

ENGAGING AND ASSESSING STUDENTS WITH EDUCATIONAL MOBILE PLATFORM TOOLS

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“Summaries of what makes most difference to student achievement, involving reviews of many thousands of studies spanning decades of research, show clearly that the most powerful single influence is feedback.” (Gibbs 2010).

Despite the overwhelming evidence supporting the efficacy of assessment feedback, current feedback mechanisms are not meeting the demands of students. Surveys indicate that students routinely are not satisfied with the quality of the feedback that they receive on assignments (Higgins et al. 2001, Sinclair & Cleland 2007, Hounsell et al. 2008, Ferguson 2011). Kahoot!(®), Socrative(®) and Nearpod(®) are all web-based and mobile application tools that allow educators to have a better understanding of student learning and in turn provide valuable, immediate, feedback to their students.

As educators, we often ask ourselves, “What is quality feedback?” Gibbs & Simpson (2004) propose six principles to consider when evaluating quality of feedback:

1. Sufficient feedback needs to be provided, both often enough and in enough detail.
2. Feedback should focus on students’ performance, on their learning and on actions under the students’ control, rather than on the students themselves and on their characteristics.
3. Feedback should be timely: received by students while it still matters to them and in time for them to pay attention to further learning or receive further assistance.
4. Feedback should be appropriate in relation to students’ understanding of what they are supposed to be doing.
5. Feedback needs to be received and attended to.

¹The views expressed herein are those of the authors and do not reflect the position of the United States Government, the United States Army, or the United States Military Academy. The authors are not involved with any of the companies mentioned in this paper and hold no interest in recommending any particular application.

6. Feedback should be provided in such a way that students act on it and change their future studying.

The innovative nature of mobile “clicker-response” type tools described in this paper allow teachers to address many of these principles. By emphasizing timeliness of feedback, we have a direct measure of how students are performing in our class at that moment. We have used this technology in freshman and sophomore calculus classes with great success. We found that while each program differs in its use, each can be valuable when introduced in the classroom at the appropriate time.

1 Kahoot!

The Kahoot!® platform itself is based on the research conducted by Morten Versvik for his Master’s degree at NTNU. The Pedagogy and User Experience is based on work by Jamie Brooker and Johan Brand developed while working at their behavior design company We Are Human in London. Kahoot! is owned and funded by the team in addition to grants from the Norwegian Research Council. The current service will stay free, however Kahoot! will offer added value services in the future.² The web URL for teachers to create a free profile and get started creating assessments is <http://www.getkahoot.com>.

1.1 How it Works

- The teacher creates multiple choice questions and answers using text, pictures, or video.
- The teacher displays the quiz on a main screen in the classroom through a projector or monitor, which provides the class with a unique Session Pin.
- Students use their computer, tablet or phone and go to <http://kahoot.it>, and log on using the session pin provided. They then enter their name or nickname.
- The teacher starts the quiz, each question has a countdown timer. When the question is done, the correct result is displayed, along with the number of responses for each answer choice.
- At this time the teacher has the option to go over the question with the class before going on to the next quiz question.
- At the end of the quiz, the top five students are displayed.

²<https://getkahoot.com/support/faq//who-and-what-is-behind-kahoot>

1.2 Notable Features

- All students answer questions at the same time with a countdown timer. This introduces a competitive nature to the game and is slightly faster-paced than the other two programs.
- You can share quizzes between teachers and search a database of thousands of other quizzes.

1.3 What we Thought of it

We really enjoy this tool. The fact that it is free and very easy to use (there is basically only one feature, the quiz, which means an easy learning curve for teachers and students alike). We didn't feel that you can use this tool for points towards the course other than bonus points.

2 Socrative

Socrative® is owned by MasteryConnect. The Socrative® platform bills itself as an instant response tool designed for the K-12 environment. The platform is accessible at <http://www.socrative.com>.

2.1 How it Works

- The teacher uses the “Socrative Teacher” app on a tablet or computer to create and manage the online experience while the student uses a similar “Socrative Student” app that is designed specifically for their use.
- The class revolves around a “Socrative Room” that is developed and managed by the teacher for the duration of the lesson allowing for more control compared to multiple “check-in” with other apps.
- The teacher can utilize prepared quizzes, or in-class, spontaneous questions that help with the flow of classroom discussion.
- Results are created in reports, which can be viewed by the teacher on the spot, or later for a more detailed analysis.
- When appropriate, the teacher can use a race/contest themed quiz with grouped students as a more entertaining assessment form.

2.2 Notable Features

- The use of two, separate, apps allows for a more focused design effort to accommodate either the student, or the teacher, respectively.

- The ability to ask/poll new questions in real time can be an innovative interaction tool for those difficult topics and quiet classrooms.

2.3 What we Thought of it:

Socrative is a great tool for developed quizzes and spontaneous short answer questions. We all consider it a good assessment based tool. If you ever feel like you're not getting the answer you'd like in class, it can be very simple to write the question, and have it appear on your students' screens. This is also a very intuitive app to develop quizzes and for viewing reports, though classroom use and timing can be a little challenging. If using this for grading, or for simple awareness on the teacher's part, it can be very helpful. For our uses, we see Socrative being the most beneficial when used as an added tool, an educational multiplier, in the daily classroom environment. If you keep this tool open frequently, it can be easily incorporated into the daily class planning, allowing for quick assessment feedback.

3 Nearpod

Nearpod® is a for profit company that “strives to empower educators to create learning experiences that engage and inspire millions of students around the world”. It is accessible at <http://www.nearpod.com>.

3.1 How it Works

- Easily create interactive classes by simply uploading a pdf presentation or you can start a new presentation while adding interactive features.
- For more basic classes, you can find free, and some for pay, interactive presentations from distinguished educators.
- The teacher can share contents and assessments in real time; to include quizzes, polls, slideshows, videos and other activities.
- The teacher can observe classroom activity and easily control the students' devices.

3.2 Notable Features

- Students can join Nearpod sessions from any location, to include at any time for homework assignments.

3.3 What we Thought of it:

While it can take an increased amount of time for preparation and initial interaction on the part of the teacher, in addition to more familiarity is needed on the part of the student, Nearpod can be an extremely helpful tool that presents multiple classroom “activities”. It can be molded and used for different situations allowing for a full course plan to be developed and taught through the app, or web app, particularly appropriate for smaller class sizes. Assessments are only one part of this tool as Nearpod is a more developed, interactive tool to assist teachers in the full lesson, not simply the assessment phase of learning.

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