

Mobile Innovation: Stimulating participation in lectures via mobile devices

Using online surveys in Google Forms to pose questions and receive audience responses using student owned mobile devices

The aim

The module leader wanted to increase student participation in lecture-based sessions and provide opportunities for active learning. He wanted to see if the mobile devices students were bringing into the classroom could allow students to become more involved during lectures.

Benefits

- **Enhancing lecture sessions through active learning**
- **Opportunity for all students to answer questions and participate in discussion**
- **Promotion of peer-supported learning**
- **Opportunity for students to gauge their level of knowledge and understanding**
- **Rapid feedback to the lecturer to determine lecture pace and resolve difficulties**
- **Improvements to overall student engagement and enjoyment of lecture sessions**

The approach

The tutor decided the best way to increase student engagement during lectures was by creating short online surveys that students could respond to using their mobile device. Google Forms was used to set up these surveys, because it can be accessed via the internet and is easy to set up. It facilitates a wide range of question types, including multiple choice, Likert scale, and text answers, and can be made available for any length of time to allow further access by students, for example during revision periods.

The questions in the survey were mostly in multiple-choice format, and were integrated into the presentation to promote immediate engagement. Access was provided to the surveys by web address and QR codes. These codes were created via goo.gl and provided in handouts as well as on screen so that students could point their mobile devices at the code to enter the question sheet.

Students worked in small groups so that those with web-enabled phones could access and answer the questions on behalf of a group, providing inclusivity for those without web-enabled phones and encouraging a collaborative style of learning. The group answers were collated to generate an overall class response, which was presented graphically, and used as a discussion point to deal with common misconceptions. The session format was based on short blocks of lecturing with slides (15-25 min), followed by short question sessions (5-10 min) and brief whole class discussion led by the tutor.

The outcome

From the tutor perspective, the online lecture questions were fairly straightforward to set up and operate, and were generally felt to be effective in terms of improving student engagement and judging student understanding.

The students were surveyed at the end of their module. The majority (90%) would like to see this implemented more widely. They said it helped them in a number of ways: i.e. they enjoyed lectures more, felt more alert, said the questions were helpful for learning facts, and that they found the peer learning valuable. They did not think the questions helped them to learn more complex conceptual aspects, but this reflects the straightforward questions asked and the immediacy of the approach used in this instance.

The key problems encountered were students' ability to access the questions and class management during question periods. Although recent surveys at SHU indicated that 70% of students own a mobile device, there was low ownership of smart devices in this cohort. Only 25% of these students accessed the questions and some did not know how to use the SHU Wi-Fi network, or had problems accessing the web link.

Periods of group discussion were sometimes noisy and difficult to bring back to focus for the following lecture block, however they help to keep students alert and students reported strong benefits from peer learning; they enjoyed working in small groups, liked to see the responses of the whole class, and generally agreed that they learned from others.

Details of the [project](#) were presented at Sheffield Hallam University's LTA Conference 2012.

Profile

Tutor name:

Ben Abell

Faculty:

Health & Wellbeing

Size of cohort:

Medium (30-70 students)

Technologies used:

Students' web-enabled mobile devices; Google Forms

If you would like your e-learning practice captured and shared in a similar case study, please contact Brian Irwin within Quality Enhancement and Student Success.

Future development

The use of mobile-accessible questions will continue next year with some refinements, and also be introduced into some other teaching. The tutor may try more complex questions, allow longer periods for answering questions, and also use the surveys to collect questions from students to clarify understanding of material covered.

Recommendations

The module leader recommends the following for others considering a similar approach:

- Find out in advance how many students will have mobile devices in the classroom, and have a clear plan for how you will manage the question / discussions sessions, for example seating students in appropriate groups.
- Provide a QR code for fast access to the web link, and provide clear instructions for students to access the web in the classroom using a range of devices, preferably prior to the session
- Establish a code of conduct for acceptable responses, since they will be broadcast on screen
- Provide continued access to the survey after the session