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# Ethical and Privacy Issues in the Design of Learning Analytics Applications

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## ABSTRACT

Issues related to Ethics and Privacy have become a major stumbling block in application of Learning Analytics technologies on a large scale. Recently, the learning analytics community at large has more actively addressed the EP4LA issues, and we are now starting to see learning analytics solutions that are designed not only as an afterthought, but also with these issues in mind. The 2<sup>nd</sup> EP4LA@LAK16 workshop will bring the discussion on ethics and privacy for learning analytics to a the next level, helping to build an agenda for organizational and technical design of LA solutions, addressing the different processes of a learning analytics workflow.

## General Terms

Algorithms, Measurement, Design, Human Factors, Legal Aspects

## Keywords

Learning analytics, ethics, privacy, legal rights, data ownership, surveillance

## 1. INTRODUCTION

Since the Ethics & Privacy for Learning Analytics (EP4LA) workshop at LAK15 it has become more and more clear that Ethics and Privacy issues play a major role in preparing for large-scale adoption of learning analytics. Cases of ‘moral panics’ are still used to create attention to these important issues – the infamous inBloom case in USA [1], and the less known Sticking Snapped case in the Netherlands [2] are both cases in point. Now

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we start to see that ethics and privacy are not only an afterthought when something has gone wrong; it starts to be built into the new designs from the very beginning. This workshop will focus on how ethics and privacy concerns would form the basis, on which technical architectures and educational practices will be built.

Literature review for the EP4LA@LAK15 workshop found few papers published related to ethics and privacy in the research field known as ‘learning analytics’, and even fewer policies or guidelines regarding privacy, legal protection rights or other ethical implications [3]. Now a special issue of Journal of Learning Analytics on ethics and privacy is in press, with a number of articles originating from the LAK workshop [4]. Furthermore, projects funded to do research and developments within the field of learning analytics now have deliverables addressing ethics and privacy [5].

## 2. ETHICS & PRIVACY IN APPLICATION DESIGN

Another recent trend is implementation of Codes of Practice for Learning Analytics. JISC, a charitable organization supporting the use of digital technologies in UK education and research, supported by LACE and other European projects has developed a Code of Practice covering the main issues institutions need to address in order to progress ethically and in compliance with the law [6]. The first university to establish an institutional Code of Practice for Learning Analytics was the Open University, UK [7].

A Code of Practice is only the first step in developing a new ecosystem for learning analytics that allows large-scale adoption. Open architectures are needed that provide technical solutions to the challenges of data ownership, consent to use, and ethical management and stewardship of the data. We are now starting to see these architectures emerge [8].

The Workshop at LAK16 will take stock of current ethics and privacy-led design for learning analytics and contribute to an agenda for large-scale implementations that goes beyond mere policy guidelines.

### 3. WORKSHOP DESCRIPTION

#### 3.1 Overall Motivation

The Workshop will develop an agenda for EP4LA-based design of organizational and technical infrastructures based on the recent awareness of the importance of ethical and privacy issues related to big data. This year's workshop will build on and strengthen the impact of the EP4LA@LAK15 workshop and drive the discussion in the direction of actions that could be implemented in educational cultures and technologies.

#### 3.2 Workshop Objectives

The Workshop builds on the series of EP4LA workshops<sup>1</sup>, which for the one in LAK15 gathered around 50 participants discussing five papers. The target audience for the Workshop this year is LAK participants, both managers and developers, who want to see EP4LA crystalized as a set of requirements and blueprints for organizational and technical designs that could be implemented in different sectors of the educational ecosystem. Following the path of data sharing through the different processes of a LA system, e.g., Learning Activity, Data Collection, Data Storing and Processing, Analyzing, Visualization, and Feedback Actions (Figure1), the objective of the Workshop is to give the participants input to build an agenda for ethics and privacy for all these processes.

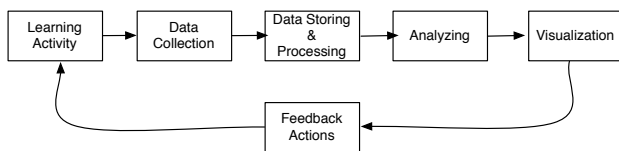


Figure 1: Processes in a Learning Analytics cycle

#### 3.3 Workshop Organization

A Call for Papers will be issued outlining the objectives of the Workshop. The organizers are confident that they have a community outreach that would result in paper submission covering the full range of the LA ecosystem. The 3 hours workshop will be organized as both paper presentation and discussions along the lines of the LA process model.

#### 3.4 Workshop Facilitators

The workshop will be organized jointly by the FP7 EU LACE project (<http://www.laceproject.eu>), the Apereo Foundation, the Asian-Pacific Society of Computers in Education (APSCE) SIG on Learning Analytics (<https://sites.google.com/site/apscsiglaedm/>) and the European Association for Technology Enhanced Learning (EATEL) SIG dataTEL (<http://ea-tel.eu/sig-datatel/>). All partners aim at advancing the learning analytics field by coming up with practical solutions and guidelines for ethical & privacy issues that are a critical part of most data-driven research in Education. The main goals are to increase the knowledge and awareness about ethical and privacy boundaries of Learning Analytics research and practice, to identify existing theories of trust and privacy, to promote the re-use of best practice solutions on privacy and ethics, to foster the cooperation between different Learning Analytics research units, and to develop a kind of code

of honor for Learning Analytics research supported by IT based legal tools.

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<sup>1</sup> <http://www.laceproject.eu/ethics-privacy-learning-analytics/>