Lecture Capture – can it help 'hard to reach' students?

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Abstract
What are the consequences of implementing Lecture Capture technology and how does it support students, especially those who are 'hard to reach'? There is growing evidence around the benefits lecture recordings provide to students and in particular how they can directly support specific groups of learners. However, balancing the needs of students with academic concerns, technological barriers and policy issues which need to be overcome is not easy. This piece presents the author's views, having supported the wide scale use of lecture capture technology since 2008.

Author Bio

Matthew Newcombe is Head of e-Learning at the University of Exeter. He has extensive experience of leading institutional wide enhancement initiatives and embedding new technologies, aligned to enhancing the curriculum.

New technology is often seen as the solution to solving problems or enhancing practice; but in many cases the benefits technology offer are lost through the challenges they present when implementing them. Is this the case with lecture capture technology? Can it actually be a solution to offering students supportive learning opportunities beyond the classroom? From my own experience of implementing an institution-wide lecture capture solution since 2008, the benefits of this technology far outweigh the technological and institutional challenges faced, but it is useful to understand both benefits and problems.

My own experiences of lecture capture technology began with an initial pilot in three large lecture rooms, in order to explore what the technology offered to learners. This has subsequently been expanded to 46 rooms (soon to be over 100), capturing approximately 7000 sessions per term. From early in the initial pilot, it became apparent how beneficial the technology could be to students, with positive feedback and high levels of engagement from across the student body. This finding is reinforced through a number of other reviews (e.g. Yeung et al. 2016; Taplin et al. 2011).

The statistics provided by the technology help to illustrate how much students are engaging, and which parts of lectures they are reviewing the most. In the first term of the 2016/17 academic year, Exeter had just over 400,000 student views, watching a total of approximately 600,000 minutes of recordings. Figure 1 shows an example of statistics for a single module and highlights the levels of engagement, especially around exam time at the end of term.

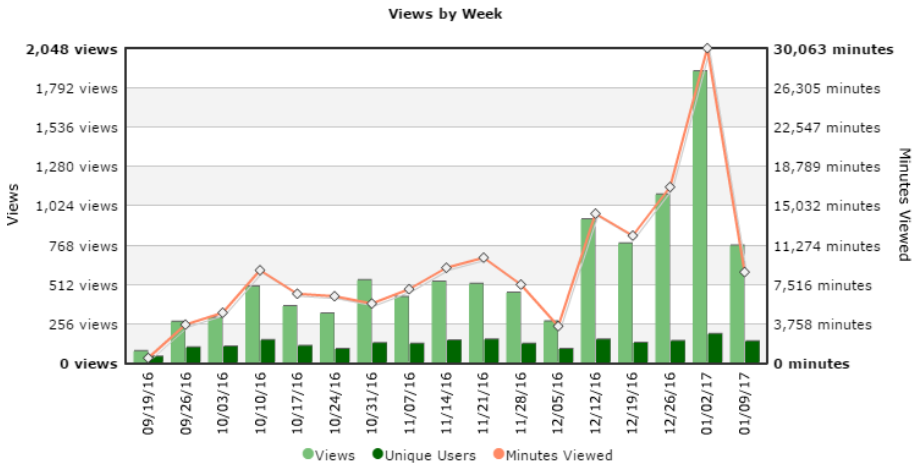

Figure 1- example of statistics generated for module which has been recorded

The statistics also provide individual academics the ability to explore and understand the sections of lectures students are watching. This in turn highlights areas which may need to be recapped in future lectures or tutorials.

This is illustrated in Figure 2 - between 16:33 and 29:26 minutes into the recording where a peak of users has watched this section; was this a new threshold concept, was there a discussion about assignment topics, or did the group just struggle with understanding this particular topic?

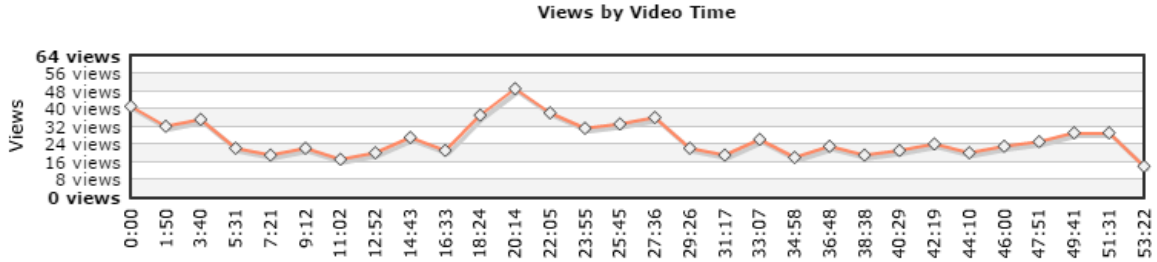

Figure 2- engagement by views and recording time for an individual lecture

By exploring these statistics alongside the recordings, academics can start to understand how the technology is being used by diverse groups of students. In more detail, they can see by username which students are engaging, a useful record if some of them are regularly unable to attend lectures.

What became obvious to me, was that recording lectures and providing them online for students to review, in their own time and wherever they want, is of benefit to all learners, allowing engagement with teaching in new and flexible ways, 24/7, as and when lectures are required by students. Thus it offers institutions an effective and highly beneficial enhancement to the student experience, both on and off campus. When this was explored in more detail, greater benefit was apparent for those considered ‘hard to reach’ in this context (i.e. those who were unable or less likely to attend lectures, whether for genuine difficulty or other reason).

My own work has allowed me to explore student engagement in a number of ways including through the generated system statistics, discussions with groups of students about how they

have used the recordings and formally through end of module surveys. So, what have I observed as the benefits to such students?

The opportunity to:

- Revisit recordings closer to exams in order to aid revision;
- Catch up and revisit sessions which may have been missed;
- Revisit and review complex ideas and concepts ;
- Work at their own pace without pressure or disturbance and take control of their own learning.

This, in turn:

- Helps students to improve their knowledge retention;
- Gives support for students where English is an additional language;
- Supports students who have a wide range of accessibility needs;
- Provides flexibility and reassurance for students who, for example, are carers and may not be able to get to lectures.

Students are becoming much more tech savvy and are used to engaging with a range of rich online media. Hence offering students' choice in how they can interact during and after their lectures is important. Once lecture capture is implemented, the benefits immediately start to become apparent; so-called 'hard to reach' students in particular benefit from the flexibility of access to core learning and it is this flexibility which opens up new avenues to them, and ensures that they are offered the best opportunity to succeed within Higher Education.

It also leads to new opportunities for academic staff to enhance and experiment within their own practice. Experimenting with new curriculum models such as flipped learning, encourages change and brings additional benefits to students. This curriculum innovation can lead to wider benefits such as exploring new assessment techniques, greater student engagement in lectures and online leading to effective development of blended learning. These changes lead to enhancement of the face-to-face, blended and online curriculum and lead to greater engagement by students within their courses.

However, lecture capture is not a simple solution – there are a range of sometimes complex issues which need to be explored, solved or addressed to achieve the benefits I have observed. For many staff the thought of being filmed is in itself a step too far, raising issues of copyright, IP ownership and public evaluation of their own professional practice. Careful consideration must be given to staff concerns and appropriate solutions identified to address them. For example, so as to allow for staff not to engage with lecture-capture, recording is supported with an 'opt-out' policy ensuring that staff who do not want to be recorded can opt-out of the process. This has in fact meant that the majority of lectures are captured, and I believe it to be more effective than an 'opt-in' process. In addition, to ensure there is no additional work for staff, the system (including opt-outs) is automated and driven by the timetable to ensure a seamless experience for students. It is also important for institutional policy to be aligned to support lecture capture, and a thorough understanding of the legal issues which may arise when it is rolled out need to be gained.

It is also important, in my opinion, to recognise that recordings should not entirely replace traditional face-to-face lectures, especially at a campus-based institution. People may argue about the value of lectures, but they continue to provide a valuable educational tool; many are now interactive and engaging, offer opportunities to talk to the lecturer and support a developing community of learners.

So back to my initial question – can lecture capture help hard to reach students? I would suggest from my observations that it can, and does; in my view it is one of the ways in which institutions can support all students very effectively. Recorded lectures certainly enhance learning opportunities, and for some specific groups of students more than others. There are many other technologies that can help, but lecture capture provides an institution-wide solution for capturing existing practice and opening up flexible approaches to university-level learning.

References

Taplin, R.H., Low, L.H. & Brown, A.M., 2011. Students' satisfaction and valuation of web-based lecture recording technologies. *Australasian Journal of Educational Technology*, 27(2), pp.175–191.

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