UNOFFICIAL TeachBack GUIDE

TeachBack is a web application that facilitates various in-class active interactions and engaging activities. Our research efforts have been to experiment and develop a platform for 'Computer Supported Agile Pedagogy'. The agility is both inside the classroom as well as over the run of the course. As listed below, in the classroom an instructor can use formative assessment, students' feedback and questions to assess learning and issues and carter to the learning objectives and needs of the students - that's agile pedagogy in a class. However, there are many ways to flip a class, do formative assessment, engage students, collect feedback and there are various tools for doing so - so what is the best way to achieve efficient and effective learning and teaching? I don't think there is a single answer that fits all, as there are diverse classes, students and teachers out there - this asks for agile pedagogy over the run of the course as well. We think by closely collecting and analyzing students' participation, interaction and performance data over short stretches of the course we can further learn about the learning styles and needs of the students and also know which teaching methods and tools are more suitable and which ones are not.

Here is a quick recap about the application:
In the website, an instructor creates a course which is then assigned 2 unique 7-digit enrollment PIN numbers, one for students and the other is for instructors/TAs - students will use the PIN for students in order to enroll in the course for the semester. The application layout is roughly: User > Courses enrolled in > Lectures (class meetings) > Activities - a lecture can have one or optionally more activities as necessary > a selection of interactive tools.

Activity based interactive tools:
- **Feedback**: Allows students to report on how they're doing in real-time - by default they can report whether they're Engaged, Bored, or Confused with a short optional comment - these can be customized at the course or lecture levels. Instructor's Feedback view will show a pie-chart and timeline plots of the aggregate feedback data.
- **Forum**: A supervised back-channel chat where students can post questions and other topics and have them answered by other students, TAs and the instructor.
- **Questions**: A clicker functionality for asking formative assessment questions - can also be used for summative assessment in homework, quizzes and exams. Answers are grouped by similarity and can easily be graded and discussed in class. It allows free text, numeric, true/false, yes/no, and custom multiple choice questions.
- **GroupWork**: Like Questions but for group-based Think/Pair/Share questions. Students are automatically grouped in 3s (based on attendance that day) and when responding to a question they each have to first have to think and submit an individual answer after which the student can see other group members' answers and access the group mini-forum for that question. After group discussion, students are each required to indicate a final answer by submitting a new answer and selecting it or picking any of the existing answers from the group.

TeachBack also has **Stats** pages at the course, lecture and activity levels - with aggregate data for students' participation and performance in all the tools above. It also automatically generates students' attendance with indication of whether students showed up, didn't show up, and if

actively participated in class. Students can also take and manager their personal notes within the application.

You can adapt TeachBack use to a variety of classroom styles, but we mostly focused on flipped active and interactive classrooms, sometimes with occasional pre-class activities. You can also check out TeachBack here: http://teachback.herokuapp.com/ you can first browse through using my account where I'm enrolled in some of the current courses: Use wtarimo@brandeis.edu with password: Brandeis2016
Feel free to sign up and create a course if you want further exploration.

Kindly,

William Tarimo, Ph.D.
Brandeis University
http://www.cs.brandeis.edu/~wtarimo/
wtarimo@cs.brandeis.edu