Welcome to the 2017 IMS Europe Conference

www.imsglobal.org | @LearningImpact
THANK YOU
2017 IMS Europe Conference
SPONSORS

Diamond Partner

Platinum Partners

ACT
Blackboard
PebblePad
Vitalsource
Enabling the Plug & Play Digital Learning Ecosystem

Rob Abel Ed.D.
CEO
IMS Global Learning Consortium
imsglobal.org
rabel@imsglobal.org
@LearningImpact
"If you don't know where you are going, any road will get you there."
Engaging, Data-informed Learning and Instruction

✔ Adaptive learning software
✔ Multiple applications right now
✔ Multiple applications over time

✔ Competency
✔ Course
✔ Academic Program
✔ Lifelong
Tools for Teaching & Learning

The Ed Tech Market Map

Created By CB Insights

Tools for Teaching & Learning

Learning Management Systems
- Blackboard
- Remind
- Edmodo
- Brightwheel
- Fresh Grade
- LearnZillion
- EverFi
- Top Hat
- Mastery Connect
- PowerSchool

Early Childhood Education
- Hotchalk
- Classkick
- SpeakaBoos
- Young Alphas
- Scratch
- Tynker
- Kidaptive
- Knowledge Adventure
- Tinybop

Broad Online Learning Platforms
- Knewton
- Coursera
- LeaderIn
- Knowledge Network
- homework
- Khan Academy
- Curious
- panOpen
- EduKart
- Udemy
- edcast
- Kaltura
- lessonly
- Inkling
- NovoEd
- Exec Online
- Declara
- Degreeed
- Qstream

Enterprise Learning

Next-Gen Schools
- University Now
- Alt School
- Minerva
- Quad Learning

Tech Learning
- Udacity
- CodeAcademy
- CodeMentor
- Codelab
- CodeHS
- One Month
- Grovo
- Bloc
- Career Foundry

Curriculum Production
- Apex Learning
- Cengage Learning
- Achieve 3000

Online to Offline
- Gadois Education
- WyzAnt
- Simply Tutors
- Varsity Tutors
- Yup

Language Learning
- Babbel
- Open English
- Colingo
- Tutor Group
- noredink
- 51Talk
- Everspring

School Administration
- BloomBoard
- School Mint
- Clever
- Full Measure

Search
- Great Schools
- jeeho.com
- Edunav

Test Prep
- BYJU'S
- Toppr
- BenchPrep
- zhan.com
The “Tool Theory” of EdTech

1) Learning requires individual agency
2) The goal of education is to ignite learning agency
3) Educational technology is a “tool set” for teachers and students to aid #1 and #2
4) There will be an ever expanding set of EdTech tools – that need to improve over time
5) The EdTech community benefits from “an ecosystem” that enables choice, usability, combination, evaluation and analysis of usage and efficacy
Expectations

- Greater expectations that technology should improve teaching and learning
- Proliferation of innovative digital learning tools – that need to work together
- Expectation that the ecosystem of tools and cooperation go beyond any single platform
THE EDTECH ECOSYSTEM IS CONSTANTLY EVOLVING

Key Industry Question Remains, How Does The Ecosystem Shake Out?

BACK OFFICE PLATFORMS

CLASSROOM FOCUSED PLATFORMS

KEY INDUSTRY QUESTIONS

ADMINISTRATIVE & PLATFORMS

INSTRUCTIONAL SUPPORT TOOLS

Platform Interoperability

SIS/MIS

ASSESSMENT

Data Integration

LMS

PRODUCTIVITY

Who Is The ‘Centre Point’?

OTHER

CLASSROOM ORCHESTRATION

Where Does The Data Reside?

FINANCIAL

AUTHORING

COLLABORATION

HR/RESOURCE

PRESENTATION TOOLS

COMMUNICATION

LESSON PLANNING

SECURITY

BEHAVIOURAL MANAGEMENT

MDM

OTHER

DATA ANALYTICS
END USERS NEED HELP SIMPLIFYING THE ECOSYSTEM

There are Numerous Examples of Providers That Are Helping to Simplify the EcoSystem Having Success

Resellers Offering Increasingly Turnkey Solutions

Single Sign On Standards Emerging

Centralised Marketplace/Procurement Tools

Class Roster Interoperability

Microsoft

ThinkIT

Increasing Ecosystem Integration

Simplifying the Ecosystem

Simplifying Administrative Tasks

Google / Xirrus
Automatic Network OnBoarding

Google Classroom – Circa 10 mil users WW

Cashless Campuses Develop Traction

Show My Homework Over 20% penetration of schools in UK (Homework Management Portal)

Third Party App Integration Leading US Districts Utilising

Clever

SchoolMessenger

Noodle Markets

OneRoster

Show My Homework

© 2016 Futuresource Consulting Ltd
A business ecosystem describes the structure and behaviour of a network of high-tech organisations that share a key technological platform and the ways individual firms can flourish in such an environment.

Irrespective of an organisation’s individual strength, all actors in a business ecosystem are connected and share the success or failure of the network as a whole.
The Role of **Technical Standards**:

(a) **Seamless Integration** to enable Choice, Agility, Usability

(b) **Data Definitions** to enable Personalization, Insights, Adaptation

(c) at Internet Scale and Real-Time
IMS Has Had Equal Governance From Leading States, Institutions and Suppliers Around the World Since Its Inception

Over 115 leading HED institutions, 50 school districts, and more than 285 edtech suppliers worldwide, are working together to enable academic transformation by creating an expansive set of interoperable products to support next generation learning.
IMS Mission

The mission of the IMS Global Learning Consortium is to advance technology that can affordably scale and improve educational participation.
400+ Members and Growing

Revenue & Membership totals 2005-2016

- Revenue
- No. of Member Orgs.
Accelerating Mainstream Adoption of Innovative Technologies for 20+ Years

Since its inception in 1995, IMS has generally been 3–5 years ahead of identifying education technology trends and accelerating mainstream adoption of innovative solutions thereby offering inspiration and direction for future digital technology planning.

Essential Areas of Impact for EdTech & Standards: K-12, HED, Career
# Digital Learning rEvolution Program

<table>
<thead>
<tr>
<th>Foundation</th>
<th>Instructional Impact</th>
<th>Advancing Insights &amp; Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital on day one of learning (Easy Access)</td>
<td>Personalized learning with integrated progress data in one place</td>
<td>Improved insight into and reporting of student learning experiences</td>
</tr>
</tbody>
</table>

© 2017 IMS Global Learning Consortium, Inc. All Rights Reserved. [Trademark Information](#)  
www.imsglobal.org  @learningimpact
Example: Houston ISD Ecosystem

Learning Content & Apps

Learning Platform/Portal/LOR

IMS Open Standards:

LTI®  Thin Common Cartridge®  OneRoster™

Launch, Search, Authorize, Results

Roster Sync

School District Data
We’ve Gone From This (confusion):

To This (choice, agility, scale, innovation):

26 standards

3.1.9 VLE system Integration requirements - part of the vision of iLearnNYC is to provide a single portal for students to access course content, and for teachers and other school administrators to view students’ progress and achievements in virtual courses. Course content can be ingested into the iLearnNYC, which becomes the LMS for the ingested content. For proprietary content that cannot be ingested, iLearnNYC provides single sign-on access to that provider’s LMS. The following diagram provides a graphical view of the envisioned iLearnNYC integration with content providers: SCORM 1.3/2004, IMS, IMS LIS, IMS DRI and METS – for import and export of items

- Z39.50 – for federated searching including the ability to transform and import records
- ECL, SRW, DSM, LORN, and Google – for federated searching
- OAI-PMH and LORAX – for harvesting
- LDAP, CAS and External Authentication (Shibboleth and Microsoft ISA) – for authentication
- SOAP and WSDL – for web services
- RSS and Atomi – for publishing
- ODL – for storage of Digital Rights
- MADS, MARC 21, MARXML and MODS – for library system interfaces
What is OneRoster?

The standard for securely sharing *class rosters* and related data between a student information system (SIS) and any other system, typically a content application or learning management system (LMS)
OneRoster 1.1 Services

Class Roster

Resources

Gradebook Results
Essential Features of Learning Tools Interoperability® (LTI®)

- **Connect**: Securely connect learning platforms and tools.
- **Confirm**: Confirm the tool, the user and the context.
- **Launch**: LTI
- **Exchange**: Exchange information in a teaching and learning workflow.
- **Learning Platform**: Tool Consumer
- **Learning Tools**: Tool Provider

© 2017, IMS Global Learning Consortium, Inc. All Rights Reserved. www.imsglobal.org
The Impact of LTI

- Has reduced integration time and cost by a factor of 100-1000x
- Ubiquitous across learning platforms of all types (HED, K12, Competency-based, MOOCs, discipline specific, etc.)
- Several hundred certified LTI apps of all types, including digital resources
- Foundation for interoperable edtech data ecosystem (owned by education sector)
The Next Wave of LTI Adoption is Coming!

LTI Advantage Builds on LTI for the Trusted Exchange of Teaching & Learning Activities

1. **Names and Role Provisioning Services**
   - Enables sending a list of course participants and faculty defined groups to learning tools.

2. **Deep Linking**
   - Enables a drag and drop approach to adding content and links to a platform from a learning tool or publisher content.

3. **Assignment and Grade Services**
   - Enables passing of assignment results from the tool back to the LMS.
Caliper = Learning Analytics Ecosystem

IMS Caliper Enabled Services
- Caliper Sensor Endpoint(s)
- Compliant Data Mgmt Services

Operations Platforms

Learning Platforms

Publisher / Courseware Solutions

Instructors
Curriculum
Admins
Learning Research

Students

EP = Sensor EndPoint

EP = Sensor

EDU

EDU Tools / Services

Mobile EDU Apps

Data Management Services

Data Stores

©2017 IMS Global Learning Consortium, Inc. All Rights Reserved. Trademark Information
Caliper: Semantic, Context-Rich Data for Learning Analytics
Extended Transcripts

- Employability Skills
- Open Badges v2
- Co-Curricular
- Experiential and Prior Learning
- Courses
- Competencies
- Degrees, Certificates, Certification and Licenses
Scope of the eT Standard
Formal, informal and employer-centered learning
Higher Education (HED) Playbook: Resources to Help Institutions Transition to a Fully Integrated Digital Ecosystem to Support Next Generation Learning

The HED Playbook is an easy-to-use reference and resource center for academic and IT leaders who are implementing a digital transformation strategy to support personalized learning to improve outcomes. Created by IMS Global member institutions, these resources are designed to help institutions of all sizes shorten the learning curve around the adoption of IMS interoperability standards to create a plug and play integrated teaching and learning ecosystem.

Innovation Leadership Network
Community members benefit through the exchange of ideas and collaborative work to accelerate their progress towards an integrated EdTech ecosystem.

Getting Started
Case studies, articles, videos and much more to help districts of all sizes begin to transition to a fully integrated digital teaching and learning ecosystem.

Procurement Resources
Ensuring that your educational technology tools are IMS Certified is the best way to establish a plug and play ecosystem. IMS Global has developed RFP language and checklists that districts can use when procuring digital platforms, apps and tools.

Connected Learning Innovation Challenge
Ongoing app challenges and resources to establish connected IT architectures and policies.

https://www.imsglobal.org/HED
Final Thoughts

• The growth of the educational technology sector worldwide is dependent on an **efficient ecosystem that enables innovation**

• That ecosystem is **not likely to come** from one vendor or a small number of vendors

• **IMS Global has achieved critical mass** in North America K-12 and HED as a framework for connecting edtech and publisher digital products

• Will IMS standards achieve critical mass in other parts of the world? **Yes, with the right partnerships.**
Upcoming IMS Meetings & Deadlines

- Open Badges Summit, 1 Dec 2017, London, England
- February Meeting and Digital Credentials Summit, 26 Feb to 1 Mar 2018, Scottsdale, Arizona
- Learning Impact Leadership Institute, 21-24 May 2018, Baltimore, Maryland
  - Call for Presentations closes November 17 -
    www.imsglobal.org/lili-2018-call-proposals
- 2018 Learning Impact Awards Nominations, 3 Jan 2018 to 28 Feb 2018
- View all IMS events at www.imsglobal.org/events
Thank You

Q&A

Rob Abel, Ed.D.
raabel@imsglobal.org
Chief Executive Officer
IMS Global Learning Consortium
http://www.imsglobal.org