

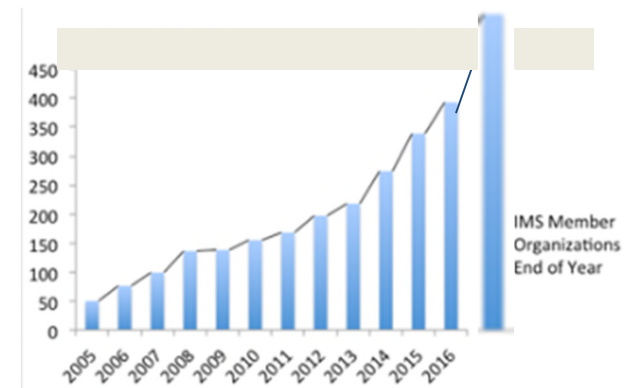
MAKING CONNECTIONS

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



DIGITAL CREDENTIALS
& PATHWAYS



LEARNING PLATFORMS,
APPS & TOOLS



INTEGRATED
ASSESSMENT



LEARNING DATA &
ANALYTICS



ADAPTIVE DIGITAL
CURRICULUM

How Do We “Make” Standards?



EDUCATION PROVIDERS

K-20 Educators
Employer Talent
Development
Proprietary Providers

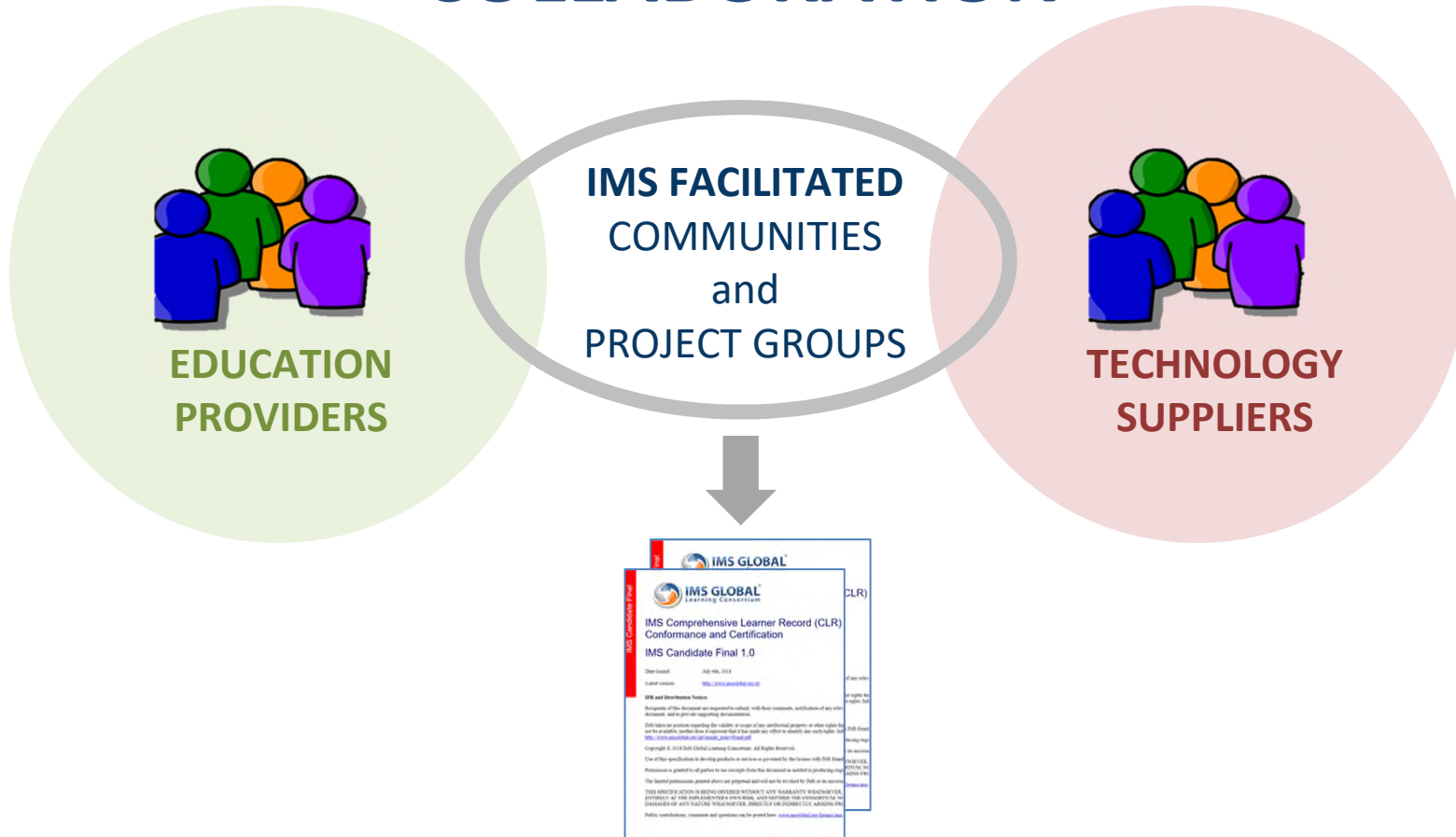


TECHNOLOGY SUPPLIERS

Teaching and Learning
Platforms and Tools
Assessment
Credentialing
Analytics

...

How Do We “Make” Standards? **COLLABORATION**



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

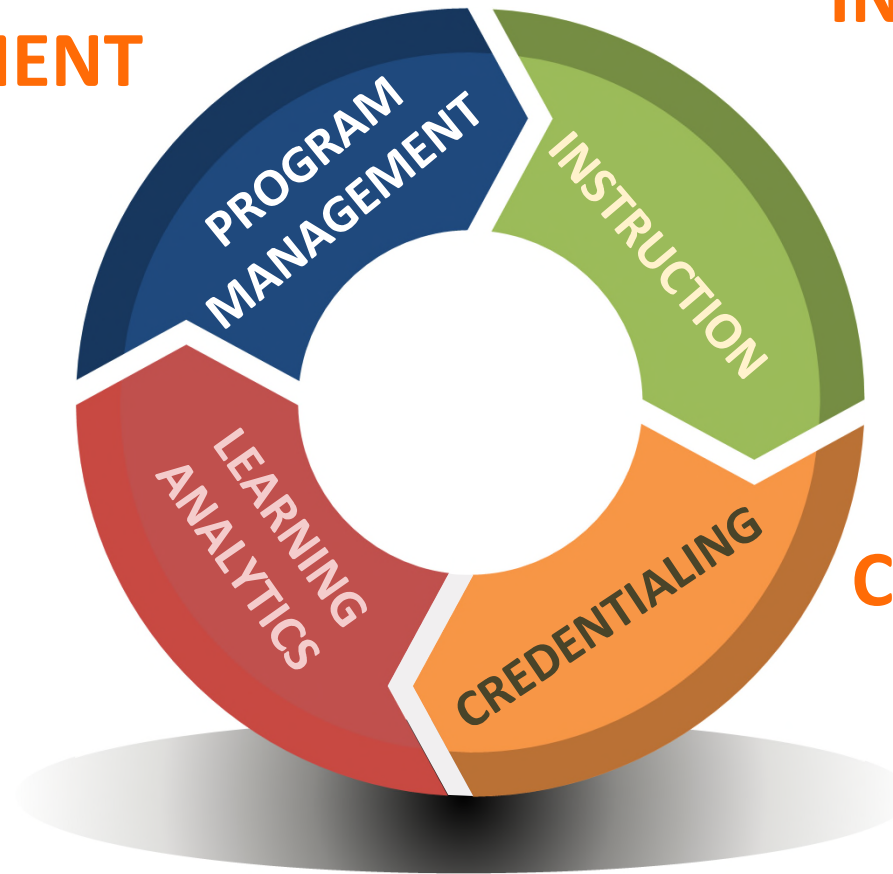
A Connected Ecosystem

**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

CONNECTED PROGRAM MANAGEMENT



CONNECTED INSTRUCTION



Align course syllabi, content and assessments to program outcomes

Host seamlessly integrated, secure online sessions

Personalize instructional delivery

CONNECTED CREDENTIALING



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



CONNECTED LEARNING ANALYTICS

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



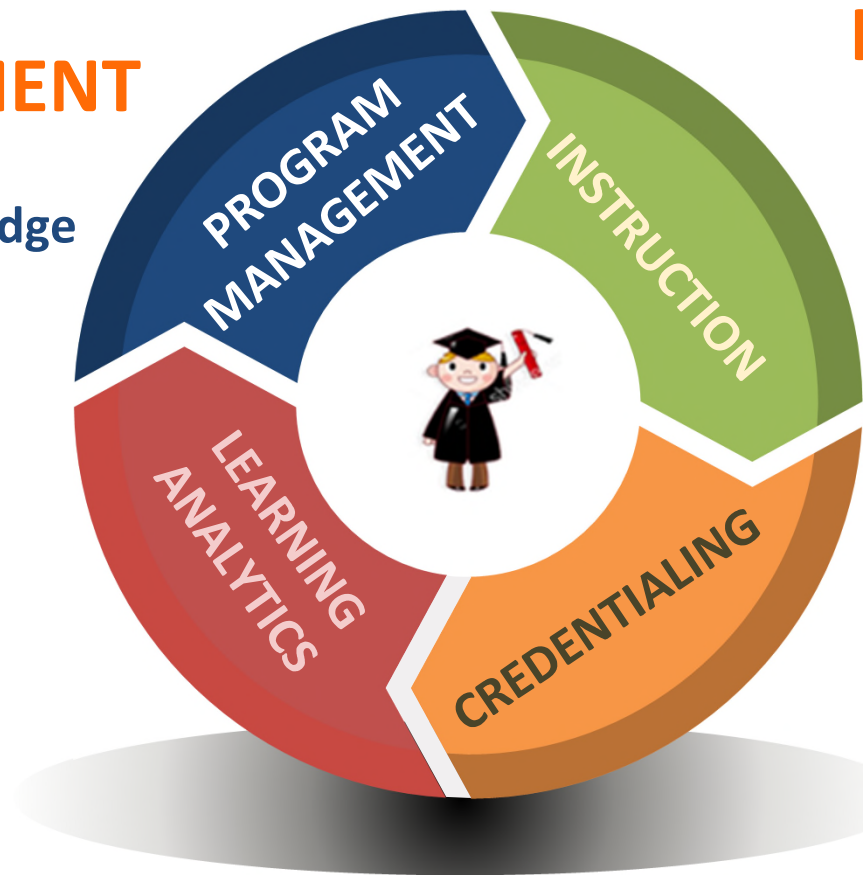
Connected Teaching and Learning Ecosystem

PROGRAM MANAGEMENT

CASE
Common Cartridge
OneRoster
QTI

LEARNING ANALYTICS

Caliper
CASE



INSTRUCTION

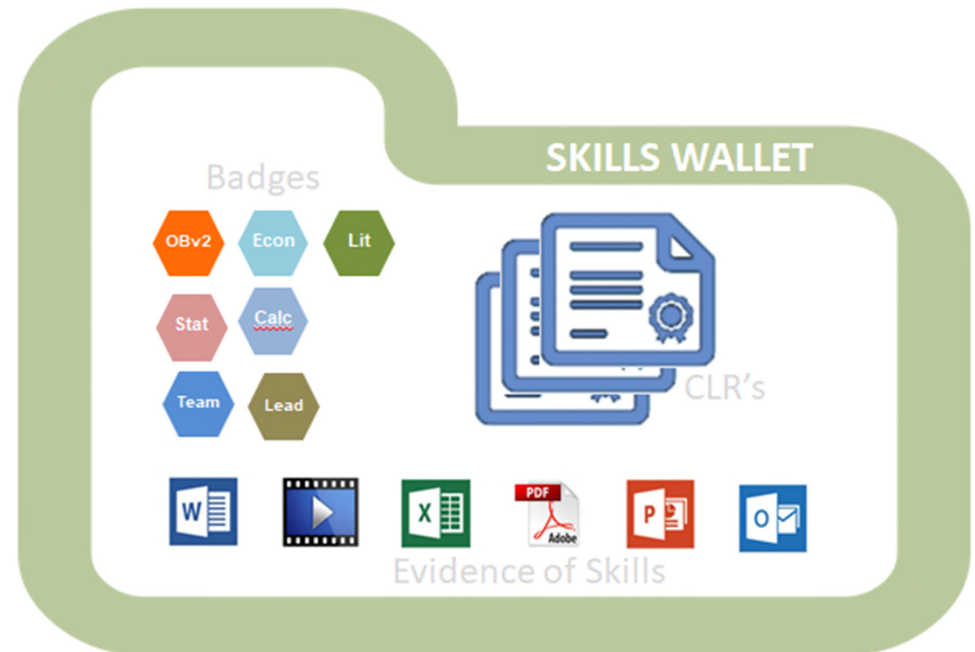
CASE
LTI Advantage
LTI Resource Search
QTI

CREDENTIALING

CASE
Comprehensive
Learner Record (CLR)
Open Badges (OBv2)

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

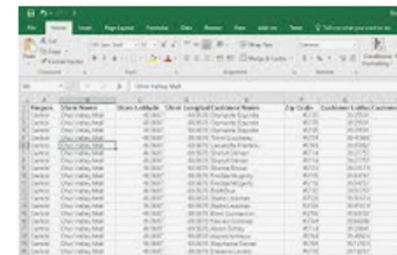
Student
Relationship
Management

Student Information System

Institutional
Outcomes

Student
Success and
Advising

Learning Platform/LMS



Competency Framework

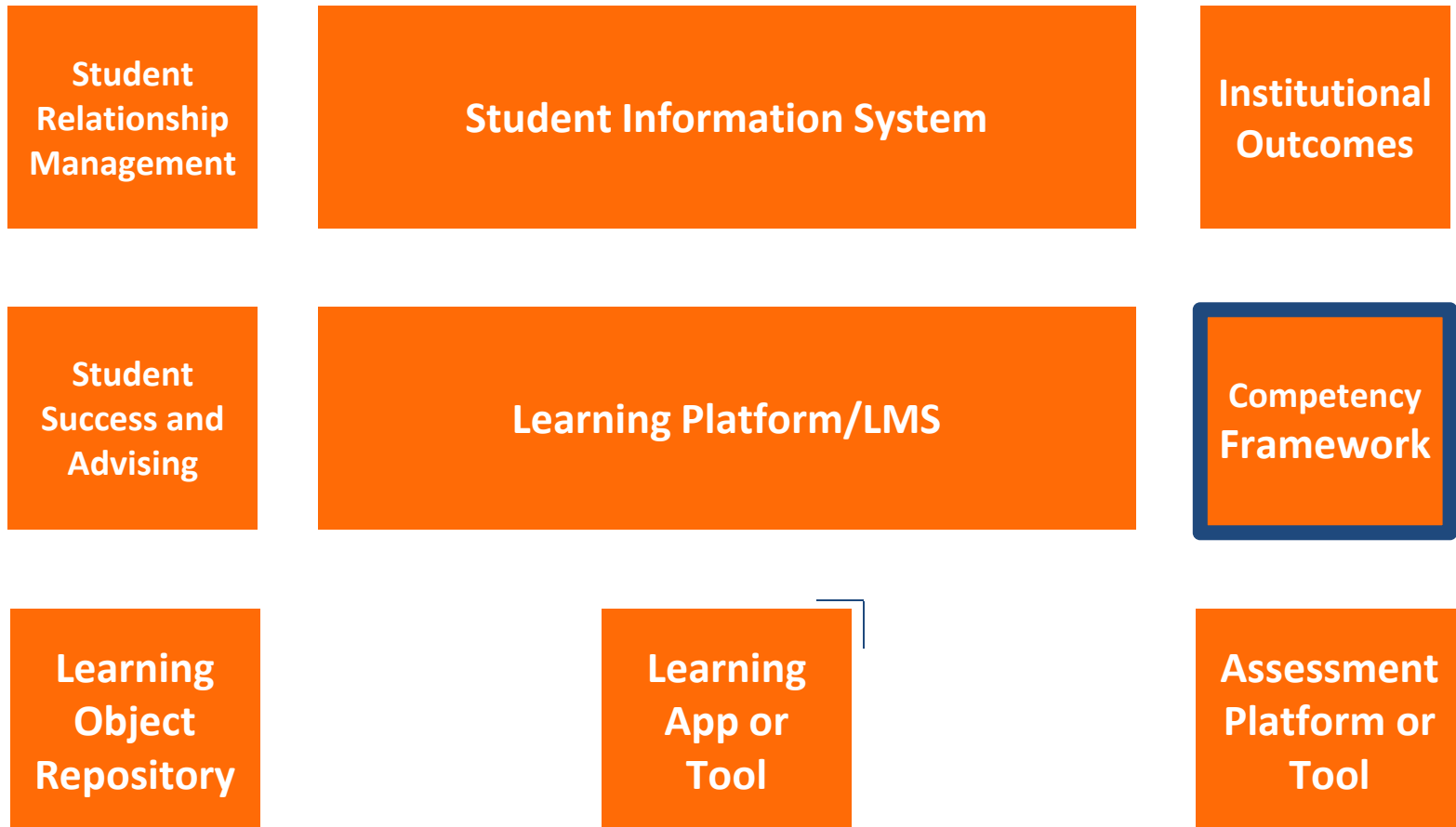
Program	Course	Class	Section	Section Leader	Section Status	Section Type	Section Location	Section Dates	Section Times	Section Seats	Section Enroll	Section Waitlist	Section Prereqs	Section Co-reqs	Section Notes
...

Learning
Object
Repository

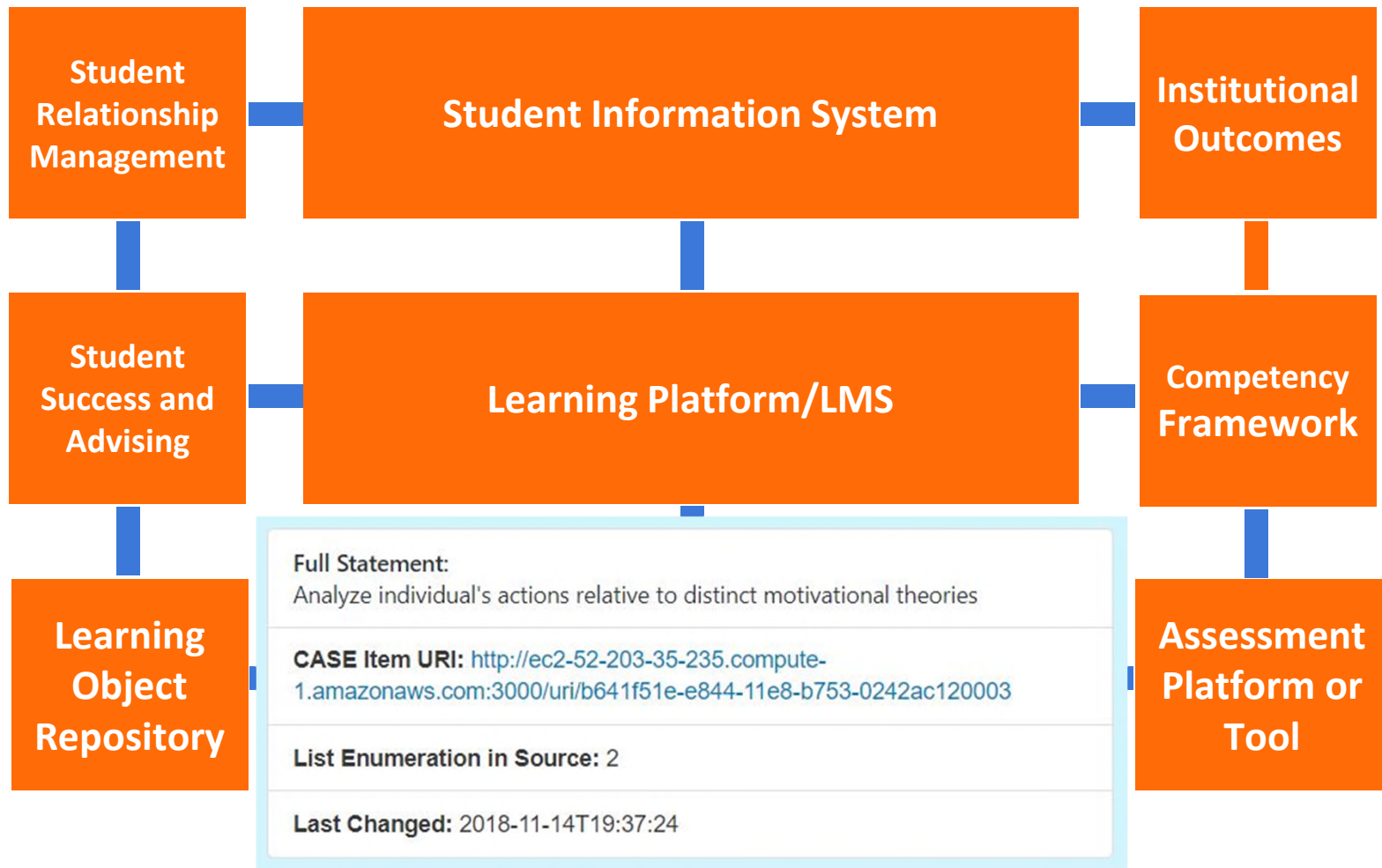
Learning
App or
Tool

Assessment
Platform or
Tool

Institutional Systems



CASE-Connected Institutional Systems



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/>

IPR and Distribution Notices

Recipients of this document are requested to submit, with their comments, notification of any relevant patent claims or other intellectual property document, and to provide supporting documentation.

IMS takes no position regarding the validity or scope of any intellectual property or other rights that might be claimed to pertain to the implement not be available; neither does it represent that it has made any effort to identify any such rights. Information on IMS's procedures with respect to http://www.imsglobal.org/ipr/imsipr_policyFinal.pdf.

Copyright © 2017 IMS Global Learning Consortium. All Rights Reserved.

Use of this specification to develop products or services is governed by the license with IMS found on the IMS website: <http://www.imsglobal.org>

Permission is granted to all parties to use excerpts from this document as needed in producing requests for proposals.

The limited permissions granted above are perpetual and will not be revoked by IMS or its successors or assigns.

THIS SPECIFICATION IS BEING OFFERED WITHOUT ANY WARRANTY WHATSOEVER, AND IN PARTICULAR, ANY WARRANTY ENTIRELY AT THE IMPLEMENTER'S OWN RISK, AND NEITHER THE CONSORTIUM, NOR ANY OF ITS MEMBERS OR SUBMITTE DAMAGES OF ANY NATURE WHATSOEVER, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF THIS SPECIFICATION.


Institution's Competency Framework in CASE Format

PSY3029: Psychological principles in action

Tree View

Association View

Search...

- ▼  PSY3029: Psychological principles in action
 - 🎯 1 Use evidence of social networks to support a grant proposal
 - 🎯 2 Analyze individual's actions relative to distinct motivational theories
 - 🎯 3 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/uri/b641f51e-e844-11e8-b753-0242ac120003>

List Enumeration in Source: 2

Last Changed: 2018-11-14T19:37:24

Less Info

Is Related To



2.1 Use scientific reasoning to interpret psychological phenomena

APA Guidelines for the ...

About OpenSALT

Institution's Competency Framework in CASE Format

PSY3029: Psychological principles in action Tree View Association View

Search...

- PSY3029: Psychological principles in action
 - 1 Use evidence of social networks to support a grant proposal
 - 2 Analyze individual's actions relative to distinct motivational theories
 - 3 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/uri/b641f51e-e844-11e8-b753-0242ac120003>

List Enumeration in Source: 2

Last Changed: 2018-11-14T19:37:24

[Less Info](#)













Is Related To 


2.1 Use scientific reasoning to interpret psychological phenomena
APA Guidelines for the ...

Aligned to an External Authoritative Framework Using CASE

APA Guidelines for the Undergraduate Psychology Major Tree View Association View

Search...

- ▼  APA Guidelines for the Undergraduate Psychology Major
 - ▶  1 Knowledge Base
 - ▶  2 Scientific Inquiry and Critical Thinking
 - ▼  2.1 Use scientific reasoning to interpret psychological pheno...
 -  2.1a Identify basic biological, psychological, and social co...
 -  2.1A Describe the value and limitation of using theories to ...
 -  2.1b Use psychology concepts to explain personal experien...
 -  2.1B Develop plausible behavioral explanations that rely on...
 -  2.1c Use an appropriate level of complexity to interpret be...
 -  2.1C Incorporate several appropriate levels of complexity (...)
 -  2.1d Ask relevant questions to gather more information ab...
 -  2.1D Generate alternative explanations based on perceived...

 **2.1 Use scientific reasoning to interpret psychological phenomena**

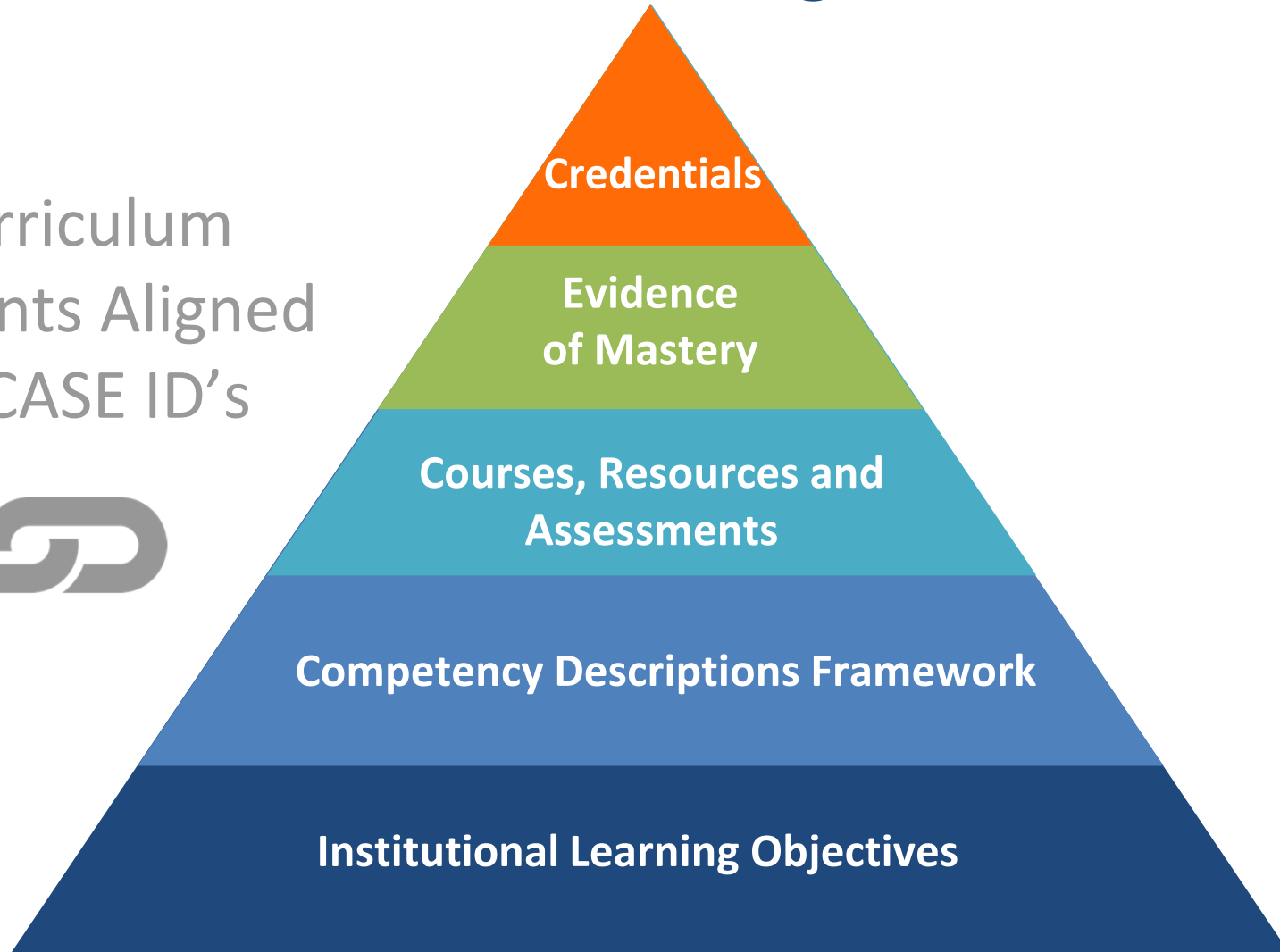
Full Statement: Use scientific reasoning to interpret psychological phenomena
Type: Student Learning Outcome
CASE Item URI: http://ec2-52-203-35-235.compute-1.amazonaws.com:3000/uri/6c419d40-73f3-11e8-b629-0242ac120003
List Enumeration in Source: 1
Last Changed: 2018-10-08T18:43:33

[Less Info](#)

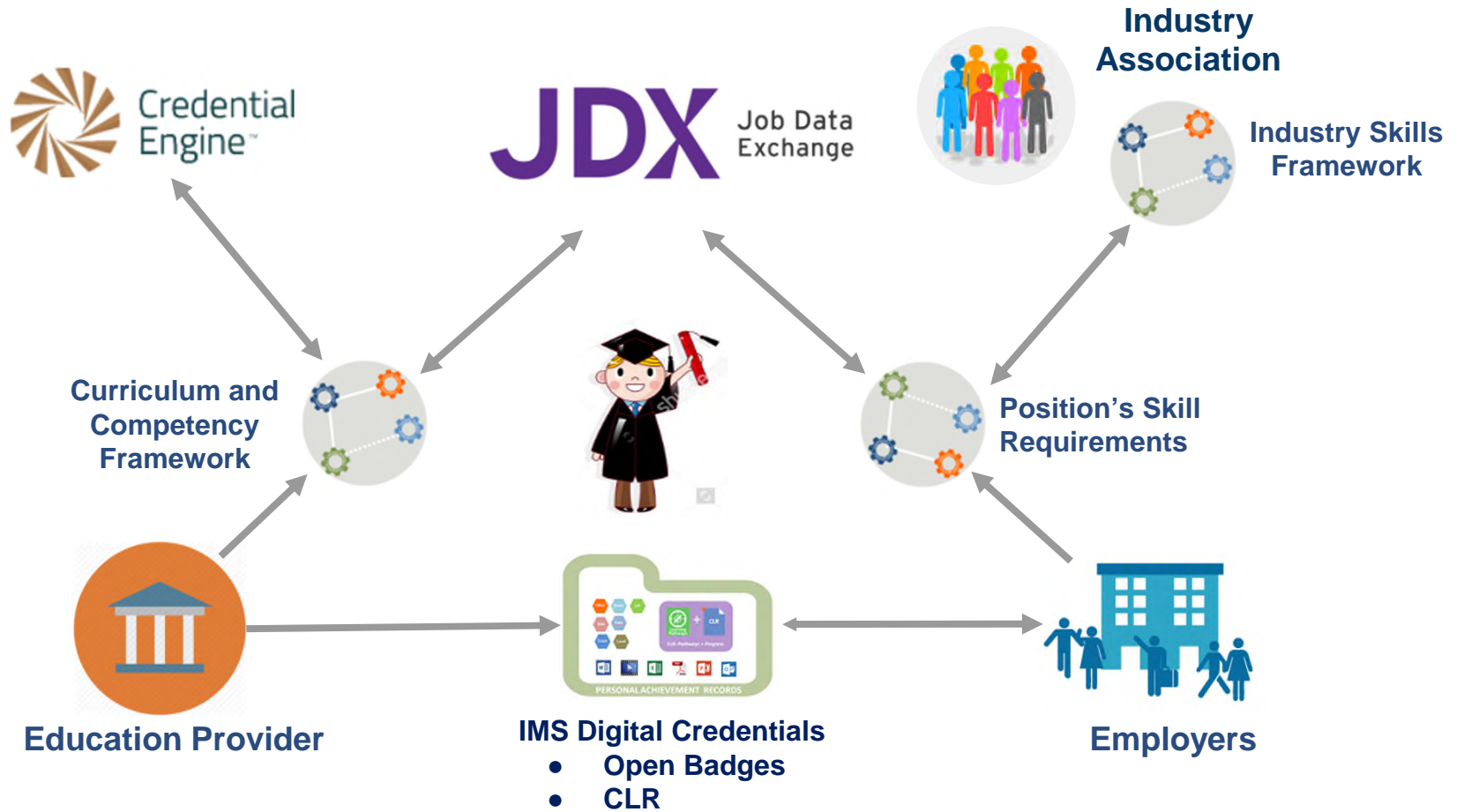
About OpenSALT

CASE Enables Alignment

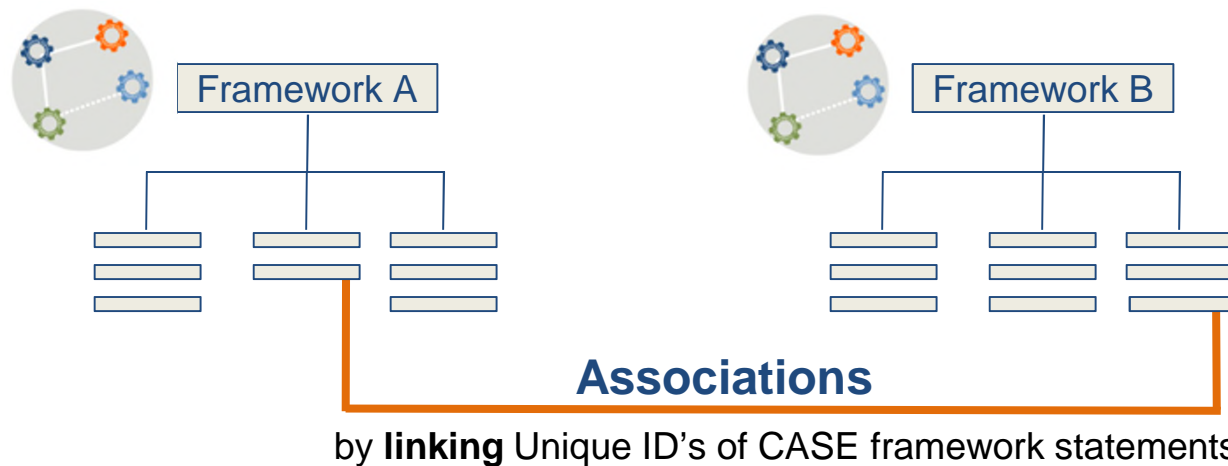
Curriculum
Elements Aligned
via CASE ID's



CASE Aligns Skills Frameworks



CASE Alignment using Associations



“Statement 2.1 of Framework A **is the same as** Statement 3.2 of Framework B”

Framework Associations

Framework “A”

Educator: Capella University

Program: Nurse Education

Outcome 2 Apply assessment and evaluation methods

Machine Readable
Associations

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

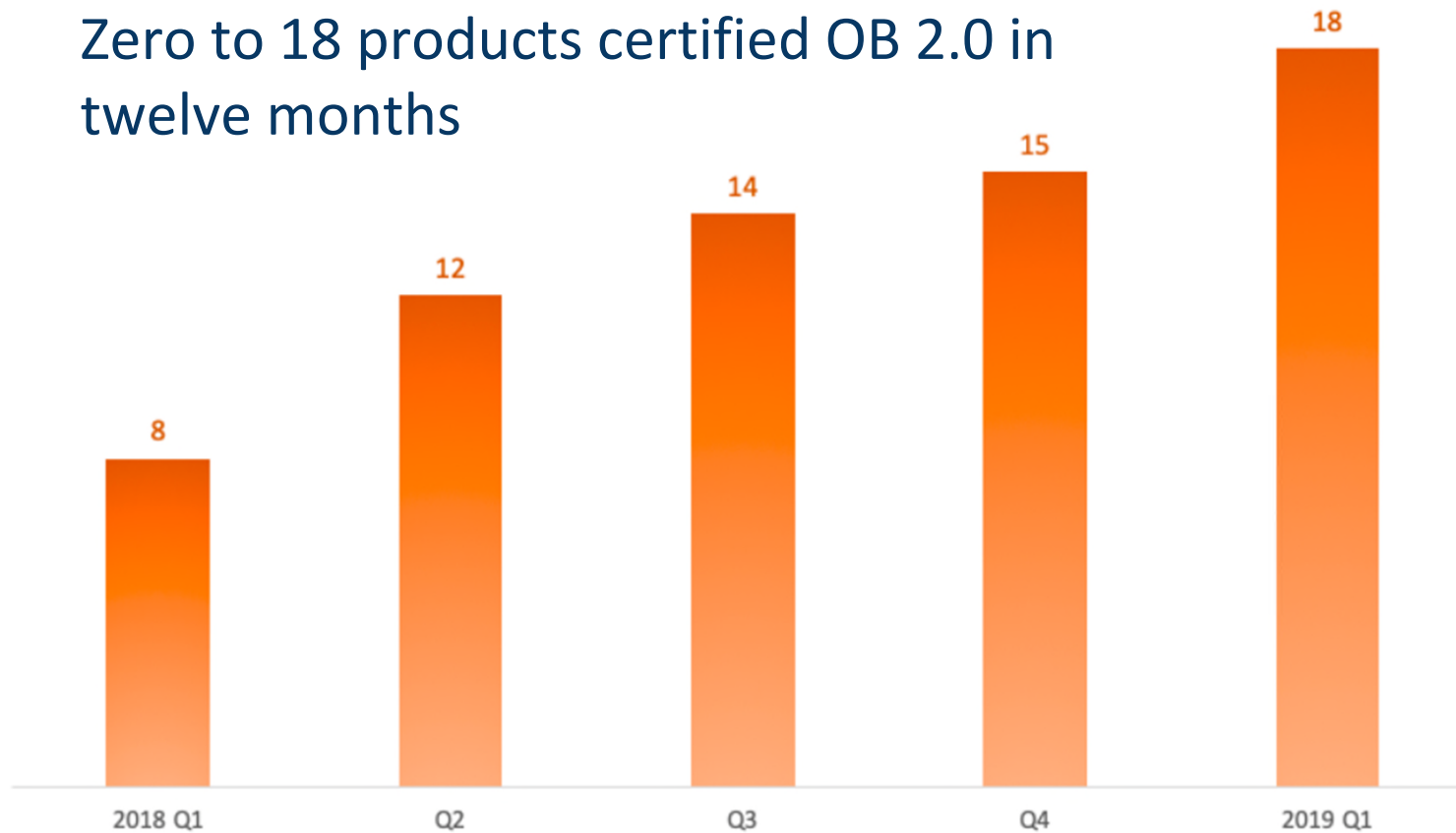


There's *data* inside!

- **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

IMS Certified OBv2 Platforms

Zero to 18 products certified OB 2.0 in twelve months



Tested and Certified Interoperable

Search by algolia

20 results found in 2ms

Applied Filters

OPEN BADGES
CLEAR ALL

Acclaim v20180221
By Pearson Education

- Open Badges v2.0

Accredible v1.1
By Accredible

- Open Badges v2.0

VETTED

Badgr v3.1
By Concentric Sky

Standards

- CASE 8
- Caliper Analytics 10
- Common Cartridge 502
- Common Cartridge (Thin) 543
- LIS 2
- LTI 244
- LTI Advantage 9
- LTI Resource Search 5
- OneRoster 221
- Open Badges 20

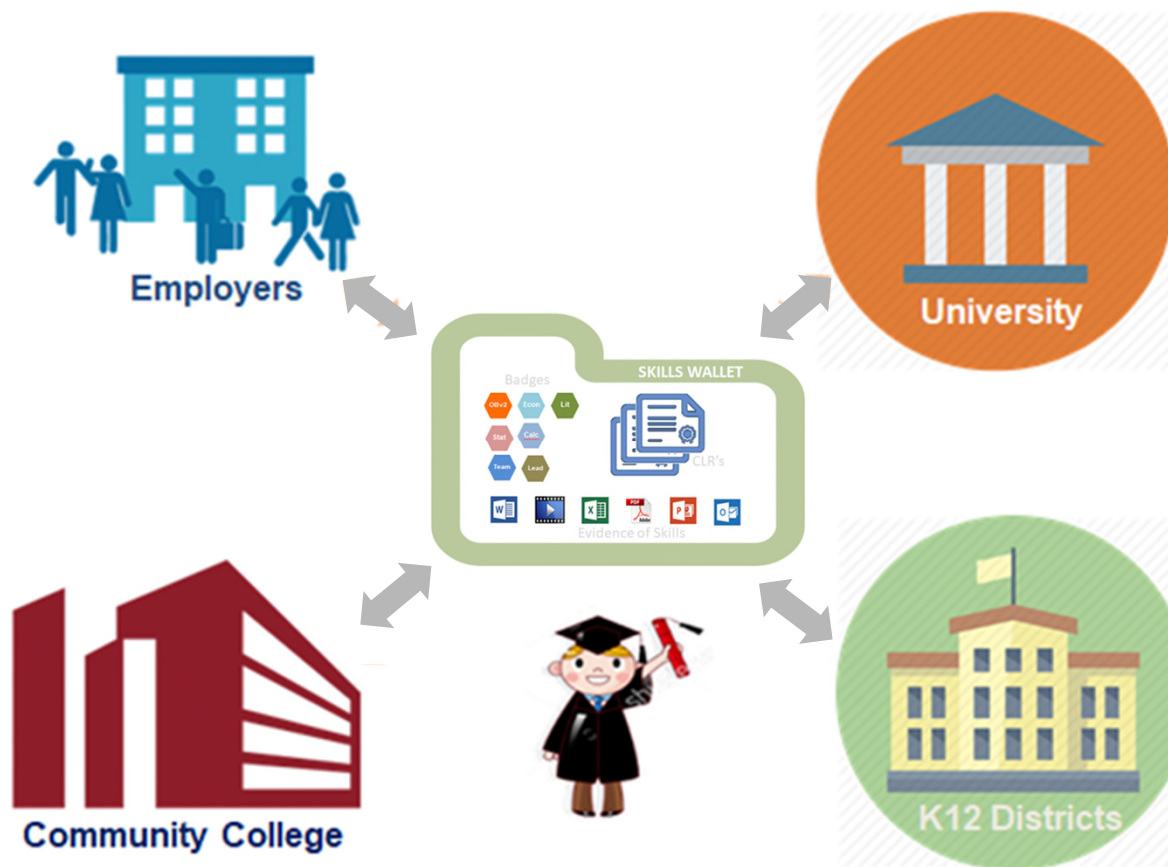
- Version 1.0 3
- Version 2.0 17
- STANDARDS 281



Comprehensive Learner Record CLR

Overview

Skills-Based Credentials Ecosystem



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





IMS Comprehensive Learner Record (CLR)

IMS Candidate Final 1.0

Date Issued: July 6th, 2018

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

IPR and Distribution Notices

Recipients of this document are requested to submit, with their comments, notification of any relevant patent claims or other intellectual property rights, and to provide supporting documentation.

IMS takes no position regarding the validity or scope of any intellectual property or other rights that might be claimed to pertain to the implementation of this specification, or to the process of making, using, or selling anything that implements this specification, or to the process of making, using, or selling anything that implements this specification, or to the process of making, using, or selling anything that implements this specification, or to the process of making, using, or selling anything that implements this specification. Information on IMS's procedures with respect to rights in intellectual property that may be related to this specification may be found in http://www.imsglobal.org/ipr/imsipr_policyFinal.pdf.

Copyright © 2018 IMS Global Learning Consortium. All Rights Reserved.

Use of this specification to develop products or services is governed by the license with IMS found on the IMS website: <http://www.imsglobal.org/s>

Permission is granted to all parties to use excerpts from this document as needed in producing requests for proposals.

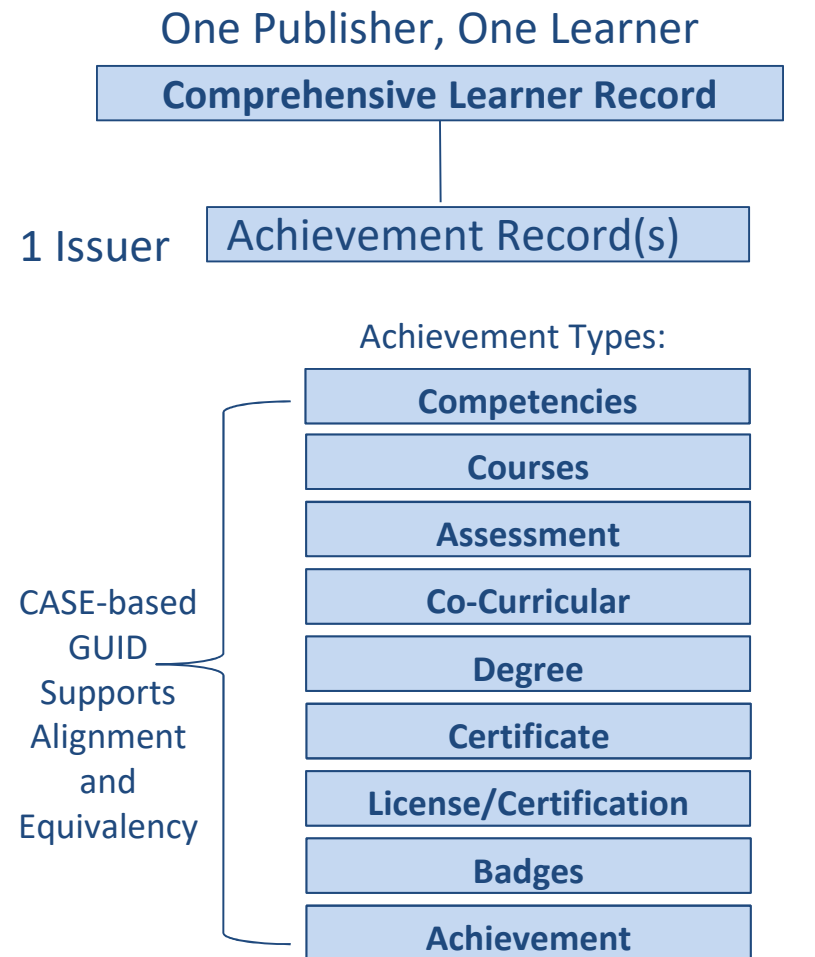
The limited permissions granted above are perpetual and will not be revoked by IMS or its successors or assigns.

THIS SPECIFICATION IS BEING OFFERED WITHOUT ANY WARRANTY WHATSOEVER, AND IN PARTICULAR, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS HEREBY DISCLAIMED. THE CONSORTIUM, NOR ANY OF ITS MEMBERS OR SUBMITTERS, SHALL BE LIABLE FOR DAMAGES OF ANY NATURE WHATSOEVER, DIRECTLY OR INDIRECTLY, ARISING FROM THE USE OF THIS SPECIFICATION.

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

CLR Technical Features

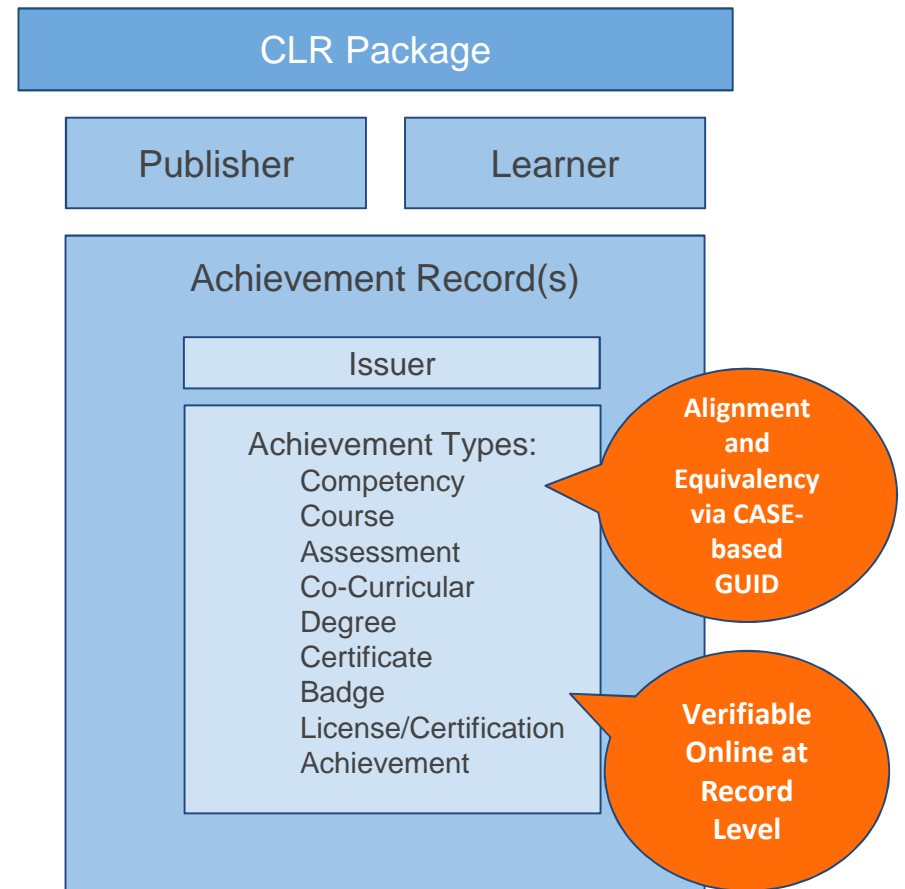
- A digital package containing issuer-validated achievements
- Comprised of achievement assertions optionally aligned to standards via CASE GUID
- Different achievement types have specialized data contents
- 100% compatible with Open Badges (badge can be generated from its contents)
- Links to evidence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



Verifiable online at assertion level

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



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	Fall 2019
Undergraduate Research, School of Social Work	
EDL 21st Century Competencies: Critical Thinking , Collaboration	

**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](#)

Tree View Association View

Private Draft

The Lab's 21st Century Skills Badges

Association group: - Default Group -

Search...


- ▼ The Lab's 21st Century Skills Badges
 - ▶ Initiative
 - ▶ **Critical Thinking**
 - ⊙ Identify Patterns
 - ⊙ Gather and Assess Relevant Information
 - ⊙ Question Assumptions
 - ⊙ Draw Conclusions
 - ▶ Oral Communication
 - ▶ Empathy
 - ▶ Intercultural Fluency
 - ▶ Creative Problem Solving
 - ▶ Collaboration
 - ▶ Resilience

⊙ Critical Thinking


Full Statement:
Critical thinking in the 21st century includes the capacity to reason logically and rigorously. Effective critical thinkers exhibit four core sub-competencies: gather and assess relevant information; identify patterns; question assumptions; and draw well-reasoned conclusions.

Identifier: 0fc21874-9cb6-11e8-a029-a34e500b64d9

More Info



Universal Unique ID



CRITICAL THINKING

<https://credly.com/credit/1527846>
1

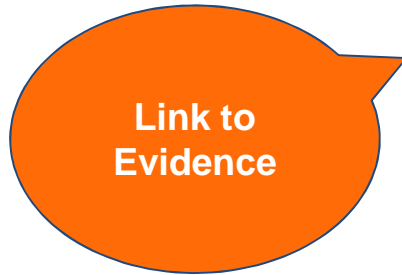
To comment please login first

Newest Oldest Popular Attachments

No comments

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

Availability of Evidence




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

Availability of Evidence

State University
Anytown, USA



Sally Student
ID XX-XXXX

Comprehensive Learner Record 
Universal Unique ID

Co-Curricular Achievements

[Mental Health Outcomes Among Migrant Communities](#) Fall 2019
Undergraduate Research, School of Social Work
EDL 21st Century Competencies: [Critical Thinking](#), [Collaboration](#)

UNDERGRADUATE RESEARCH


[MAKE A GIFT](#)  


► Undergraduate Research Menu

► FIND US

HOME » OUR » STUDENT-PROFILES » MARIA RENTERIA

STUDENT PROFILE

M 



Major: Social Work and Anthropology

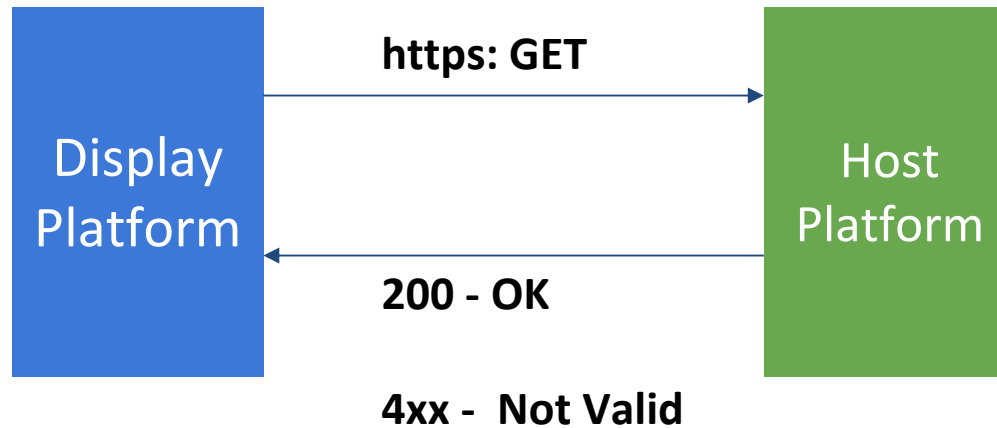
"The most surprising thing has been being able to go to conferences and meet other professionals who can provide more perspective and strengthen your research."

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

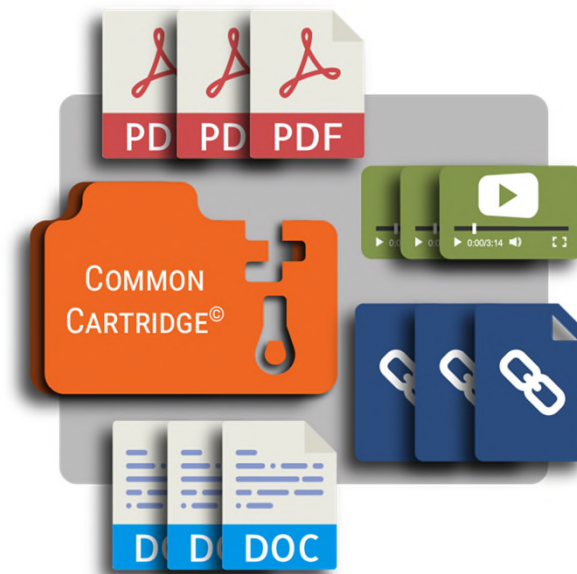
Real-Time Verification





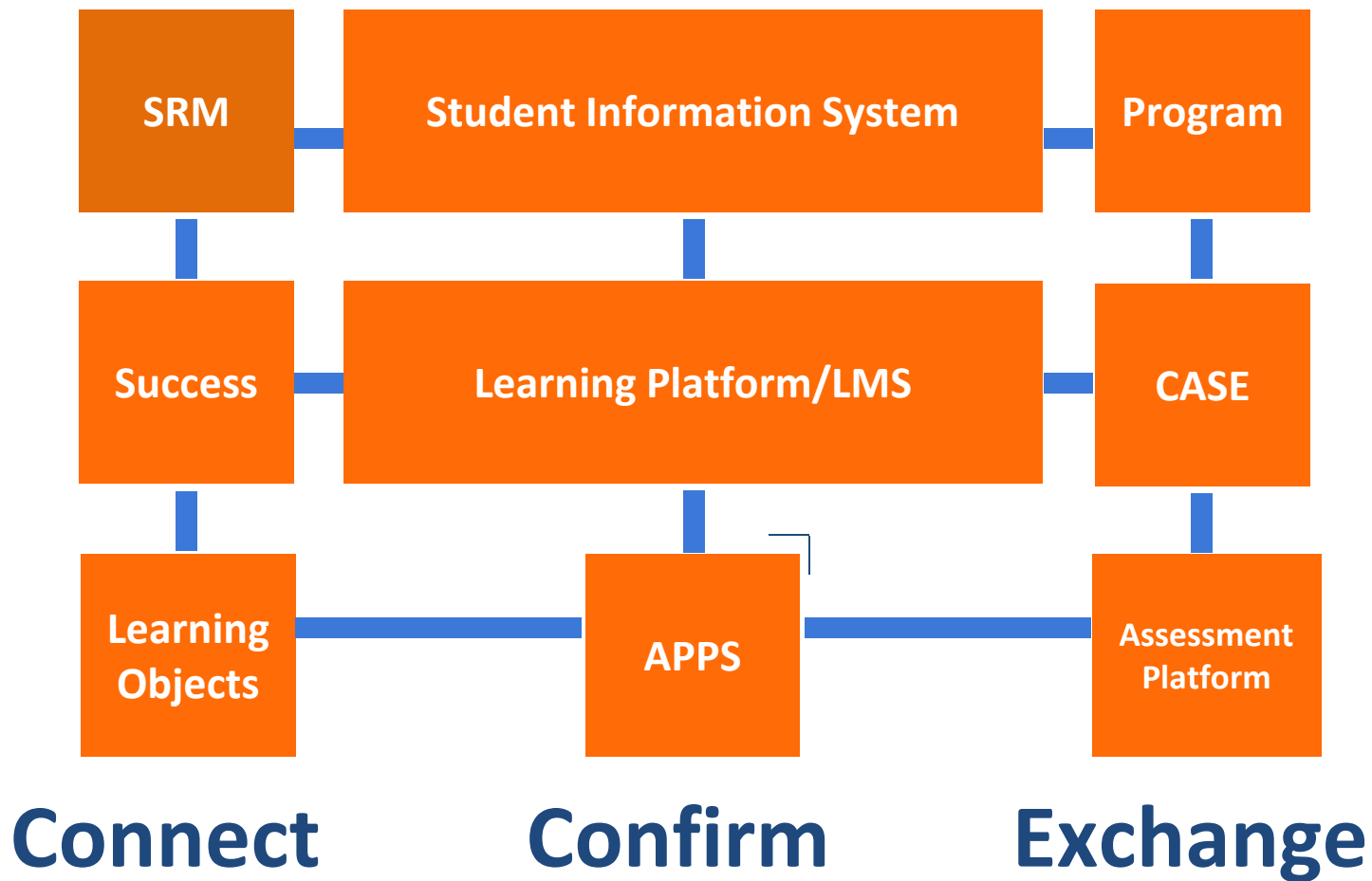
Connected Ecosystem Standards

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)



LTI Advantage the Next Generation LTI

Blackboard



VitalSource®

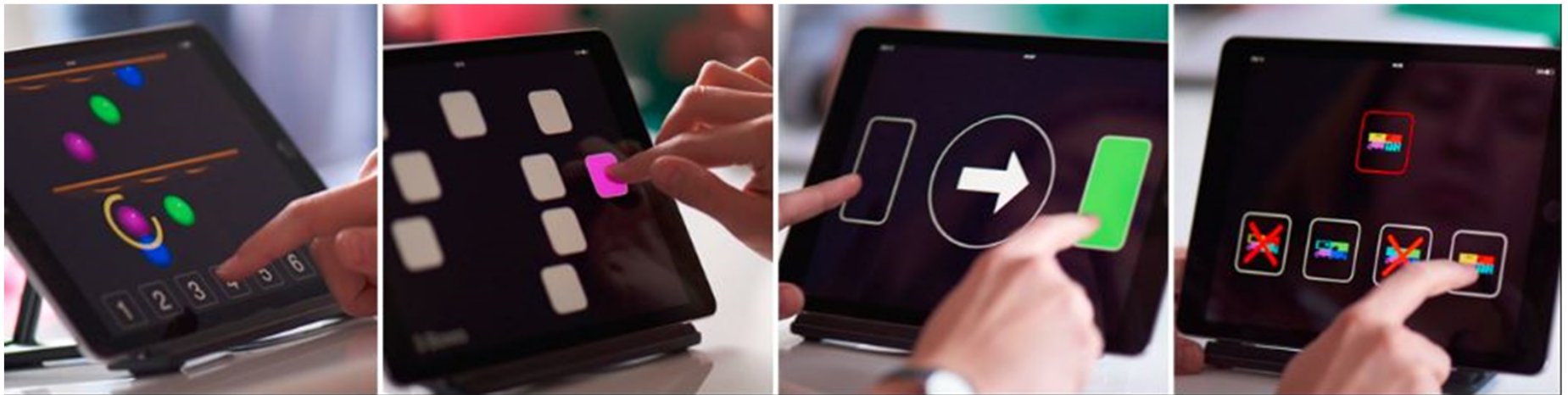


**moodle**

D2L
DESIRE2LEARN

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**

Question Test Interoperability



*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

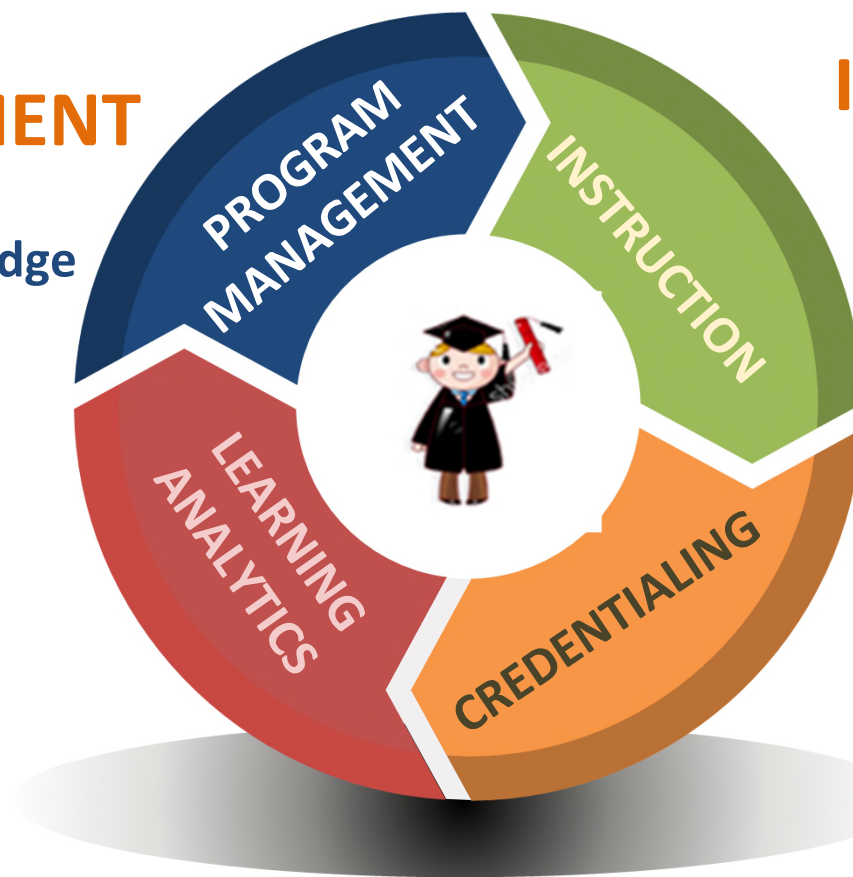
PROGRAM

MANAGEMENT

CASE
Common Cartridge
OneRoster
QTI

LEARNING ANALYTICS

Caliper
CASE



INSTRUCTION

CASE
LTI Advantage
LTI Resource Search
QTI

CREDENTIALING

CASE
Comprehensive
Learner Record (CLR)
Open Badges (OBv2)

LEARNING IMPACT LEADERSHIP INSTITUTE 2019

20-23 MAY 2019 | SAN DIEGO, CALIFORNIA

The Future of EdTech Starts Here

REGISTER NOW 

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>

2019 Conference Details

[Agenda](#)

[Track Descriptions](#)

[Registration](#)

[Speakers](#)

[Sponsors](#)

[Sponsorship Opportunities](#)

[Media Partner Program](#)

Join the Conversation

Follow [@LearningImpact](#) and [#LILI2019](#)

Learning Impact Awards

[2019 Finalists and Voting](#)

[Program Details and Eligibility](#)

[Learning Impact Report](#)

[2018 Award Winners](#)

MAKING CONNECTIONS

Innovations for Lifelong Learning

PESC Spring 2019 Data Summit