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Book Review: Mentimeter: A Tool for Actively Engaging Large Lecture Cohorts.

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Abstract:	Management schools worldwide have seen substantial student growth compared to other disciplines (Cameron, 2017). Resulting from this ongoing massification (Trow, 1973), lectures due to their scalability in teaching students, continue to be the main form of teaching in higher education. Lectures with large cohorts tend to be didactic in nature (Huggins & Stamatel, 2015), resulting in numerous authors (Howard, 2002) deeming them to be ineffective at engaging students in academic knowledge (Laurillard, 2002). This is particularly problematic for the current generation Z students who enjoy interactive learning (Hussin, 2018).

Book Review

Resource Review: Mentimeter: A Tool for Actively Engaging Large Lecture Cohorts.

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Management schools worldwide have seen substantial student growth compared to other disciplines (Cameron, 2017). Resulting from this ongoing massification (Trow, 1973), lectures due to their scalability in teaching students, continue to be the main form of teaching in higher education. Lectures with large cohorts tend to be didactic in nature (Huggins & Stamatel, 2015), resulting in numerous authors (Howard, 2002) deeming them to be ineffective at engaging students in academic knowledge (Laurillard, 2002). This is particularly problematic for the current generation Z students who enjoy interactive learning (Hussin, 2018).

One key way of significantly increasing the level of student engagement in large lectures is through the use of student response systems (Cline, Zullo, Huckeraby, Storm, & Stewart, 2018; Goodhead & MacMillan, 2018; Habel & Stubbs, 2014; Van Daele, Frijns. & Lievens, 2018). Student response systems were initially developed in the 1960s (Habel & Stubbs, 2014) through the use of clickers and are still being used today (e.g. Buil, Catalán, & Martínez, 2019). However, given the investment cost, time spent handing these in and out and only one question style format (Trees & Jackson, 2007), clickers are less feasible to use in large lectures. As an alternative, web-based, real-time, student response (otherwise known as polling or voting) systems have begun to evolve such as Poll Everywhere or Mentimeter. Mentimeter has thirty million users worldwide (Mentimeter, 2019) and is a combination of

polling, quiz and presentation tool. Mentimeter offers Free, Basic and Pro price plans for professionals and Educational Basic and Educational Pro for academics. For the purposes of this review I will focus on the Free plan, which for large lectures, has the benefit of an unlimited number of participants. I have found that the use of up to two core questions types and five quizzes per presentation in the Free plan is sufficient for most one to two hour lectures. Otherwise Trees & Jackson (2007) warn that if Mentimeter is overly used, students' enjoyment level diminishes.

The user-friendly set-up entails going to https://www.mentimeter.com and creating an account, adding slides, then selecting from Quick Slide for presentation-type slides, Quiz or Question Type. The range of question type formats include: "Multiple Choice", "Image Choice", "2 by 2 Matrix" and "Q&A". The slides can be presented independently online or alternatively, via a plug-in that can be downloaded via Office365. Once finished, a QR code can be generated or students can go to https://www.menti.com and input a six digit code using their mobile devices. A Mentimeter can be set up so that the pace can be dictated by the academic or the students. The students then read the question, commit to an answer, the result of which the academic can choose whether or not to be displayed to students.

In this review I will share my experiences of using Mentimeter with undergraduates through to doctoral students and staff in management and business schools. Like Masikunas, Panayiotidis, & Burke (2007) and Buil, Catalán, & Martínez (2016) realise in relation to other student response systems, with Mentimeter I have observed a positive impact on student satisfaction at all levels of study. I am also of the opinion that, higher than Vallely & Gibson's (2018) estimate, student engagement in Mentimeter question types or quizzes is around eighty per cent. This could be partly attributed to the anonymised answer format,

giving confidence to first years and internationals especially, to volunteer an answer in large lectures (Habel & Stubbs, 2014).

On an undergraduate employability skills module, I use the "Who Will Win" question type to encourage students to vote on the most appropriate answer in a job interview situation. The new "Ranking" enables students to realise the most common skills required by graduate employers, and as Mentimeter provides real time cumulative response rates, I encourage more students to provide an answer accordingly (Cline, Zullo, Huckaby, Storm, & Stewart, 2018). Regardless of the question type, I always give immediate feedback on answers, otherwise as Schmid (2006) warns, students' enthusiasm for learning tapers.

For a Masters research module comprising of 450 students on various programmes, initially I gauge their experiences on using research interviews using "Scales". Similar to a Likert scale, I pose questions using "Scales" such as 'I know a lot about using interviews in research' and 'I conducted research interviews for my undergraduate dissertation'. Further into the lecture, I also initiate a timed "Quiz" to, as a number of author advocate (e.g. Egelandsdal & Krumsuik, 2017), test students' understanding of the main features of structured, unstructured and semi-structured interviews. The Mentimeter "Quiz" takes into account the correct answer being selected and time taken to respond, so after a few questions I start to show the leader board as well as the overall winner at the end. Utilising questions, timing and a points scored reward system promotes the gamification of learning, and motivates students (Kapp, 2012) especially generation Z students who enjoy a challenge (Hussin, 2018). Moreover, Skoyles & Bloxsidge (2017) recognise that seeing the correct answer immediately is beneficial for all students.

When training doctoral students to mark undergraduate assessments I use "Word Cloud" as an ice breaker to ask for a one word opinion on how they feel about assessing students' work. The visual format allows quick recognition of the most common opinions as they appear larger in the "Word Cloud", which I then call upon students to volunteer a more detailed response as a means of initiating a discussion. To promote deeper learning, I later question PhDs on the reasons for assessing students using the "Open Ended" question type. There are also different options for displaying responses, my favourite of which is the flowing grid display, because while I talk through the answers, reflective learners are then promoted with ideas. I also ensure that I intersperse Mentimeter questions between information slides (Hoekstra, 2008) to keep student alert.

As part of a Chartered Management and Business Educator external working group, I wanted to assess the most popular professional development workshop topics for academics and leaders. To do this I used the "100 Points" question type whereby participants have to split one hundred points between the options to denote importance. Once the results were in, I downloaded a PDF of the result to disseminate to the working group for subsequent analysis. For the academic, Mentimeter also offers the opportunity to check historical data which is useful for module evaluations. These learner analytics serve as important means of tracking students' progress, and will become more prevalent in the future (EDUCAUSE, 2019).

Since its inception five year ago, Mentimeter features are continually evolving particularly in terms of question types. Sometimes though because of the character limitations, it is not always possible to select a preferred question type, but this can be mitigated by recognising the style of answer required, which then dictates which questions type to use. For students it can be frustrating that once an answer is submitted it cannot be amended. However, for some

of the question types, responses do not have to be limited to just one response and if the lecture environment encourages a 'give it a go' ethos, the need to revoke an answer becomes less of an issue. Finally, in the future I would like a match-up question type, whereby a range of single words or short sentences that are predetermined by the academic can be matched up to a corresponding short sentence out of a range of options. This could, for example, be used to match a technical term with a corresponding definition.

In sum Mentimeter and the multitude of question types and quiz elements for large lectures can be utilised to significantly enhance student enjoyment and engagement. For academics and students, the simple format and facilitation of deep learning opportunities, means that the benefits far outweigh some of the minor areas for development and I am excited to know what next lies in store in Mentimeter's offering.

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