Measuring Student Behaviour Dynamics in a Large Interactive Classroom Setting

http://asq.inf.usi.ch/

RQ1: To what extent can a Web-based, privacy-preserving teaching tool be reliably used to assess the attention and learning outcomes of students?

RQ2: Does the practice question strategy have any impact on student engagement and student learning?

**Motivation**
- Real Classroom
- Privacy/Fairness concerns
- Directed Use of Technology

**Setting**
- Web & Database Technology
- 2016/17 edition
- 1st - 3rd year Bachelor students
- 14x90min lecture sessions
- 83-319 students

**Question Engagement (Q)**

\[
\text{MQE}(v, s) = \frac{1}{|Q(s)|} \sum_{q \in Q(s)} \text{submitted}(v, q)
\]

**Slide Engagement (S)**

\[
\text{MSE}(v, s) = \frac{1}{T(s)} \sum_{t=1}^{T(s)} \text{visible}(v, s, t)
\]

Answers Slides Questions
- Embed active learning questions in slides
- Real time answer gathering and Analytics
- Engage students and catch misconceptions early