveness.	Online / blended program evaluation includes some academic (e.g., course evaluations, learning outcomes achievement) and administrative (e.g., satisfaction surveys, student success / persistence rates) measures to assess effectiveness.	Online / blended program evaluation includes a wide variety of academic (e.g., course evaluations, learning outcomes achievement) and administrative (e.g., satisfaction surveys, student success / persistence rates) measures to assess effectiveness; the evaluation occurs regularly and frequently; and is used to guide changes.
Course		10	Intended learning outcomes at the course level are reviewed regularly to ensure alignment, clarity, utility, appropriateness, and effectiveness.		The program / institution does not have a review process to assess learning outcomes.	Learning outcomes are assessed on an ad hoc basis to ensure alignment, clarity, utility, appropriateness and effectiveness.	Learning outcomes are assessed on a regular basis to ensure alignment, clarity, utility, appropriateness and effectiveness.	Learning outcomes are assessed on a regular basis to ensure alignment, clarity, utility, appropriateness and effectiveness; a peer review process is used; outcomes from the process drive updates.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Institution	Faculty Support	11	Clear standards are established for faculty engagement and expectations in online / blended education (e.g. response time, contact information, etc.).		To date, no discussions or planning was evident with regard to establishing clearing standards.	The program / institution is in the process of establishing clear standards for faculty engagement and expectations.	The program / institution has established clear standards for faculty engagement and expectations; ensure appropriate personnel and systems are in place to communicate standards and monitor faculty performance.	The program / institution has established clear standards for faculty engagement and expectations; ensure appropriate personnel and systems are in place to communicate standards and monitor faculty performance; create and implement online faculty certification courses; engage a consistent performance review process.
Institution		12	Faculty are provided ongoing professional development related to online / blended teaching and learning.		No evidence is provided which supports a commitment to ongoing professional development for online faculty members.	The program / institution provides professional development for faculty members on an ad hoc basis.	The program / institution provides ongoing professional development for faculty members focused on teaching and learning.	The program / institution provides ongoing professional development for faculty members focused on teaching and learning; development opportunities are provided through various delivery formats; the needs of faculty members are considered when developing a training schedule of topics.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Institution	Institutional Support	13	The organizational structure of online / blended education supports the institution's mission, values, and strategic plan.		The institution is engaging in exploratory conversations about online / blended education.	The institution is in the beginning stages of realizing how an online / blended program supports the institution's mission, values, and strategic plan.	The online / blended program is clearly tied to the institution's mission, values, and strategic plan.	The online / blended program is positioned within the organizational structure to ensure success; it is clearly tied to the institution's mission, values, and strategic plan.
Institution		14	The institution demonstrates sufficient resource allocation, including technology and financial resources, in order to effectively support the mission of online / blended education.		The online / blended program is considered a 'start-up' and is not tied to the institution's strategic planning processes specifically with regard to resource allocations.	The online / blended program consistently struggles to garner sufficient resource allocation (e.g., financial resources) to effectively sustain the program.	The institution demonstrates sufficient resource allocation to effectively sustain the online / blended program.	Online / blended learning is considered 'mission critical'; the institution demonstrates sufficient resource allocation to effectively sustain and also to grow the online program.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Institution	Technology Support	15	The technology delivery systems for online / blended education are highly reliable and operable with measurable standards being utilized such as system downtime tracking or task benchmarking.		To date, the technology system performance is not continually monitored, tracked, and reported.	Technology delivery system performance is continually monitored, tracked, and reported.	The program / institution views its technology delivery systems as 'mission critical'; system performance is continually monitored, tracked, and reported.	The program / institution views its technology delivery systems as 'mission critical'; system performance is continually monitored, tracked, and reported; system backups are in place for all necessary technical systems (preferably with off-site backups in case of a closure due to disaster).
Institution		16	A centralized system provides support for building and maintaining the online / blended education infrastructure.		The online / blended program is in 'start-up' and has yet to develop a system for building and supporting the online infrastructure.	The program / institution has a distributed system (e.g., several functional units are involved) for building and maintaining the online / blended infrastructure.	The program / institution has invested in a centralized system for building and maintaining the online / blended infrastructure.	The program / institution has invested in a centralized system for building and maintaining the online / blended infrastructure; it is team-based, collaborative, comprehensive, action-oriented and non-hierarchical; perspectives of key stakeholders are continually assessed to improve the system.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Institution	Student Support	17	Students enrolled in online / blended courses and programs have access to effective academic, personal, and career counseling.		No evidence is provided to demonstrate how students access any counseling services.	Evidence demonstrates students have access to only one type of counseling services; limited channels are available.	Evidence demonstrates that students have access to two types of counseling services; limited channels are available.	Evidence demonstrates that online / blended students have access to a full array of counseling services, including academic advisers, a mental health / psychology counseling center, and career services resources; services are provided through various channels (e.g., in-person, telephone, e-mail or web conferencing).
Institution		18	The institution provides guidance / tutorials for students in the use of all forms of technologies used for online / blended course delivery.		There is no evidence that students are provided with guidance concerning use of technology.	There is evidence that guidance is available for students but guidance provided is confusing or unclear. Instructions for access may be needed.	Guidance is provided for only the primary technology used for course delivery. Instructions for access are clear.	Guidance, fact sheets, infographics are provided for all types of technologies used in coursework and may include video tutorials. Instructions for access are clear and consistent across all courses.

COURSE-LEVEL AND INSTITUTION-LEVEL IMPLEMENTATION GUIDES CONTINUED

LEVEL	CATEGORY	#	INDICATORS	SCORE (0-3)	0. EMERGING	1. DEVELOPING	2. ACCOMPLISHED	3. EXEMPLARY
Institution	Evaluation and Feedback	19	The institution demonstrates compliance and review of accessibility standards (Section 508, etc.).		No process is in place to regularly review accessibility standards.	Program / institution has designated personnel to support accessibility needs; a process is in place and followed on an ad hoc basis to assess accessibility standards.	Program / institution has designated personnel to support accessibility needs; a process is in place and followed on a regular basis (e.g., annually) to assess accessibility standards.	Program / institution has designated personnel to support accessibility needs; a process is in place and followed on a regular basis (e.g., annually) to assess accessibility standards with outcomes published on the program's website; outcomes also serve as a foundation for improvement.
Institution		20	A process is in place and followed for the assessment of student retention in online / blended courses and programs.		No process is in place to assess student retention.	A process is in place and engaged on an ad hoc basis to assess student retention.	A process is in place and followed on a regular basis (e.g., annually) to assess student retention.	A process is in place and followed on a regular basis (e.g., annually) to assess student retention; outcomes serve as a foundation for improvements.

GLOSSARY

ADAPTIVITY

Any changes made by a software product to the scope, sequence, or completion criteria of a student's learning experiences based on knowledge of that student's proficiency or disposition.

AFFECTIVE STATE

Any emotional response or disposition that can have a measurable impact on engagement or attainment

ALT TAGS

Alternate descriptions of images or other objects on a user interface that exist in the programming code, most commonly used to comply with accessibility guidelines such as WCAG or Section 508 of the American Disabilities Act. Alt Tags, for example, allow a vision-impaired user to read or hear a description of an image.

FERPA

Family Educational Rights Protection Act, a law governing data privacy rights in educational contexts

GAME-BASED ACTIVITIES

Activities that use some form of game design (e.g. competition, goal-based rewards) to motivate students

GRADATION FEEDBACK

Feedback in two types of contexts:

- Allowing students multiple attempts at the same task
- Providing feedback to students that incorporates recent student actions on a preceding task

IMS GLOBAL

A professional association with the goal of ensuring interoperability among technology systems in education. They build and maintain open standards such as LTI (Learning Tools Interoperability) and QTI (Question & Item Interoperability).

INSTRUMENT (OR INSTRUMENTATION)

The ability to dynamically create assessment items or activities based on machine-readable content, typically content that the student has been viewing

LDAP AUTHENTICATION

Lightweight Directory Access Protocol is a technology used to expose user directory lists (usually Microsoft's Active Directory) from a Student Information System or other "database of record" operated by an institution. LDAP authentication refers to a courseware product's practice of logging in its users by confirming that they are on regularly updated directory lists.

LTI

Learning Tools Interoperability, an interoperability standard that supports integrations between courseware delivery platforms (e.g., LMSs) and software applications (e.g., courseware products)

MENTAL PRACTICE

The act of imagining the performance of a learning task in contrast to physically performing that task. Visualizations of successfully completing a complex task, particularly one that includes psychomotor skills, are a common example of mental practice that can help reduce performance anxiety or better understand complex tasks.

MODE OF REPRESENTATION

The manner in which instructional content is presented to students. Instructional design practices (e.g., Universal Design for Learning) endorse varied modalities of presenting content in order to encourage student engagement.

MODE OF RESPONSE

The manner in which a student can respond to or interact with instructional content in order to complete a task. Instructional design practices (e.g., Universal Design for Learning) endorse varied means of student response in order to support a greater range of student demonstrations of skills and successful outcomes.

PARAMETERS (OF ADAPTIVE PROTOCOLS)

Inputs to adaptive algorithms or protocols, which often include a student's proficiency and the difficulty of a learning or assessment task

SAML

Security Assertion Markup Language, a standard for securely logging in software users and supporting Single Sign On among multiple applications

SCORM

An open interoperability standard meant to facilitate the publication of, delivery of, and analytics on digital instructional content. SCORM is a standard that courseware products support to be compatible with Learning Management Systems and similar platforms.

SOCIAL / EMOTIONAL FACTORS

Abilities students have to regulate their emotions, have self-awareness, have social awareness, and act responsibly or appropriately within an instructional context

SUMMATIVE ASSESSMENT

An assessment that impacts a student's course results (e.g. Pass or Fail), also indicating an assessment that does not provide actionable feedback to students beyond a score or grade

THIRD PARTY APIS

Technologies that expose data from software systems other than those belonging to the courseware provider, which indicates an ability for a courseware product to expose a wider variety of content

US / EU SAFE HARBOR

A set of data security principles that help US companies gain compliance with European Union data privacy laws. Safe Harbor is not a law but rather a guide to identify good practices in information security.