# Technological Review: *Mentimeter* Smartphone Student Response System

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*Mentimeter* is a student response system (SRS), much like *TurningPoint* or 'Clickers'. Web-based systems such as this, or *Socrative* and *Poll Everywhere*, reduce the logistical burden on the instructor by letting students use their own mobile devices to participate in the activity via the device's internet browser and a six-digit code sign-in to the quiz. This removes the process of handing out and collecting voting devices, thereby saving valuable time for teaching and learning.

SRS can encourage an immediate feedback loop on taught content, informing both student learning and staff teaching practices, which has been linked to increased examination scores (Trees and Jackson, 2007). Heaslip *et al* (2014) also found that clicker devices can simultaneously improve engagement and offer an anonymity that class discussions do not. However, there is also some evidence to suggest that it is in fact the active presentation of questions, and not the SRS themselves, that leads to increased engagement and attainment (Morling *et al,* 2008). The positive effects frequently reported from SRS use are often indicative of more engaging teaching, in which regular checks on student learning are conducted by the practitioner anyway (Poirer and Feldman, 2007). There remains, however, a significant body of evidence which reports SRS to be a highly-effective manner of engaging learners, especially in large groups.

## Features

There are two types of instructor accounts available - free and paid.

- The free version allows an unlimited number of participants, displays results live on screen and allows you to create a maximum of two questions per session.
- The paid version, with a discount available for educators, continues to allow an unlimited number of participants, but removes the limit on the number of questions you can ask and gives practitioners the option to export quiz results into a downloadable Excel file.

*Mentimeter* has multiple choice questions, provided by almost all SRS, and open-ended questions allowing the capture of qualitative data, a feature present in softwares such as *Socrative* and *Poll Everywhere*. It is in the range of available question formats that *Mentimeter* then begins to offer new options which could really energise a teaching activity: it can analyse results and produce word clouds based on the most common words used; you can create scales which move and adjust as each vote is cast; students can rate topics across a "2 by 2 matrix"; finally, practitioners could encourage students to distribute 100 points across a number of options, thus displaying group preferences and characteristics (Mentimeter AB, 2016). Combining these formats can create a dynamic and challenging survey, quiz or check of understanding in any taught session.

You can further customise your activity with a number of different personalisation options. Practitioners can select from a number of themes, opt to dictate the pace / allow learners to have control and choose whether or not to share the results with the audience immediately. Finally, practitioners can embed *Mentimeter* within *PowerPoint* slides, via a plug-in, allowing a seamless blend of lecture slides and interactive voting activities.

A number of the key issues surrounding *Mentimeter* can be seen in the SWOT analysis found in Table 1.

**Table 1:** SWOT Analysis

| | |
|---|---|
| **Strengths**<br>● Multiple question formats.<br>● Slick user interface.<br>● Unlimited participant capacity.<br>● Easy sign-in process - no additional software/app download required.<br>● On the spot selection of question format.<br>● Extremely easy-to-build quizzes.<br>● Works on any web browser. | **Weaknesses**<br>● Requires mobile device like all web 2.0-based SRS.<br>● Fluidity of display can be a little distracting.<br>● Can be difficult to single out the impact of the technology. |
| **Opportunities**<br>● Paid account offers unlimited number of questions.<br>● Traditional use to quiz or check knowledge.<br>● Use to direct and guide teaching - free-form style.<br>● Location services can speed up sign-in process for learners. | **Threats**<br>● Free account offers only two free questions – useful, but limited.<br>● Requires students to have devices, which may not always be the case. |

Assessing the impact of any single factor upon student learning will always be complex and problematic. In this regard, *Mentimeter* is no different. Practitioners may use the software to gather feedback on the use of *Mentimeter*, but assessing its impact upon metrics such as attainment would be a complex and contested task (Morling *et al,* 2008; Poirer and Feldman, 2007).

## How can I use this in my practice?

*Mentimeter* can be used in a number of ways to enhance teaching and learning activities:

- Quizzes - This is the traditional use of SRS technology to test taught content and highlight gaps in knowledge.
- Surveys/Evaluations - Software such as this could offer a method of in-session group completion of module evaluations, affording a rich data set with the varied question types. The word-cloud, 2 by 2 axis and 100-point distribution questions would be useful for performing in-house evaluations of assessments.
- Student-led teaching - While SRS can be used as a method of ‘testing’ learnt content, there is significant potential in deploying them to create free-form teaching activities where the session is driven by the students’ answers to in-class questions. This would be particularly useful in the lead-up to assessments, for recapping content or for reflecting upon assessments that have been completed.

## Conclusions - Benefits to staff and students

For students, softwares such as this offer an opportunity to participate and engage without fear of making mistakes in front of peers, as well as giving an insight into the thoughts, feelings and knowledge of the rest of the group. A small sample of evaluative students comments, from an induction session delivered to international students in January 2016, demonstrates the potential of interactive voting software such as *Mentimeter*:

> *"The word quizzes helped me see how everyone else felt and it kept me focussed"*
> *"The interactive nature of it kept you engaged the entire time"*
> *"I liked using my phone for the questions"*

For staff, *Mentimeter* offers highly-customisable activities which can facilitate an instant analysis of responses, provide downloadable data sets and create an interactive teaching and learning experience for groups of varying sizes. Fellow practitioners should visit www.mentimeter.com if they wish to try this fantastic teaching tool.

## Reference list

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