Learning Analytics and xAPI

The focus on Competency-Based Medical Education (CBME) has shone welcome attention on the need for good assessment: how do you know when a learner is competent? We need data. All of us are happy when the learner is doing well. Some have suggested1 that we are becoming too focused on checklists and that gestalt ratings are just as good. But what about those learners on the lower shoulder of the curve? We need better data for earlier detection of those who need help; we need stronger data to support decisions to terminate, lest we spend weeks in litigation.

We have several efforts to support competency assessment: EPAs, milestones, pre-EPAs, each looking at lower levels of complexity on the spectrum of learning activities. But too many of these depend on observer-b(i)ased checklists, and we are already encountering survey fatigue at all levels of learner assessment. Yet, much of what we do is now captured online in one form or another: electronic medical records, learning management systems, simulation systems, enterprise calendars.

Activity metrics take a ground up, rather than top-down, approach to tracking what learners actually do rather than what they, or their teachers, say they do. This already happens in limited individual systems but we need an extensible approach if we are to garner a more comprehensive view. The Experience API (xAPI)2 is a technically simple approach that is easy to integrate into existing systems. Data is captured into a Learning Record Store (LRS)3.

xAPI statements follow a very simple actor-verb-object structure: Bob Did This. And yet this simplicity belies great power through a very extensible set of vocabularies. The LRS structure is designed to swallow such xAPI statements from multiple sources, in true Big Data fashion, and can be securely federated so that a wide range of analytic and data visualization tools can be employed.

xAPI is technically well established. Groups, such as Medbiquitous4, are standardizing profiles of activities for medical education and health system outcomes. Now is the perfect time to engage medical educators in the power of these metrics. Their assessment needs should drive how and where these activities are measured.

References:

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