Hands on workshop with Eric Mazur's Team based learning, Active learning with peers, Student engagement, and Assessment for learning

Om the 31st of March, a follow up workshop was organised by the Centre for Engineering Education (CEE) and the Centre of Expertise in Learning and Teaching (CELT). It was a very successful workshop. The workshop was opened by Lisa Gommer, coordinator of CEE for the University of Twente. Followed by two teachers who shared their experiences with us: Marjolein Dohmen-Janssen (programme director of Civil Engineering) and Remco Wiegerink (Teacher for Engineering Education). Click here to view the slides of the plenary presentation.

A brief summary of Marjolein's story
Marjolein participated in a workshop about TBL at the University of Bradford, which was given by Simon Tweddell. She explained the outline of TBL and how she learned about it. Below is a picture of a typical TBL module. Before class students have to prepare themselves reading the papers/books suggested by the teacher. During class the students first do a short individual multiple choice test (iRAT). They hand those in by the teacher. After the individual test, they make the exact same multiple choice test, but then in teams (tRAT). If the students have completed the test, they can make appeals, for example if they think the question was not formulated correctly, or if they disagreed with the answer. During the tRAT, the teacher can quickly review the individual answers from the iRAT and use that information for giving a mini-lecture on the topic that had the most wrong answers. In the following sessions, students can work in activating activities and learn more in depth about the different concepts.
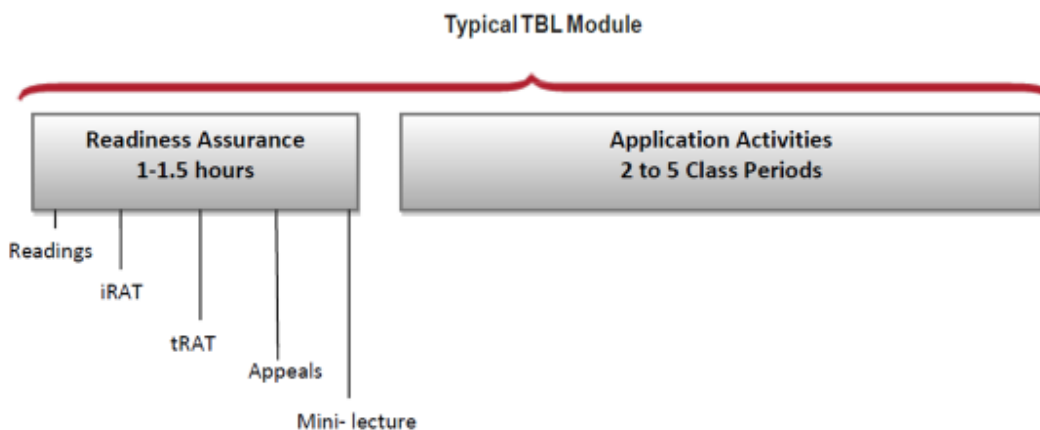

Figure 1. Source: Team_Based Learning: An introduction. Student study guide. University of Bradford, Simon Tweddell.

Marjolein is going to incorporate this method in one of the master courses that she is involved in. She showed some concept questions for the multiple choice test. She enjoyed formulating these questions and made an effort to construct the questions not only about factual knowledge, but also on applying the conceptual knowledge.
Click here to view the slides of the introduction on TBL.

A brief summary of Remco's story
Remco Wiegerink and Anne-Johan Annema have incorporated Perusall (www.perusall.com) in the module 3 for Engineering Education. Perusall is a software programme (designed by Eric Mazur) which

can support peer feedback. For each lecture, a chapter of the book students had to read was uploaded for students to annotate. The annotations students made existed of questions about difficult parts and reactions on the posted questions.
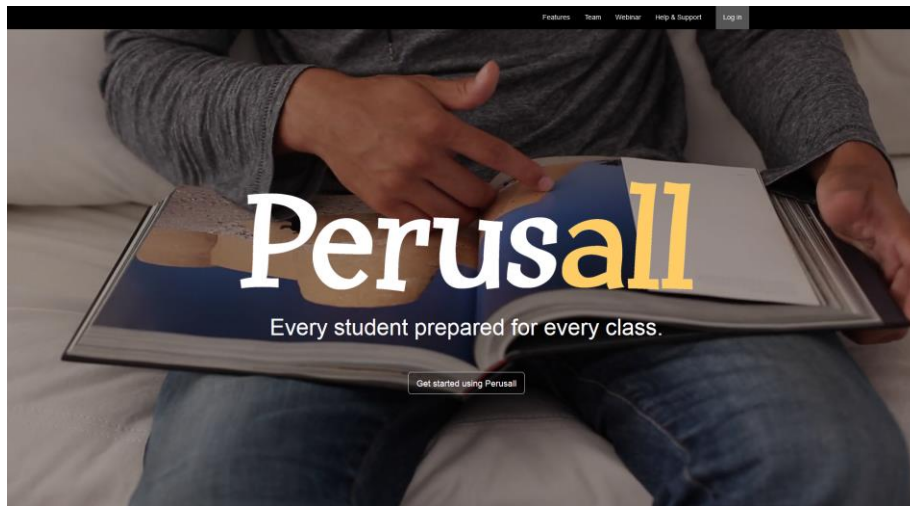

Figure 2. Source: Perusall, every student prepared for every class (https://perusall.com)

The system uses artificial intelligence to score these annotations. In the end the students' experiences were mixed. Some students noticed that it helped them to understand the subject matter better, other students were unsure about the scoring system of Perusall and thought that posting a lot of bad questions would also get high scores. The lectures experience with Perusall was positive. They noticed that students came prepared to the lectures, and that they could focus on the difficult parts during class time.
Click here to view the slides of the presentation on experiences with Perusall.

After the plenary presentations, participants were divided into groups matching the theme of their interest. In the subgroups some theory was explained and ideas for innovating educational practice were discussed.
Halfway through, Eric Mazur joined the workshop by means of a Skype session and answered questions from workshop participants. After talking to Eric participants started working on concrete ideas for improving their own course.
Click on the themes below to read a short summaries of the different discussions.
- Team-Based Learning
- Active Learning with Peers
- Student Engagement
- Assessment for Learning