

Standards in the learning ecosystem

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Standards are a key part of maturity and interoperability in any IT environment.
What are the key standards that we need to be cognizant of in the Learning Ecosystem?

IMS standards

1. [LTI](#): Learning Tools Interoperability. The principal concept of LTI is to establish a standard way of integrating rich learning applications
2. LTI roles
3. [LIS](#) The Learning Information Services (LIS) specification is the definition of how systems manage the exchange of information that describes people, groups, memberships, courses and outcomes within the context of learning
4. [IMS Content Packaging](#) Used for example in manifest of MIT OCW courses
5. [CALIPER](#) : a proposed standard for analytics.

IEEE

[LOM](#): Learning Object Metadata

Student Academic Record

1. In North America: [PESC](#) is the de facto standards body for the exchange of academic transcripts
2. Mainly K-12, but some post-secondary: The SIF Association (<https://www.sifassociation.org/Specification/Pages/default.aspx>)
3. In Europe there is an attempt to standardize learning results across jurisdictions: European Credit Transfer and Accumulation System (ECTS)

Identity and access management

HTML 5

There are a whole bunch of features in HTML 5 that, if implemented, will make HTML 5 a universal platform for content delivery. HTML 5 will probably replace flash. In many places it should obviate the need for native apps (Android, iOS etc). For example:

1. `<audio>` and `<video>` tags allow audio and video to be embedded directly in an HTML page (with parameters)
2. SVG support will provide a universal standard for vector graphics
3. `<canvas>` tag allow 2D graphics and animations
4. MathML support will allow rendering of math and physics equations directly in the browser (as opposed to the current practice of embedding .png or .gif files)