Using Interaction Data to Evaluate Online Learning Materials

eduhub days 2016
Challange of Online Learning

Classical Teaching

Teacher

Students

Material
Challange of Online Learning

Online Teaching

Teacher

Students

Material
Our Solution

Interaction Data

- Measurements of Students working with problem based online learning materials.
- Measurements of actual interactions.
- Very fine grained information (188 Measurements)

Collected Data

- 720,715 Datapoints
- 815 Students
- 884 Datapoints/Student
Challenge of Online Learning

Online Teaching

Teacher

Students

Material
Analysis
When are Students working?

Module 2

Module 3

Exam
Live Analysis
Where do students have problems
Live Analysis
Where do students have problems

Verteilung Arbeitszeiten

Daten Auswahl
Sprache: de
E: Tutorial
Programmiergrundlagen Python 1

Daten Filterung
Datumsbereich: 28.01.2015 to 25.01.2016

Remove outlayers:
- Global
- Stepwise
- Fixed
- Do not remove

Größe des Datensatzes: 167
Größe nach Filterung: 52
Prozentanteil der entfernten Daten: 0.33%
Conclusion

Live data analysis of interaction data can:

- cope with the loose of interaction between teacher and students.
- give additional insight into students learning.
- provides helpful feedback for lecturers.
- help lecturers to monitor students progress.
- **not** identify risk students.
Thanks for your attention
Contact information and credits

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D. Sichau, L. Fässler:
Evaluation of online learning materials with automatically Collected interaction data.