Workshop 1: Ideal Virtual Research Lab for Learning Analytics

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Abstract

The world is changing ever more rapidly towards development of virtual environments and digital tools that would enable researchers to work and collaborate in geographically distributed settings. The need for such tools and environments became most evident during COVID-19 lockdown but they are very useful facilitators of any setting of international research.

A promising, yet uncovered approach is to build a Virtual Research Laboratory (also known as Virtual Research Environment) of Learning Analytics, an online platform that offers easily accessible and usable, fast and secure workplace with various virtual tools. The tools may include data collections, databases, sensors, tests or other instruments as well as processing and analyses tools. The essence of a virtual laboratory is to provide the capability to carry out work as a sequence of interconnected work processes i.e., a workflow, which can be deployed, executed, and shared. The laboratory keeps track of the details of research designed and executed, for example provenance information about the data and tools used in order to assist repeatability and replication of results. There are also tools that provide assistance and support to collaborations between persons and across teams. These cover sharing and publishing mechanisms for ideas, data and results, as well as communications capabilities for Web-based audio/video conferencing, email and instant messaging, and even for technical training and support.

The proposed workshop focuses on exploring the possibilities of different kinds of Virtual Research Labs. Participants are encouraged to discuss different use cases/needs for learning analytics research and research-oriented teaching practices that may arise. Together we move towards answering the questions:

- How to put together a Virtual Research Laboratory that enables and facilitates learning analytics research?
- How an ideal Virtual Research Laboratory of Learning Analytics should look like and what components it should have?