EXPERIENCE API

BY DR MARK KEOUGH

The 70:20:10 conversation is now common among learning professionals. In some form or other it concludes that 10 per cent of the learning our people need occurs through education and training programs, 20 per cent comes from what they learn from their peers in the workplace, and 70 per cent comes from their own intuitive discoveries. This conversation often leaves open the question of how to recognise the 90 per cent of training that doesn't occur in a monitored program. This is especially important considering much of this peer and informal learning is making a tangible contribution to performance improvement.

xAPI, also known as the Experience API or Tin Can is emerging as a significant change in approach to recognition of learning outcomes. It is the key driver in the implementation of Learning Analytics systems. So, what is xAPI? In simple terms it is a standardised way of describing a learning activity or outcome, a learning experience of some kind, formal, peer based or informal. By standardising the language of a learning outcome, it is possible to record an analogue learning experience as data, or a micro-learning record. These records are accumulated against learning outcome context, for example a qualification, competency or skill in a data warehouse known as a Learning Record Store.

xAPI statements take the form of ID > verb> noun> context or for example Jenny > completed > workplace safety course and quiz> score was 9/10.

The last part or context can be a result or it can identify where the particular learning outcome sits in an outcome framework.

What makes this so powerful is the xAPI records or statements as they are known, can be attributed to very small amounts of learning. These records of micro-learning can stand alone or be aggregated and mapped to any established learning outcome framework, such as a leadership development framework, or a formal qualification or any other learning framework you may imagine.

Another recent development has added significantly to the conversation. The education technology standards organisation ADLNET, who brought us the well-known eLearning content standard SCORM and now xAPI announced recently a meaningful collaboration on xAPI with the other major educational technology standards agency IMS Global. They have agreed to work closely together on the development of reporting by creating standards for xAPI taxonomies (or metadata libraries) under the IMS Caliper standard for taxonomies.

IMS Global, are responsible for education technology standards such as the Learning Tools Interoperability standard (LTI), the eportfolio standard, and the QTI standard for quiz questions.

The fundamental question is why? What does xAPI promise and why is it significant?

Well the good news is that xAPI effectively removes the "e" from e-learning, it makes all learning capable of have an "e" record. For me it has invigorated the potential for classroom and workplace situational learning. It provides a method for recognising all the workplace relevant learning people experience.

xAPI or Tin Can is effectively an analogue to digital converter for any learning experience. It takes analogue experiences and digitises the critical elements as digital information or xAPI statements. These structured statements formalise outcomes of a learning experience.

The best metaphor perhaps is that of the experience of musicians and filmmakers over the last few years. Analogue to digital conversion technology has simply revolutionised their world. Digital mixers and recording devices takes the experience of singing or playing an instrument and convert it into minuscule, but ultimately related pieces of information. This world of analogue to digital conversion in media

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is based on technical standards such as mp3 and wav. Audio experiences are then repurposed and re-contextualised repeatedly. Other similar standards you may be familiar with could include mp4 or Quicktime for video, and jpeg or eps for images.

The challenge is that the technology in xAPI is not technology at all, but the information science of linguistics and meaning stored as taxonomy (or meta-data) libraries to do the conversion. Without them and an excellent reporting tool, all we are recording is masses of micro-learning data from a learning experience. The particularly challenging problem is the potential loss or misunderstanding of the learning context. Learning outcomes without a context may be valuable, but their value is hard to measure and report.

Now if this is all a bit techie for you that's understandable. It is worthy of investigation at some level, because these standards are the building blocks of machine learning and artificial intelligence, that is starting already to impact on every area of human endeavour, and especially learning.

Time for some reflection. Have you have ever noticed the impact of searching Google for an interesting topic, such as a tourist destination. This simple act often results in some advertisements appearing in your sidebar, or on Facebook, or in your email inbox. The activity stream process that drives that experience is very like the development occurring in the collaboration between IMS and ADLNET for Caliper and xAPI. Future Learning systems will create a relationship between the very large amounts of data coming from learning experiences, and micro-learning, and the provision of timely (even real-time) and meaningful reports and feedback.

A 2014 academic paper from the 9th European Conference on Technology Enhanced Learning offers a deep dive description of a worked example of the use of xAPI in an industrial training setting. It was the article that first led this author on a journey of discovery.

One final note, especially for educators, is that when capturing the activity streams for learners, especially when we electronically observe learning and record it, some ethical issues regarding interpretation, authenticity and privacy arise. Micro-learning out of context is not really learning at all. Perhaps there are some interesting policy and procedural conversations ahead, as these technological changes start to take effect.

References

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