

iMOOC: Building a platform from existing software components

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Abstract

iMOOC is a new pedagogical model for massive open online courses (Teixeira & Mota, 2013), that evolved from UAb's online model (Pereira et al., 2008), based on its four pillars of student-centered learning, interaction, flexibility and digital inclusion. It is also a software platform, that supports this model, and that was developed at UAb in close articulation with the pedagogical model. In this paper we describe the guidelines that oriented such development, and argue in favor of the use (or re-use) of well-established and robust software components for this purpose, as opposed to building platforms from scratch.

The emergence of MOOCs as open courses, where participants have free access to the course, created new challenges in a closed, formatted LMS landscape. This led to the development of whole new environments that addressed those requirements (edX, Coursera).

The iMOOC approach, however, was to build a platform from existing open source software components using an integration of Moodle (<https://moodle.org/>), which was previously adapted to UAb's pedagogical model (Rocio & Coelho, 2009), and Elgg (<http://elgg.org/>), combining the advantages of both formal and informal learning modes, and addressing the pedagogical requirements in a cost-effective way. The integration was achieved using the IMS specification for LTI (learning tools interoperability) (Severance, 2010).

As a result, the iMOOC platform has been successfully used both in stand-alone projects, and also in the european ECO project, where the effort to turn it project-compliant was relatively simple, due to the adoption of well-established protocols.

Keywords: MOOCs, platforms, software component re-use, formal learning, informal learning

References

Severance, C. (2010). IMS Global Learning Tools Interoperability Basic LTI Implementation Guide v1.0. IMS Global Learning Consortium. Retrieved from <http://www.imsglobal.org/lti/index.html>.

Pereira, A., Mendes, A.Q., Morgado, L., Amante, L., Bidarra, J. (2008). "Universidade Aberta's Pedagogical Model for Distance Education: A University for the Future". Lisboa: Universidade Aberta, 109 pp.

Rocio, V. & Coelho, J. (2009). "A course template for undergraduate courses ". In Proceedings of the 23rd ICDE World Conference on Open Learning and Distance Education including the 2009 EADTU Annual Conference, Maastricht, The Netherlands. EADTU.

Teixeira, A., & Mota, J. (2013). Innovation and Openness through MOOCs: Universidade Aberta's Pedagogical Model for Non-formal Online Courses. Proceedings EDEN Conference 2013, 479-488. Oslo, Norway.