204
xAPI: An Introduction for Instructional Designers

Megan Torrance
TorranceLearning
Where are you on your xAPI journey?
<table>
<thead>
<tr>
<th>Onboarding Plan A</th>
<th>Onboarding Plan B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elearning: Welcome &amp; virtual tour</td>
<td>Tour the campus &amp; buildings</td>
</tr>
<tr>
<td>Elearning: Log into LMS</td>
<td>Explore benefit package</td>
</tr>
<tr>
<td>Elearning: Plant tour</td>
<td>Take a skills assessment</td>
</tr>
<tr>
<td>Class: Your benefits &amp; you</td>
<td>Attend webinar</td>
</tr>
<tr>
<td>Class: Email and You</td>
<td>Attend a class</td>
</tr>
<tr>
<td>Elearning: Who’s who</td>
<td>Rate your experience</td>
</tr>
<tr>
<td>Elearning: Our customers</td>
<td>Complete online course</td>
</tr>
<tr>
<td>Class: Finance 101</td>
<td>Observe the job being done</td>
</tr>
<tr>
<td>Class: Using the intranet</td>
<td>Practice doing the job</td>
</tr>
<tr>
<td>Recorded webinar</td>
<td>Receive coaching</td>
</tr>
<tr>
<td>Webinar</td>
<td>Watch a video</td>
</tr>
<tr>
<td>Multiple choice test</td>
<td>Job shadow</td>
</tr>
<tr>
<td></td>
<td>Follow a blog</td>
</tr>
<tr>
<td></td>
<td>Read a book by an expert</td>
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</tbody>
</table>
xAPI is ...

Experience API is ...
Tin Can API is ...

$X = \text{experience}$

API = application programming interface

Specification for sending, storing, retrieving activity about learning and performance experiences

Not so much “next generation SCORM” as it is “what will replace SCORM.”
<table>
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<tr>
<th>SCORM</th>
<th>xAPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Actor verb object</td>
</tr>
<tr>
<td>Score</td>
<td>Actor verb object context</td>
</tr>
<tr>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>Answers</td>
<td></td>
</tr>
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</table>
Claire read Business Writing for Professionals
John practiced frosting birthday cakes
Lindsey watched the Company History video
Rashad completed Oil Change Upselling
Claire read Business Writing for Professionals
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Actor verb object
Actor verb object context
Mohammed wrote a blog post about local theatre that got 45 views and 3 comments.

Oron rated ATD event Essentials of Creating Learning Experiences with xAPI @MMTorrance 4 stars “coffee rocked, nice use of WebEx”

Claire read Business Writing for Professionals

John practiced frosting birthday cakes

Lindsey watched the Company History video

Rashad completed Oil Change Upselling

Cynthia completed Oil Change Upselling score 60%

Ladan simulated landing at DTW

Arthi simulated landing at DTW in SimSuite #4 and was rated 98% by Instructor

Mohammed wrote a blog post about local theatre that got 45 views and 3 comments

Oron rated ATD event Essentials of Creating Learning Experiences with xAPI @MMTorrance 4 stars “coffee rocked, nice use of WebEx”
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    "fr-FR": "a répondu"
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    "objectType": "Group"
  },
  "contextActivities": {
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        },
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    ],
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        },
        "description": {
          "en-US": "Ann Arbor Hands-On Museum Interactive Exhibit Project - Blast Off"
        }
      },
      "objectType": "Activity"  
    }
  }
}
What can you do with xAPI?

• Learn more about the learning experience – not just elearning
• Learn more about the performance
• Correlate learning with performance
• Offer more targeted training
• Support performance in better ways
• Use data to learn with others
• Compare performance and learning across learners
• Deliver and track training outside of the LMS

YOU CAN DO ALL OF THIS WITHOUT xAPI
BUT WE DON’T RECOMMEND IT.
Design a solution to meet stated needs

Collect & enter data accurately

Provide verbal feedback to teammates

Nail roof shingles safely

Remove a kidney stone

Practice in Training

Know...
Kirkpatrick Levels of Training Evaluation + Cathy Moore

Level 1
Satisfaction & Experience

Level 2
Knowledge & Retention: Testing

Level 3
On the Job Behaviors

Level 4
Business Results
### Brinkerhoff & Apking’s High Impact Learning Map

<table>
<thead>
<tr>
<th>Learning Objectives</th>
<th>Critical Job Tasks</th>
<th>Key Results</th>
<th>Business Unit Results</th>
<th>Organization Goals</th>
</tr>
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</table>

**WHY?**

**HOW?**
Our brains are designed to forget

The Ebbinghaus forgetting curve

Spaced repetition “Boostering”

https://www.learningsolutionsmag.com/articles/1400/brain-science-overcoming-the-forgetting-curve
The 70/20/10

We are here now

Formal Learning | Learning from Others | Learning from Experience
Gottfredson & Mosher’s
(& Torrance’s)

Moments of Learning Need

5 Moments of Learning Need: Gottfredson & Mosher
9 Moments of Need: Torrance
Getting Started
First pick a project

SCORM is not the (best) answer.
The project’s sponsor is on board.
There’s plenty of data.
You can capture or get to the data you need.
STEP 1: Send the data

Use your current elearning authoring tools

Get your product vendor to send the data

Use xapiapps to assemble things that aren’t xAPI into a thing that is

Write some custom code
AUTHORING TOOLS

Out of the box:
- SCORM-like transactions
- Individual page views
- Actions and triggers (depends)

With a little JavaScript:
- Any action or trigger you want

More info:
www.xapiquarterly.com (Sean Putman), xAPI Cohort Fall 2017 results
MISC OTHER OPTIONS

Not really “authoring tools,” but very deep learning experiences, LMCSes, etc. that send xAPI data.
First tool we’ve found outside L&D that uses xAPI
xapiapps

Edit Pathways

- YouTube: T Rex Dancing Ballet
  - SUCCESSFUL
- Link: What Is xAPI?
  - SUCCESSFUL
- Coach: Stop the Bleeding Coaching Session (xapiapps Medical Example)
  - Coach: Learner
  - Due: 2 day(s)
  - SUCCESSFUL
STEP 2: Receive the data
The integrated approach

- eCommerce
- Social Learning
- Messaging
- Users
- Enrollments
- LRS
- SCORM data
- Courses
- Classes
- Certs
- Games
- Sims
- Perf Supp
- Reporting
- Import/Export to Biz Data
- Performance, Talent hooks

Dashboards
The managed ecosystem approach
The sidecar approach
LEARNING RECORD STORES

Out of the box:
• Data storage & retrieval
• Visualizations & reporting

Connecting to analytics
• Tableau, Microsoft BI, Envision BI, etc.

UP TO DATE LIST OF CONFORMANT LRS:
https://adopters.adlnet.gov/

THIS LIST IS INCOMPLETE

THIS LIST IS GROWING
Take 2 aspirin...
Launch xAPI record providers from the LMS* (cmi5):
- Digital Chalk
- Learndash
- Moodle (with plugin)
- Other non-xAPI LMS

Send xAPI from triggers in a SCORM course
Export SCORM data from LMS to LRS

*This is an incomplete list.
Wait for your LMS to adopt xAPI

Offer to beta test.

Get a sidecar LRS for your special projects and new projects.

• Two sets of reports
• Export xAPI “Completions” → LMS
Stop using SCORM where you can.

If you have to, build for SCORM knowing you’ll use xAPI.
- Flexible tools that do both
- Follow best practices for xAPI now (xAPI Quarterly)

Start asking the “x” question.
Start learning more …

Vendor sites

www.learnxapi.com and www.xapiquarterly.com

xAPI Learning Cohort

xAPI Camps & xAPI Party
Is xAPI ready for prime time?

- **FORMING**
  - Project Tin Can

- **STORMING**
  - Specification
  - Communities of Practice work to define usage
  - xAPI needs geeks

- **NORMING**
  - Conformance & Certification emerge
  - Geek-free tools emerge

- **PERFORMING**
  - Standard
  - More common than SCORM
xAPI: An intro for Instructional Designers

What are your takeaways?
Next steps?

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Learning Solutions Conference 2018 | Session 204
Megan Torrance

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