

Charter

Document version: 1.0

Date: January 1, 2015

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Goal

Education analytics offers an opportunity to better track learner educational activities and to better understand the strengths and weaknesses of the healthcare workforce as well as factors associated with higher performance. But often, data on learner performance remains locked in proprietary systems, unable to be combined with data from other sources, even if the data relates to the same educational experience. In addition, a rich store of learner data could be used to better tailor learning to the individual based on their experiences and achievements.

Social networking and system integration technologies offer an opportunity to gather more detailed data about our learners' experiences. In parallel, the Internet of things offers a wealth of data about learners, including facets as diverse as their activities, geolocation, health status and resource consumption habits. In order for those technologies to be used consistently in the health professions, healthcare specific profiles and guidance are required. A common approach to implementing xAPI in the health professions would allow organizations to bring together data from across multiple systems or vendors for better analytics and educational experiences. Without a common approach, healthcare implementations will remain siloed, unable to work together as part of an education and analytic ecosystem.

Context

MedBiquitous develops information technology standards for healthcare education and competence assessment. Through Working Groups and a Standards Committee, MedBiquitous members are creating a technology blueprint for healthcare education and competence assessment. Based on XML and Web services standards, this blueprint will weave together the many activities, organizations, and resources that support the ongoing education, performance, and assessment of healthcare professionals. The Experience API (xAPI) version 1.0 was released in April 2013 and describes the rules for tracking learning experience data and secure retrieval of stored data by authorized systems. The xAPI uses a format based on Activity Streams, which are widely used in modern internet technologies. An activity stream can be thought of as a sentence with the structure <Actor> <Verb> <Object>, or "Bob did this". The xAPI specification, combined with other competency-related standards and specifications developed by MedBiquitous, provides a vehicle for tracking learner outcomes across healthcare education activities in a standardized fashion.

Standards Environment

We propose to tailor an existing standard rather than develop a standard de novo to avoid redundant standards development efforts and to best make use of industry tools that already implement the xAPI standard. Implementers include Adobe, Blackboard, Moodle, NHS UK, Pandora, Sakai, and many others (see <http://tincanapi.com/adopters/>).

There is some overlap in functionality between xAPI and the Caliper Analytics specification developed by IMS Global Learning Consortium which, at the time of writing, is available to IMS members only. However, xAPI is more broadly adopted and open in its governance.

Scope

We propose developing a set of profiles to provide guidance around specific types of activities, including the following.

Simulations (Virtual patients, Mannekin-based simulations, Preceptor-reviewed simulations, Virtual worlds/games, Standardized patients, etc)

Clinical training activities/experiences In addition to profiles, the working group may create verbs for use within the profiles. Verbs may be applicable across multiple profiles.

The MedBiquitous xAPI interest group has developed use cases and requirements that will guide development (see <http://groups.medbiq.org/medbiq/display/XIG/XAPI+Interest+Group+Home>).

The MedBiquitous Technical Steering Committee will offer guidance and technical support when needed.

Work Plan

Working Group members or staff will perform much of the group's work independently with member comments submitted to a discussion list and documents shared via wiki. While there is no timeline for development, it is expected that development will be informed by existing guidance and profiles for xAPI in other industries. A draft Virtual Patient profile should be available for presentation by May 2016.

References

What is the Tin Can API: <http://tincanapi.com/overview/>

Experience API, Version 1.0.1, 1 October 2013, http://www.adlnet.gov/wp-content/uploads/2013/10/xAPI_v1.0.1-2013-10-01.pdf