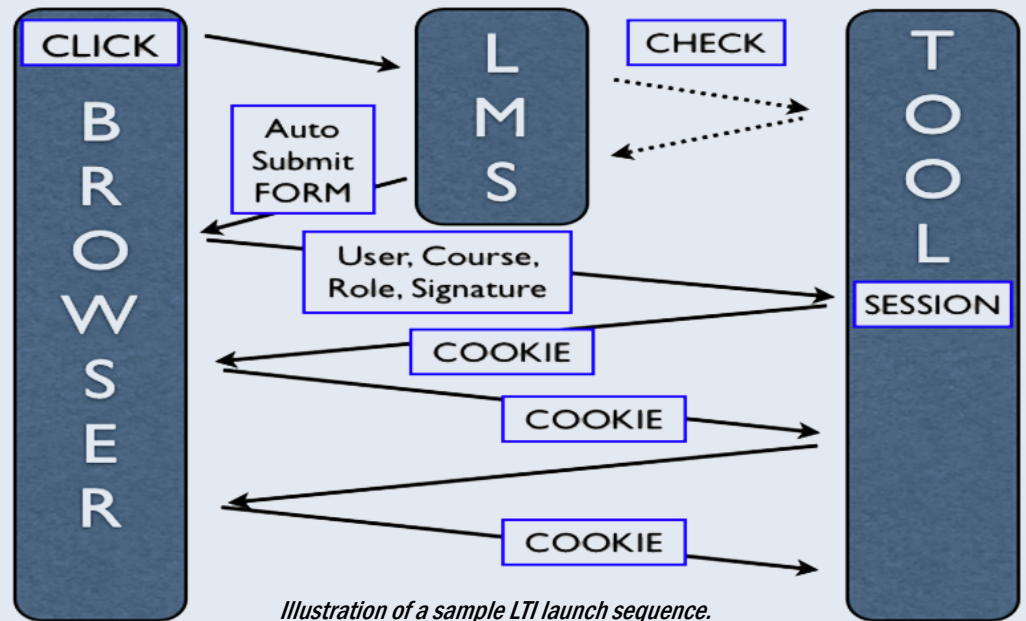


# IMS Global Learning Consortium Support for K-12 Challenges

## 1 Integrated Online Teaching and Learning Support: *Improved Learning Management and Applications Integration Results in More Efficient and Effective User (Teacher & Student) Experiences*

**Challenge:** There are many learning applications and tools available to support lesson planning and curriculum delivery. However, lack of seamless integration of these learning applications with a school or district's portal or learning management system (LMS) reduces the effectiveness of the online experience for students and teachers and locks data into proprietary formats that limit their usefulness.

**IMS GLC Activity:** IMS GLC is working with leading K-12 publishers, virtual school content providers, LMS providers, and learning application providers to develop prototypes demonstrating the use of IMS Learning Tools Interoperability (LTI) standard to enable a seamless online experience. The LTI standard enables interactions, namely launching and data exchange, between learning systems or related applications, either in the enterprise or web-based, allowing incorporation of learning tools, applications, mash-ups, and software as a service within the context of a learning portal or other learning environment. For more information on LTI, please visit <http://www.imsglobal.org/toolsinteroperability2.cfm>.



*Illustration of a sample LTI launch sequence.*

## 2 Alignment of Digital Content and Tools to State Standards: *Improving the Effectiveness of Digital Content and Learning Applications by Aligning with K-12 State Curriculum Standards is Essential to Unlocking the Power of Digital Tools and Gauging District, State, and National Performance, and Establishing Uniform Reporting and Comparison*

**Challenge:** The need for K-12 educators to support the increasing usage of standards to create best-of-breed curriculum and gauge performance at school, district, state, and national levels; and, the need to enable uniform reporting and comparison, e.g. inconsistencies in standards hierarchies/obtaining consistent curriculum and assessment standard formats. The diversity in standards content and hierarchies between the different states/districts/schools complicates the idea of universal templates since interpretation is often required in how to atomize appropriately.

**IMS GLC Activity:** Developing a publicly available database of K-12 curriculum standards—built on a foundation of open standards for integration with online platforms. Developing prototypes/demonstrations that show the power of tagging digital content with curriculum standards for use in online platforms. This activity includes the involvement of the top educational publishers, virtual school content providers, and LMS platforms.

\*District leaders interested in supporting the definition or refinement of the demo scenarios and witnessing the demonstrations as proof points that it can be done with open standards should express their interest to Rob Abel, IMS GLC CEO, [rabel@imsglobal.org](mailto:rabel@imsglobal.org)

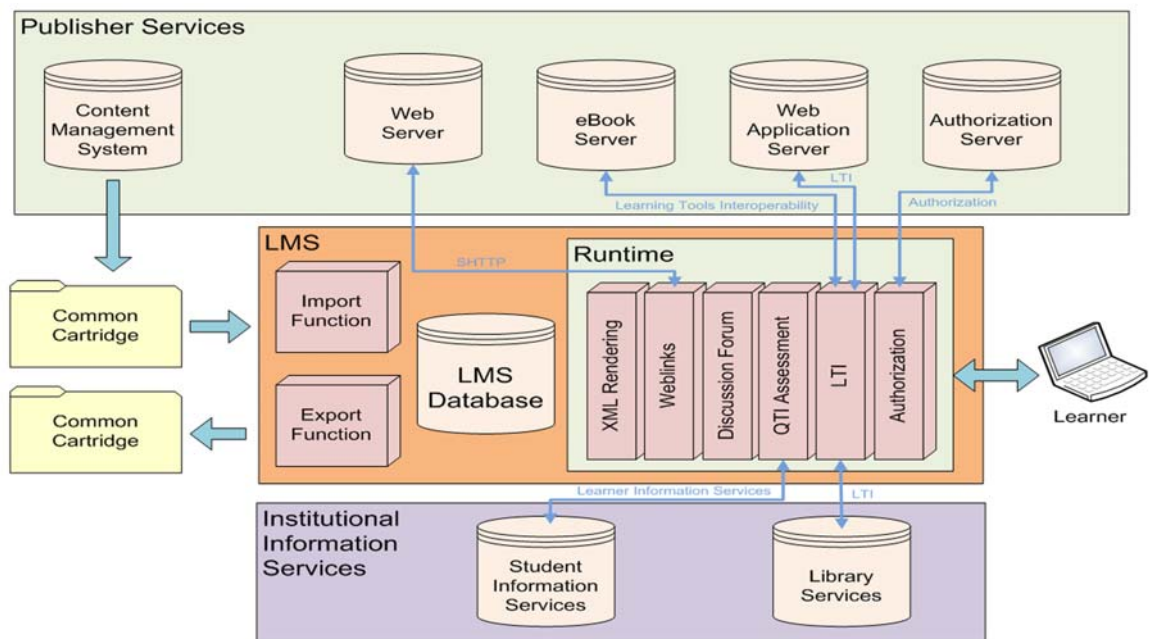
**Challenge:** A standard way to represent digital course materials for use in online learning systems such that content can be developed in one format and used across a wide variety of learning systems (e.g., LMS), enabling new publishing models for online course materials and digital books that are modular, web-distributed, interactive, and customizable; and, aligning digital content with learning objects according to curriculum standards and learning objectives to support district, state, and national reporting and comparison activities.

**IMS GLC Activity:** IMS Common Cartridge v. 1.0, <http://www.imsglobal.org/commoncartridge.html>, enables learning content and web application interoperability for rich, interactive digital content, including assessments, collaboration, integration with learning applications—with web-based authorization to all included resources; and, it includes application profiles of some of the most widely used IMS standards, including Content Packaging, Question and Test Interoperability, and Learning Tools Interoperability (<http://www.imsglobal.org/activities.html>).

**Cost:** Standardized Learning Content Development and Distribution Frameworks Enable Providers and End-users Efficiencies Resulting in Operational and Delivery Cost Savings

Building on Common Cartridge (CC) v. 1.0, CC v. 1.1 will expand CC functionality to support K-12 use cases (<http://www.imsglobal.org/cck12.html>), including vendor-neutral tagging of learning objects according to curriculum standards and learning objectives.

\*If you're interested in learning more about CC activities visit the Common Cartridge Alliance site at <http://www.imsglobal.org/cc/alliance.html>.



*Graphical Depiction of Common Cartridge Import and Functions*

Visit the IMS GLC Learning Technology Product Directory: Locate products and services spanning numerous product types and segments, and identifies which specifications the products use as well as if they have received an IMS GLC conformance mark - <http://www.imsglobal.org/productdirectory/directory.cfm>

### About IMS Global Learning Consortium (IMS GLC)

IMS Global Learning is a nonprofit member organization that strives to enable the growth and impact of learning technology in higher education, K-12, and corporate education worldwide. IMS GLC members are leading corporations, higher education institutions, school districts and government organizations who are enabling the future of education by developing interoperability and adoption practice standards for educational and learning technology. IMS GLC sponsors Learning Impact: a global program and conference that recognizes the impact of learning and educational technology on access, affordability, and quality – the world's most significant educational challenges. For more information, visit <http://www.imsglobal.org>.

