MAKING CONNECTIONS

Innovations for Lifelong Learning

PESC Spring 2019 Data Summit
IMS Overview

• International **non-profit** education technology collaborative

• **518** organizational members *(and growing)* representing K12, Higher Education, Corporate, and Ed-Tech suppliers

• Over **115 leading HED institutions** including 13 of the top 100 ranked institutions worldwide. **180+** education technology **suppliers and corporations**
IMS Global’s Mission

To advance teaching and learning through technology that can affordably scale to improve educational access and attainment

Better Learning
From
Better Learning Technology®
Five Strategic Program Initiatives
How Do We “Make” Standards?

**EDUCATION PROVIDERS**
- K-20 Educators
- Employer Talent Development
- Proprietary Providers

**TECHNOLOGY SUPPLIERS**
- Teaching and Learning Platforms and Tools
- Assessment Credentialing Analytics
- ...
How Do We “Make” Standards?

COLLABORATION

EDUCATION PROVIDERS

IMS FACILITATED COMMUNITIES and PROJECT GROUPS

TECHNOLOGY SUPPLIERS

Free and Open Standards
Help and Resources for Adoption
Bringing Together Like Minded Professionals
With One Goal in Mind
Leading to Employment
A Continuum of Lifelong Learning
The Talent Continuum

Open Standards for Opportunity

www.imsglobal.org/talent
A Connected Ecosystem

- PROGRAM MANAGEMENT
- INSTRUCTION
- LEARNING ANALYTICS
- CREDENTIALING
Collaboratively develop relevant, up-to-date academic programs

Described in a competency framework

With quality content and assessments aligned to competencies
Align course syllabi, content and assessments to program outcomes

Host seamlessly integrated, secure online sessions

Personalize instructional delivery
Recognize learners achievements K - Career 

Courses, competency, degrees, co-curricular and employability skills

Shareable online by the learner for real time verification

Connects to Credential Registry and industry frameworks
Continuously improve program elements with available real time, actionable data

Standardized learning events aligned to program outcomes, program materials and individual learner results

Foundation for personalization
Connected Teaching and Learning Ecosystem

PROGRAM MANAGEMENT
CASE
Common Cartridge
OneRoster
QTI

LEARNING ANALYTICS
Caliper
CASE

INSTRUCTION
CASE
LTI Advantage
LTI Resource Search
QTI

CREDENTIALING
CASE
Comprehensive Learner Record (CLR)
Open Badges (OBv2)
Skills-Based Credentials Ecosystem
Digital Credentials - Guiding Principles

• Learners’ agency over their digital credentials

• Employers connecting to job candidates based on verified skills

• Digital credentials encompass formal, community and employer-based learning
Digital Credentials - Enabling Standards

- Open Badges (OBv2)
- Comprehensive Learner Record (CLR)
- Competency and Academic Standards Exchange (CASE)
Support for Competencies in Education Systems
Institutional Systems

- Student Relationship Management
- Student Information System
- Institutional Outcomes
- Student Success and Advising
- Learning Platform/LMS
- Competency Framework
- Learning Object Repository
- Learning App or Tool
- Assessment Platform or Tool
Institutional Systems

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CASE-Connected Institutional Systems

Student Relationship Management

Student Information System

Institutional Outcomes

Student Success and Advising

Learning Platform/LMS

Competency Framework

Learning Object Repository

Assessment Platform or Tool

Full Statement:
Analyze individual's actions relative to distinct motivational theories

CASE Item URI: http://ec2-52-203-35-235.compute-1.amazonaws.com:3000/url/b641f51e-e844-11e8-b753-0242ac120003

List Enumeration in Source: 2

Last Changed: 2018-11-14T19:37:24
CASE
Competencies and Academic Standards Exchange

A data format for exchanging and aligning skill frameworks

CASE has 3 components
IMS Competencies and Academic Standards Exchange (CASE)

IMS Final Release
Version 1.0

Date Issued: 7th July, 2017
Latest version: http://www.imsglobal.org/case/

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Institution’s Competency Framework in CASE Format

PSY3029: Psychological principles in action

- Use evidence of social networks to support a grant proposal
- Analyze individual’s actions relative to distinct motivational theories
- Design an quasi-experimental study related to workplace efficiencies

Full Statement:
Analyze individual’s actions relative to distinct motivational theories

CASE Item URI: http://ec2-52-203-35-235.compute-1.amazonaws.com:3000/url/b641f51e-e844-11e8-b753-0242ac120003

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Is Related To
2.1 Use scientific reasoning to interpret psychological phenomena

APA Guidelines for the...
Institution’s Competency Framework in CASE Format

PSY3029: Psychological principles in action

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2. Analyze individual’s actions relative to distinct motivational theories
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Is Related To

2.1 Use scientific reasoning to interpret psychological phenomena

APA Guidelines for the...
Aligned to an **External Authoritative Framework Using CASE**
CASE Enables Alignment

Institutional Learning Objectives

Competency Descriptions Framework

Courses, Resources and Assessments

Evidence of Mastery

Credentials

Curriculum Elements Aligned via CASE ID’s
CASE Aligns Skills Frameworks

Education Provider → Curriculum and Competency Framework → Credential Engine

Job Data Exchange (JDX) → Position’s Skill Requirements

Industry Association

Industry Skills Framework

IMS Digital Credentials
- Open Badges
- CLR

Employers
CASE Alignment using Associations

"Statement 2.1 of Framework A is the same as Statement 3.2 of Framework B"

Associations by linking Unique ID's of CASE framework statements
Framework Associations

Framework “A”
Educator: Capella University
Program: Nurse Education

Outcome 2 **Apply assessment and evaluation methods**

Framework “B”
Industry Assoc: National League for Nursing
Framework: Core Competencies for Nurse Educators 2.0

**Competency 3.0 Use assessment and evaluation strategies**

3.1 Uses assessment and evaluation data to enhance the teaching-learning process
3.2 Provides timely, constructive, ...
Open Badges

• **Proven micro-credentials** for recognizing and recording skills in *machine readable form*

• **Portable** and controllable by the learner

• **Scalable** with millions issued to date

• **Digitally Verifiable** via automated means: e.g. http and Blockchain

• **Capable** of inclusion in comprehensive learner records
Open Badges

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- **Portable** and controllable by the learner
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There’s *data* inside!
IMS Certified OBv2 Platforms

Zero to 18 products certified OB 2.0 in twelve months
Tested and **Certified** Interoperable
Comprehensive Learner Record
CLR

Overview
Skills-Based Credentials Ecosystem

Employers

University

Community College

K12 Districts

Skills Wallet
Guiding Principles

• **Learners’ agency** over their digital credentials

• Digital credentials encompassing **formal, community based** and **employer** education

• Employers connecting to job candidates based on **verified skills**

• Centered within a vibrant **opportunity marketplace** with learner’s skills and achievements **as a currency for mobility**
Comprehensive Learner Record

- Employability Skills
- Competencies
- Courses
- Badges, Certificates, Degrees, and Licenses
- Internship, Experiential and Prior Learning
- Co-Curricular
IMS Comprehensive Learner Record (CLR)

IMS Candidate Final 1.0

Date Issued: July 6th, 2018

Latest version: http://www.imsglobal.org/et/

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Public contributions, comments and questions can be posted here: www.imsglobal.org/forums/ims-gc-public-forums-and-resources
CLR Technical Features

- A digital package containing issuer-validated achievements
- Comprised of achievement assertions optionally aligned to standards via CASE GUID
- Different achievement types have specialized data contents
- 100% compatible with Open Badges (badge can be generated from its contents)
- Links to evidence
- Web-verifiable via https get to Publisher end-point

Achievement Types:
- Competencies
- Courses
- Assessment
- Co-Curricular
- Degree
- Certificate
- License/Certification
- Badges
- Achievement

One Publisher, One Learner

Comprehensive Learner Record

1 Issuer

Achievement Record(s)

CASE-based GUID
Supports Alignment and Equivalency

Verifiable online at assertion level
CLR Technical Features

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Alignment with Skills Frameworks

State University
Anytown, USA

Sally Student
ID XX-XXXX

Comprehensive Learner Record

Co-Curricular Achievements

**Mental Health Outcomes Among Migrant Communities**

Undergraduate Research, School of Social Work
EDL 21st Century Competencies: Critical Thinking, Collaboration

Fall 2019

Alignment to External Frameworks
Alignment with Skills Frameworks

State University
Anytown, USA

Comprehensive Learner Record

Co-Curricular Achievements

Mental Health Outcomes Among Migrant Communities
Undergraduate Research, School of Social Work
EDL 21st Century Competencies: Critical Thinking, Collaboration

Universal Unique ID

http://frameworks-staging.act.org/cftree/item/180662

https://credly.com/credit/1527846

http://frameworks-staging.act.org/cftree/item/180662
## Availability of Evidence

### Comprehensive Learner Record

<table>
<thead>
<tr>
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<th>Sally Student</th>
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Comprehensive Learner Record

State University
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Co-Curricular Achievements

Mental Health Outcomes Among Migrant Communities
Undergraduate Research, School of Social Work
EDL 21st Century Competencies: Critical Thinking, Collaboration

Fall 2019

“"The most surprising thing has been being able to go to conferences and meet other professionals who can provide more perspective and strengthen your research."

Faculty Supervisor: Dr. Rowena Fong, School of Social Work

Please tell us a little bit about your research project.

My research project uses quantitative secondary data of a previous longitudinal study that examined perceptions of drug trafficking and immigration on borderland culture. Specifically, I am looking at the relationships between traditional-modern gender role beliefs, perceptions of the border environment, and mental health outcomes among...
Real-Time Verification

Display Platform

https: GET

Host Platform

200 - OK

4xx - Not Valid
Connected Ecosystem Standards
Common Cartridge

“As a teacher or instructional designer I want to deliver aligned instructional materials, videos, learning objects and competencies in an easy to install interchangeable package”
Learning Tools Interoperability (LTI)

SRM → Student Information System → Program
Success → Learning Platform/LMS
Learning Objects → APPS → Assessment Platform

Connect  Confirm  Exchange
LTI Advantage the Next Generation LTI

LTI Advantage instantly and securely connects teachers and students to digital learning objects, assessments, apps and tools for improved usability and more actionable data; LTI Advantage is the foundation for next generation digital learning
Deliver rich **assessments** aligned to **learning objectives** and **competencies**
Caliper Learning Analytics

Capture and measure learner actions and events in real time
Connected Teaching and Learning Ecosystem

PROGRAM MANAGEMENT
- CASE
- Common Cartridge
- OneRoster
- QTI

LEARNING ANALYTICS
- Caliper
- CASE

INSTRUCTION
- CASE
- LTI Advantage
- LTI Resource Search
- QTI

CREDENTIALING
- CASE
- Comprehensive Learner Record (CLR)
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The Future of EdTech Starts Here

The Learning Impact Leadership Institute offers powerful (and practical) ideas for moving the edtech ecosystem forward, motivation to transform teaching and learning technology at your organization, and valuable networking opportunities with peers and partners.

At the Learning Impact Leadership Institute, you will connect with educational technology leaders from all over the world. This is the only gathering for higher education, K-12, and edtech providers of all sizes where all communities are integrated and have an equal voice in shaping our digital learning ecosystem for the benefit of all.

The 2019 Learning Impact Leadership Institute will be held at the beautiful Manchester Grand Hyatt waterfront hotel in San Diego, California.

https://www.imsglobal.org/lili2019
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PESC Spring 2019 Data Summit