The xAPI: A “Swiss Army Knife” for Your Learning Environment

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SESSION PRESENTER

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Want the slides?

http://mlearning.com/shows/focuson-2016
SESSION EXPECTATIONS (PER SHOW GUIDE)

• The basic structural and design tenets of an xAPI-based solution and the best-practice approach to implementing those solutions
• When to use the xAPI over SCORM for tracking and when “all of the above” is better than one or the other
• How to determine the best authoring tools and learning platforms to take advantage of the xAPI
• New use cases to apply tracking to non-traditional learning assignments and interactions
• How to overcome challenges with LMS integration, security, access (especially when offline), and more
PRESENTATION AGENDA

• Introductions & Expectations
• Presenter Experience & Background
• The Versatility of xAPI
• Case Studies & Examples
• Other Benefits & Recent Features
• Questions & Answers, Wrap Up
SESSION POLL #1

What’s the state of your Learning Technology Infrastructure? Share what you have installed now:

A. We have LMS or Talent Management platform
B. We have a standalone Learning Record Store (“LRS”)
C. We have an LMS with an integrated LRS?
D. What’s an LRS?
PLEASE SHARE YOUR THOUGHTS & INSIGHTS

• What are some of the use cases and benefits driving a move to adopt xAPI/install an LRS?
• What tools are you using (or contemplating) that adhere to the xAPI standard?
• How big of a priority is it for your organization to move in this direction?
Company Background & Approach
COMPANY BACKGROUND

• Formed in 2002 by software development & media experts to create value oriented LMS/LCMS platform for middle market

• Added CellCast® Solution offerings, our mobile learning content & training delivery technologies for handsets, tablets & more in 2003

• Headquartered in Savannah, Georgia USA with development team in New Zealand plus partners in Americas, APAC & EMEA

• 120+ enterprise installations, 1.1 M+ licensed users worldwide

• 40+ Industry Awards received to date

• Hold mlearning.com & mobilelearning.com Internet domains
KEY ENTERPRISE FEATURES

- Apps, Mobile Web, Old/New
- Social Networking/Collaboration
- Game Mechanics/Dynamics
- Enterprise Security (125+ features)
- APIs & Connectors (REST, SSO, xAPI)
- Complimentary Online Portals
- “Unified User Experience” (x-Plat. UI/UX)
OUR FORMULA FOR SUCCESS

Feature Set
- Online
- Mobile
- Responsive UX
- xAPI, SSO, SCORM
- Gamification
- Social
- eCommerce
- APIs & Connectors

Common Use Cases
- Product Launch
- Onboarding & New Hire
- Leadership Development
- Compliance & Regulatory
- Extended Ecosystems

Your Business Objectives

Purpose-Built Outcomes!
THEN ADD: xAPI-AWARE/ENABLED CAPABILITIES

- Authoring & Publication
  - Authoritative Info Sources
    - (SCORM, xAPI, Media)
  - VILT Platforms
  - LMS & TM Connectors
  - Authentication & Dir. Services
- Admins
- Web Server/Mobile Gateway

- Full Online & Mobile Solutions
  - LMS
  - LRS
  - Registration & Ecommerce
  - Administrator & Manager Consoles

- Branded Mobile Apps in Private App Store
  - Android
  - Apple iOS
  - WinPhone v8-10
  - BlackBerry BB10s
  - Online or Laptop App

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xAPI: How versatile is this new tool?
xAPI HAS PROVEN USEFUL IN MYRIAD WAYS
WE CAN MEASURE EVERYTHING ELSE, WHY NOT LEARNING?

 Courtesy: Megan Torrance, Torrance Learning
HECK, WE’VE GOT SCORM TO TRACK LEARNING, AS LONG AS IT IS…

- Time
- Score
- Location
- Status
- Answers
xAPI ORIGIN STORY

• xAPI grew out SCORM & AICC (& their limitations)
• SCORM was developed at request of US Govt. (DOD, DOS) to provide a standard normalized way to manage content packages across different LMS platforms
• Basics of SCORM are now more than a dozen years old...

SCORM Limitations (then & now)

• Content that’s largely Flash-based  • “Must” be online (SCORM API on LMS)
• Legacy browsers are not advanced  • The typical scenario involves the learner on a PC + web browser + structured content package – not mobile, wearable, informal, others
• Limited data points (e.g., progress, completion, score, bookmarks)
Does xAPI = SCORM 2016?

**SCORM is Content Focused**

- How content is *built*
- How content is *packaged*
- How content is *played*
- What data is *moved & tracked*

**xAPI is Data Focused**

- Specific data that you need (or want) to be *collected...*
- & how that data is *moved & tracked*
• The Experience API, or “xAPI”, is a common way of sharing information about our experiences using data
• xAPI can be used to describe/track a wide variety of experiences, can promote adaptive design & development practices, can accelerate integrations with other systems, and can encourage transparency in data capture & use
• In practice, people interact with “stuff” (e.g., content, apps, business systems) expressed as an activity stream or statement, then collected/managed in a Learning Record Store (a non-SQL database)
Data describing our experiences can come from different sources.
Activity Statements are “Observations”
ATTRIBUTES OF xAPI

Brian Miller experienced 'Java JAX RS · wordnik/swagger-core Wiki'

Brian Miller experienced 'A Comparison of Spring MVC and JAX-RS'

Tammy Rutherford experienced 'Questions I've Fielded on Tin Can API'

Megan Bowe completed 'Js Tetris - Tin Can Prototype’ with Score ‘794’

Courtesy: Megan Bowe
What’s Now Possible?

The promise of a new frontier for learning, mobile, video, performance support & so much more!
SUPPORTING THE 70:20:10 MODEL

SCORM

Formal  People  Experience

xAPI

Courtesy: Megan Torrance
KIRKPATRICK’S LEVELS OF TRAINING

Level 1: Satisfaction & Experience
Level 2: Knowledge & Retention
Level 2: Practice & Testing
Level 3 / 4: Behaviors
Level 4 / 5: Results & ROI

Courtesy: Megan Torrance

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xAPI
SCORM
BENEFITS OF xAPI

1. Learning can be recorded wherever it occurs.
2. Learning content does not have to reside in a browser (anyone have a mobile device?)
3. Learning does not have to be “launched” from an LMS, enabling:
   • Mobile Apps
   • Social Learning
   • Gaming & Simulations
4. Learning content can be distributed (in another domain)
5. xAPI uses modern, common technology (e.g., REST, JSON)
6. Simplicity! The whole spec is only 70 pages

Courtesy: Art Werkenthin/RISC
BENEFITS OF xAPI: 140+ SOLUTIONS TODAY!

Notable M.I.A. Providers

Several leading LMS Vendors have yet to DEPLOY* their xAPI/Tin Can support including:

- Cornerstone on Demand
- Oracle HCM/Taleo
- SumTotal/Skillsoft
- SAP/SuccessFactors
- Meridian
- Others...

* = Announcing isn’t Shipping
Case Studies & Examples
Show Us Something Tangible!
10 RECENT REAL WORLD xAPI SOLUTIONS

1. Leverage Legacy Data/Results from LMS
2. Improved Content Authoring – **Simple!**
3. Improved Content Authoring – **Slick!**
4. Improved Content Authoring – **Sophisticated!!!**
5. Track UI/UX Usability
6. Measure Search Patterns
7. Manage Ad Hoc Messaging
8. Capture Action Plans
9. Expand Access to Discussion Forums
10. Streamline App-to-App Integration
10 RECENT REAL WORLD xAPI SOLUTIONS

How much heavy lifting was there?
#1. LEVERAGE DATA/RESULTS FROM ONPOINT LMS

Auto-Generated & Collected xAPI Statements

- **Formal Learning**
  - eLearning/mLearning courseware
  - ILT & webinar participations
  - Assessments & Exams
- **Informal Learning Completions**
  - User-generated contributions
  - Game mechanics, points earned
  - Social interactions
- **Specialty Features/Functions**
  - SCORM-2-xAPI wrapper
  - QR code-based completions
  - Offline statement management for mobile apps!

(Really) Big Data
#1. LEVERAGE DATA/RESULTS FROM ONPOINT LMS
REFRESHER: CONTENT AUTHORING “STATE OF THE STATE”

RED – No xAPI Support

YELLOW – Basic xAPI Support

GREEN – Advanced xAPI Support
REFRESHER: CONTENT AUTHORING “STATE OF THE STATE”

RED – No xAPI Support

YELLOW – Basic xAPI Support

GREEN – Advanced xAPI Support
#2. IMPROVED CONTENT AUTHORING – SIMPLE!

xAPI Value Proposition for Uline

“Robert, you said this tool would work! I built 40 interactions as SCORM but can’t collect the data!”

- Item-level analysis of responses to interactive quizzes via statements
- Republished all modules SCORM to xAPI in < one hour
- Statements mined from Activity Viewer; added one custom report
#2. IMPROVED CONTENT AUTHORING – SIMPLE!

xAPI Value Proposition for Uline

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- Item-level analysis of responses to interactive quizzes via statements
- Republished all modules SCORM to xAPI in < one hour
- Statements mined from Activity Viewer; added one custom report
#3. IMPROVED CONTENT AUTHORING – **SLICK!!**

xAPI Value Prop for Q-Assist

“We need to make our content more interactive!”

- Collect demographic data from course participants to help them contextualize their experience
- Custom triggers in Lectora allowed for external calls in/out of LRS
- Review via Activity Viewer plus several custom reports
#4. IMPROVED CONTENT AUTHORIZING – SOPHISTICATED!!!

xAPI Value Prop for Th3rd Coast

“We need to make our content REALLY interactive!”

• Provided ability to trap/record every interaction within highly interactive video modules
• Added ability to launch & track statements in “off-line” mode inside mobile native apps plus custom reports for each module
• Generator for BIG DATA
#4. IMPROVED CONTENT AUTHORING – SOPHISTICATED!!!

xAPI Value Prop for Third Coast

“We need to make our content REALLY interactive!”

- Provided ability to trap/record every interaction within highly interactive video modules
- Added ability to launch & track statements in “off-line” mode inside mobile native apps plus custom reports for each module
- Gathering point for BIG DATA
#4. IMPROVED CONTENT AUTHORING – SOPHISTICATED!!!
#5. TRACK UI/UX USABILITY

Collected xAPI Statements

- Tom explored “View Track Detail” button on main-hero-space
- Tom explored “My Locker” feature
- Tom explored “Recommended for Me”
#5. TRACK UI/UX USABILITY

**COLLECTED xAPI STATEMENTS**

- Alice explored “Discover” feature
- Alice explored “Communicate” feature
- Alice explored “Z10” product content
- Alice explored “Return to Previous” button
#6. MEASURE SEARCH PATTERNS

Luis searched for:
1. "BOB 2500 Combinator"
2. "BOB combinators"
3. "combinators"
#6. MEASURE SEARCH PATTERNS – STATEMENT VIEWER

Click on a statement to see the raw statement data.

View OnPoint xAPI Search

<table>
<thead>
<tr>
<th>Verb ID</th>
<th>Activity ID</th>
<th>Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verb</td>
<td>Activity ID</td>
<td>OnPoint Registration ID</td>
</tr>
</tbody>
</table>

- Michael Rozzi searched 'fridge specifications'
- Michael Rozzi searched 'fridge'
- Charles Ravaglia searched 'allowable%20meal%20expense%20for%20representatives%20white%20out%20of%20town'
- Charles Ravaglia searched 'allowable%20meal%20expense%20for%20representatives'
- Charles Ravaglia searched 'allowable%20expense%20for%20representatives'
- Eugenia Solomon searched 'travel'
- Sharon Swirpel searched 'how%20to%20expense%20exhibit%20snacks'
- Sharon Swirpel searched 'exhibits'
- Sharon Swirpel searched 'snacks'
- Michelle Winberry searched 'eers'
- Michelle Winberry searched 'mobile%20phone'
- Michelle Winberry searched 'cell%20phone'
- Sharon Swirpel searched 'throw%20of%20town'
#7. MANAGE AD HOC MESSAGING

**xAPI STATEMENTS**

- Tom Jones withdrew from Engage session due to “illness in family”
- Gail Smith withdrew from Engage session due to “I got promoted; xfering to Dallas”
#8. CAPTURE ACTION PLANS

Personalized "Action Plans" filled out by learner while in course object; memorializes the learner's expected path to apply their knowledge for the next year.

Action Plans accessible to learners plus their managers, admins can mine "action plan trends".
#9. EXPAND ACCESS TO DISCUSSION FORUMS

Collecting subject-specific forum entries while in a course object
- Basic functionality enables threaded discussions to be “called” from other feature sets/use cases
- Analytics available for most popular/active messaging threads
#10. APP-TO-APP INTEGRATIONS

**Value Proposition**
- Flexible Learning Portal architecture
- Seamless UX for both online & mobile
- Shared tablets lower delivery costs
- Gamification Engine drives engagement
- Ties easily with other internal systems
- **Winner at DemoFest @ DevLearn!!**
#10. APP-TO-APP INTEGRATIONS
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Game Templates

Content & Media (SCORM & xAPI)

Gamification (Dynamics & Mechanics)

Sales Results (by Location & Stylist)

Management

Delivery

Online Users

Windows

Apple iOS

Web Server/Mobile Gateway

Registration & Ecommerce

Administrator & Manager Consoles

LMS ↔ LRS

Custom Gameboards

Points

Badges

Leaders

Levels

Challenges

1000 POINTS

Sales Results
XAPI BENEFITS SUMMARY @ONPOINT

- Strong Commitment to “the xAPI movement”
  - We love it, we use it,
  - We believe in its’ future!
- Continue to Refine our Thinking
  - Fantastic “lens” to look through – so many possibilities
  - How (and where) can xAPI help?
- Evangelize to All Who’ll Listen
  - Conferences, meetings, webinars, blog posts
  - Jump in, the water is fine!
Use Case: Quantify & Qualify Learning Experiences

Value Prop: Make it easy for any admin & any manager

Overview: OnPoint has been working to create more informative, easier to manage dashboards & analytics with easy drill down/thru capabilities to streamline reporting & better measure organizational performance in real time.

Requirements:

- LRS to receive xAPI statements from any formal or informal learning experience
- Easier ways to extract and contextualize data sets into quantifiable information & results
Let’s See Some Demos!
Q&A, Wrap Up
Connect with me via:

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To Download Slides:
http://mlearning.com/shows/focuson-2016
Thanks for Attending!

Please complete your surveys too!!