A MULTIMODAL LEARNING ANALYTICS VIEW OF HTML5 APIs: TECHNICAL BENEFITS AND PRIVACY RISKS

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Mobile devices allow learners to...
learn outside the school, virtually everywhere (mLearning)
communicate and share learning experiences (PLEs)
explore and enhance the real world (AR, sensors)
provide insights about their learning processes *effortlessly* (LA)
mLearning + Learning Analytics = researchers dream!
Geolocation & Orientation

Is the learner at school/home? Is she commuting? Where does the learning process take place?

Is the context suitable for learning?
Microphone & Camera

Is the learner in a noisy context? Is she looking at the mobile device?
Battery & Network Information

Does the lack of battery / cost of the network access disrupt the learning scenario? How?
Local Storage

What did the learner do when she was offline? Did it affect learning processes?
Drafts: ambient light, temperature, humidity, atmospheric pressure, etc.

Insights about the context of learning processes
mLearning + Learning Analytics = users nightmare!
LA privacy issues are not only about user-id anonymization

The relation between id’s and users could be reconstructed via EDM
Students are not mere sources of data

Who takes advantage from your LA study? If the answer is not your students, you are using them.
Goal: mutual trust

Customizing content, preventing failure, enhancing learning
mLearning + Learning Analytics = a difficult balance
Hi!

First of all, we will like to say thank you for your interest in this initiative.

Since we want to study how people learn to program, we would like to collect data from your activity. You do not have to identify yourself, and data provided by you will be joined with the group's total to be analyzed as a whole.

Your participation is voluntary and anonymous.

If you want to continue, press 'Start'.

Start
Fine-grained data-collection via HTML5

Unique id's, event handlers, remote storage via AJAX
Thank you
References


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- HTML5: Focus management: http://www.w3.org/TR/html5/editing.html#focus


- HTML5: Session history and navigation: http://www.w3.org/TR/2011/WD-html5-20110113/history.html


References


- EUP. 2014. The working party on the protection of individuals with regards to the processing of personal data. Opinion 05/2014 on Anonymisation Techniques.