Cross-LAK: Learning Analytics Across Physical and Digital Spaces

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ABSTRACT

It is of high relevance to the LAK community to explore blended learning scenarios where students can interact at diverse digital and physical learning spaces. This workshop aims to gather the sub-community of LAK researchers, learning scientists and researchers from other communities, interested in ubiquitous, mobile and/or face-to-face learning analytics. An overarching concern is how to integrate and coordinate learning analytics to provide continued support to learning across digital and physical spaces. The goals of the workshop are to share approaches and identify a set of guidelines to design and connect Learning Analytics solutions according to the pedagogical needs and contextual constraints to provide support across different extents and each poses its own challenges [9, 11]. An overarching concern is how to integrate analytics across all different extents and each poses its own challenges [9, 11]. An overarching concern is how to integrate learning analytics techniques to exploit these (often) heterogeneous data. This workshop aims to gather the sub-community of LAK researchers interested in ubiquitous, mobile and/or face-to-face learning analytics in conjunction with learning scientists and researchers from other communities who have explored the perspective of learning analytics solutions across physical and digital spaces.

1. INTRODUCTION AND MOTIVATION

Students’ learning commonly occurs in spaces and at moments that go beyond formal education, and this learning is not constrained to a single physical or digital environment [5, 10]. Research in the learning sciences (LS), computer-supported collaborative learning (CSCL) and technology-enhanced learning (TEL) has revealed the pedagogical benefits of letting students experience different types of content, "real world" challenges, and physical and social interactions with educators or other learners [2, 8]. Increasing access to emerging communication technologies has made it possible for students to make use of a wide range of devices and educational (and non-educational) software applications. At the same time, educational providers, including schools and universities, deploy a variety of educational technologies and pedagogical resources in both online and face-to-face settings [9]. These technologies allow learners to get remote access to educational resources from different physical spaces (ubiquitous learning support) or to enrich their learning experiences in the classroom in ways that were not previously possible (face-to-face learning support). In short, there is an increasing interest in providing support for students’ learning across physical and digital spaces.

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2. **WORKSHOP THEMES**

The workshop will focus on the following four themes:

1. *Learning analytics across digital spaces* (e.g. [4]). Examples of application of learning analytics in educational settings where multiple digital technologies (digital spaces, learning environments, tools such as e-books, learning management systems, e-portfolio systems, social network platforms, intelligent tutoring systems, etc), connected or disconnected, are used to facilitate different learning activities.

2. *Learning analytics bridging physical (and digital) spaces* (e.g. [6]). Examples of application of learning analytics in educational settings with an significant face-to-face component (e.g. the classroom, the computer lab, collocated experimental settings, etc), a blend of collocated face-to-face and remote learning activities, or experimental approaches to gather collaborative student’s data while interacting with various systems.

3. *Mobile and ubiquitous learning analytics* (e.g. [1, 7]). Examples of application of learning analytics in ubiquitous educational settings with an important component of student’s mobility and where the learning activity spans across various physical and digital spaces.

4. *Data integration of heterogeneous learning data sources* (e.g. refer to [3, 4]). Examples learning analytics solutions to collect, gather and synchronise student’s activity data coming from varied heterogeneous data sources.

3. **EXPECTED OUTCOMES**

The expected outcomes of the workshop are the following:

1. *Definition of the research gap*. This workshop also will aim to help identify still unsolved challenges and future research lines in Learning Analytics across Spaces and set grounding for possible joint research efforts.

2. *Guidelines or principles for R&D*. The workshop will bring together the sub-communities within CSCL/LS, TEL, and LAK with the goal of contributing with expert guidelines/principles that can help guide future research and development to create learning analytics and monitoring tools that can provide support for each of the four themes posed above.

3. *Dissemination of R&D of LA across spaces*. All the outcomes of the workshop, including the outcomes listed above and the papers submitted, will be made available through the workshop’s own website or an online wiki so other members of the LAK community can benefit and further contribute to the design space.

4. **CONCLUSION**

While this workshop can be considered to be grounded on a consolidated line interest on the topic of learning across spaces, in this case the focus is on the particular challenges to provide continued support to students by using learning analytics techniques. More detailed information about the workshop organisers, authors, program and outcomes of the workshop can be consulted in the workshop website.1

5. **ACKNOWLEDGEMENTS**

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6. **REFERENCES**


1 Cross-LAK 2016 - [https://sites.google.com/site/crosslak2016](https://sites.google.com/site/crosslak2016)