



# ADL Training & Learning Architecture (TLA)

Mr. Jonathan Poltrack

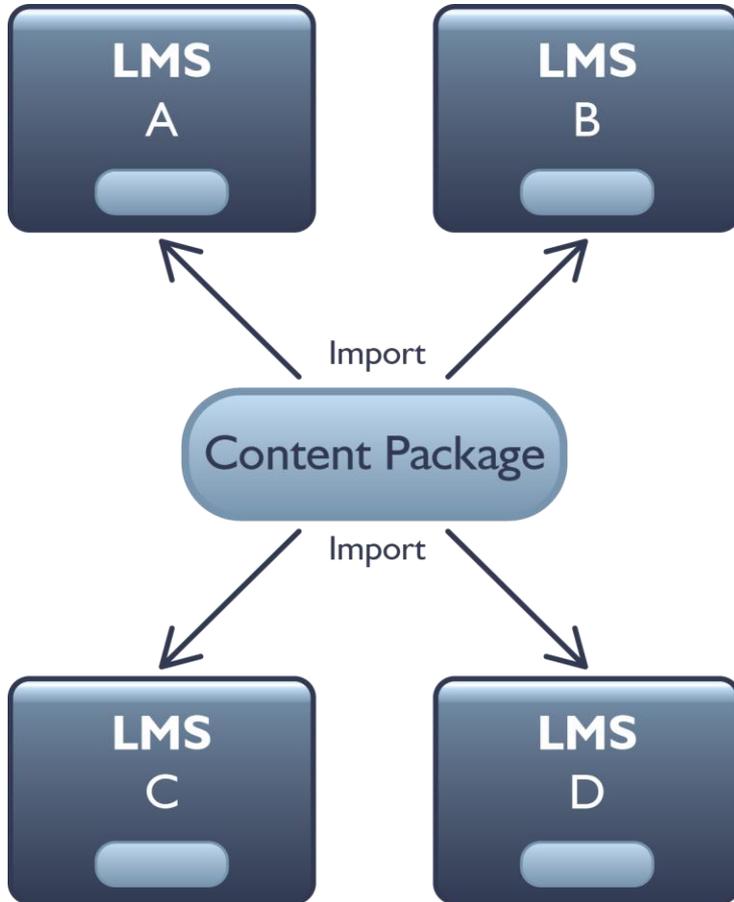
ADL Alexandria Co-Lab Director of Operations & Technical Team Co-Lead

Contractor with Problem Solutions LLC, SETA Support for ADL

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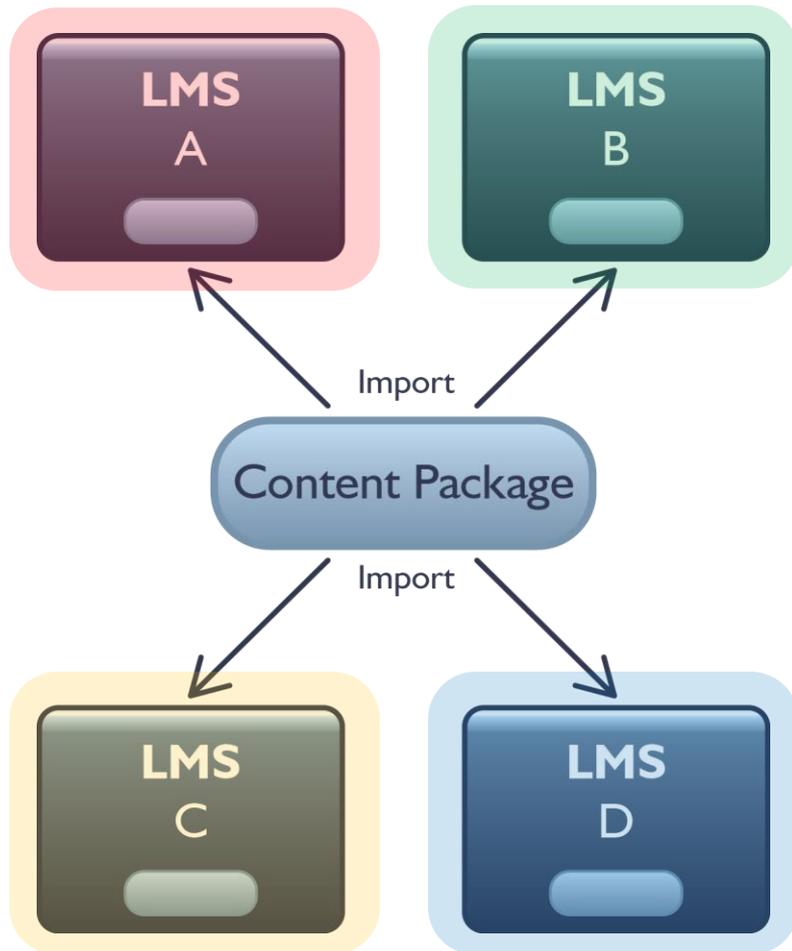
# The Traditional Learning Enterprise



## Distributed Content

- ▶ **Web-Based Content Packages imported into LMSs**
- ▶ **Content duplicated in each system**
- ▶ **LMSs contain the content, control access and manage learning data**

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## Distributed Content

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# This Worked Well for Web-Based Activities

- ▶ Platform was intended for web-based content-only
- ▶ Run-Time Environments (RTEs )used JavaScript (ECMAScript) which is widely used by web programmers
- ▶ Data Model provided a means to get and set common data elements like scores, complete/incomplete, pass/fail, etc.
- ▶ DoD and Services had immediate problem moving courses to other LMSs on secure networks

# New Expectations

What will you expect your next generation learning environment to provide?

# Next Generation Environment



**Access From  
Any Device**



**Personalized  
and Brokered  
Content**

- Just-in-Time
- Just-for-You



**Learn From:**

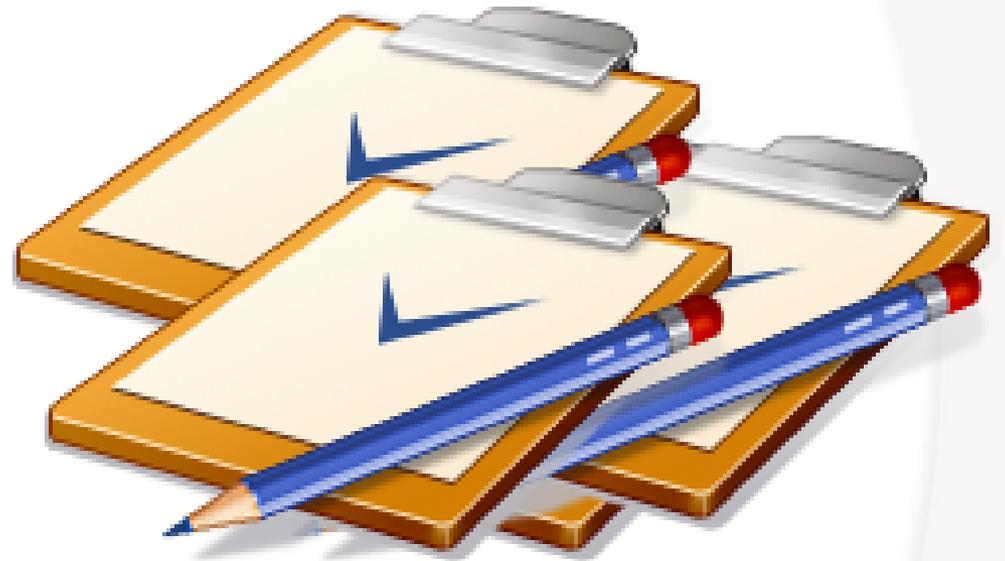
- Intelligent Tutors
- Mentors and peers via social networks
- Self-Discovery

**Learn Using:**

- Simulations
- Games
- Virtual Worlds
- Intelligent content

# Learn on any Platform...

**... and get credit for it**



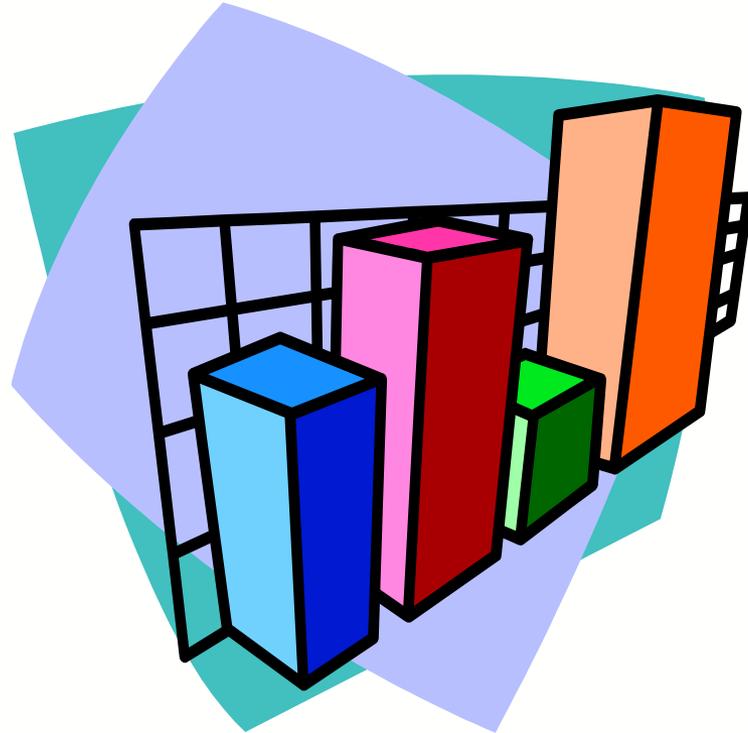
# Tailor Content...

... based on a complete and thorough set of learner data



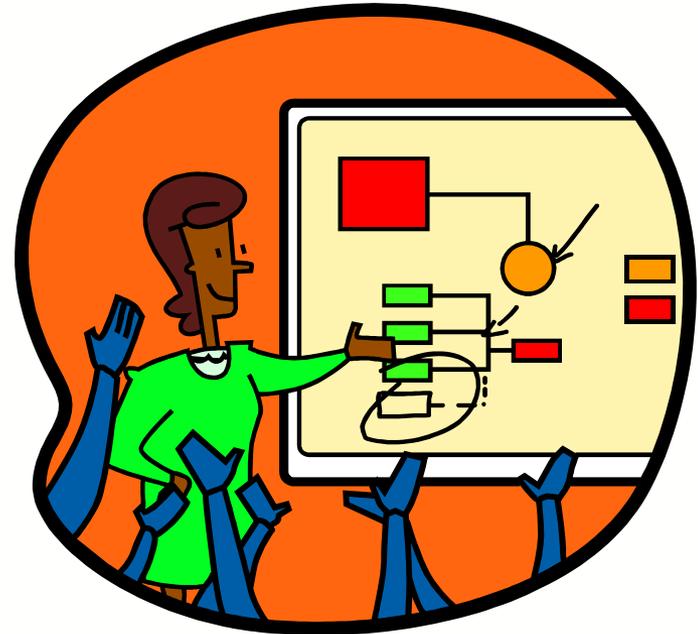
# View Reports...

**... that are detailed,  
customizable and  
actionable**



# Get and Use Data...

**... from instructors, peers,  
teams, mentors, tutors,  
systems and learners**



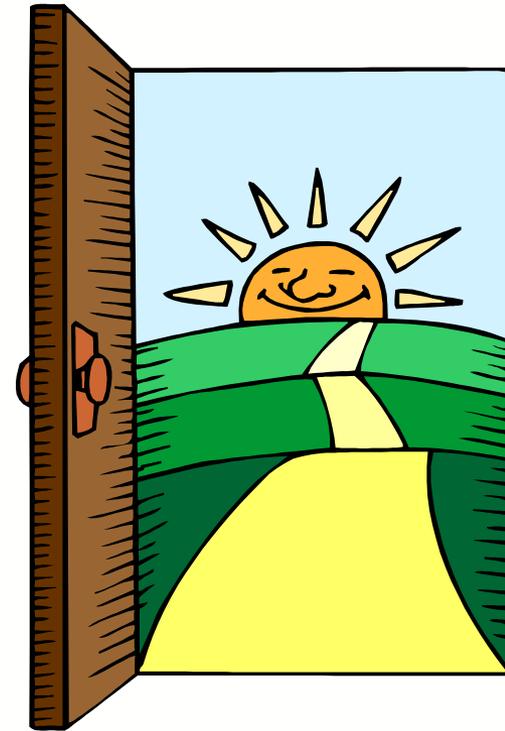
# Identify Learners Falling Behind...

**... and do it early, before  
an intervention may  
be too late**



# Know the Path to a Job/Degree/Skill...

**... and get there the most effective and efficient way possible**



# Collect Big Data

**... and access it, securely,  
for meaningful learning  
analytics**



# How?

Legacy platforms are often data silos with limited access to collected data

# Training & Learning Architecture (TLA)

**TLA**

- Experience Tracking
- Content Brokering
- Learner Profiles
- Competency Networks

# Web Service Benefits

- ▶ **Interoperability** – Works with any programming language while providing non-proprietary solution due to standards-based communications
- ▶ **Usability** – Exposes logic over the web that can be used instead of reinvented
- ▶ **Reusability** – Easy to reuse common tasks without duplication of code
- ▶ **Deployability**– Leverages standard Internet technologies

# Open Source Benefits

- ▶ **Security and Quality** – The more people who see the code, the more likely flaws will be caught and tested quickly
- ▶ **Freedom and Customizability** – With all of the code available, any custom updates can be made without vendor reliance
- ▶ **Auditability** – Visibility of code means that systems can be verified first-hand
- ▶ **Costs** – Licensing costs are low or free
- ▶ **Support Options** – Vibrant communities with forums, wikis, newsgroups, chat, etc.

# Training & Learning Architecture (TLA)

TLA

- **Experience Tracking**
- Content Brokering
- Learner Profiles
- Competency Networks

# What is the Experience API?

- ▶ **Tracks experiences, scores, progress, teams, virtual media, real-world experiences (not just completions)**
- ▶ **Allows data storage AND retrieval (ex. 3<sup>rd</sup> party reporting and analytics tools)**
- ▶ **Enables tracking mobile, games, and virtual worlds experiences**
- ▶ **Developed by open source community**

# Training & Learning Architecture (TLA)

TLA

- Experience Tracking
- **Content Brokering**
- Learner Profiles
- Competency Networks

# TLA Content Brokering

## Requirements

- Manage content to support just-in-time learning by enabling logical selections of the “next” logical activity
- Provides machines the ability to “understand” content for the purposes of selection and launch

## Services and Specifications

- 3D Repository Federation Services

## Open Source Software

- Re-Usability Support System for E-Learning (RUSSEL)
- Federal Learning Registry
- ADL 3D Repository

# Training & Learning Architecture (TLA)

TLA

- Experience Tracking
- Content Brokering
- **Learner Profiles**
- Competency Networks

# TLA Learner Profiles

## Requirements

- Compile data about a learner to include previous course completions, competencies, preferences, and portfolios
- Provide access to profile information to be used to tailor learning experiences to an individual

## Services and Specifications

- Open Social Learner Model (OSLM)
- Mozilla Open Badges

## Open Source Software

- TBD

# Training & Learning Architecture (TLA)

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- Experience Tracking
- Content Brokering
- Learner Profiles
- **Competency Networks**

# TLA Competency Networks

## Requirements

- Establish a common way for content and systems to reference objectives and competencies
- Provide a means to represent a competency and competency relationships

## Services and Specifications

- MedBiq Competency Framework
- Common Core CEDS
- InLOC

## Open Source Software

- Using Competencies with xAPI Proof-of-Concept

**Jonathan Poltrack**  
**Advanced Distributed Learning (ADL)**

[jonathan.poltrack.ctr@adlnet.gov](mailto:jonathan.poltrack.ctr@adlnet.gov)

 @adljono