QUESTIONS ABOUT: LECTURE RECORDING

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Contents

Executive Summary

Lecture recording is an incredible popular technology that provides an opportunity to benefit students' learning through aiding revision and catching up missed classes. These benefits can be particularly useful for students who may be disadvantaged in face-to-face classes.

Since the development of lecture recording technologies significant research has been undertaken across institutions, cultures, and disciplines; exploring the impact of lecture recording on student attendance, satisfaction, and learning. The key outcomes of this research are:

- the availability of lecture recordings has a small effect on student attendance as attendance decisions are complex,
- lecture recordings generally have a small positive impact on student learning, through aiding revision and catching up missed classes. However, students generally over rate the value of recordings for their study.

Recommendations for using lecture recording

- Design and teach for the students in attendance, the focus of our classes is the learning of students attending even when this produces poor lecture recordings
- Provide lecture recordings when possible, and as soon as reasonable after class. International studies and UQ data indicate students use lecture recordings throughout the semester.
- Support students in how to use lecture recordings as part of effective study regimes
- Be aware of what you are recording; most lecture content is ok but pause the recording when using restricted, copyright material, or engaging in confidential discussions.

At The University of Queensland, lecture recording is the automated capture and distribution of the visuals displayed (e.g. PowerPoint presentations and document camera materials) and audio amplified (e.g. the lecturer's lapel, and lectern microphone) through the audio-visual systems in teaching spaces. No video of the lecturer or students is currently recorded. Lecture recordings are automatically produced and distributed in the teaching spaces with the appropriate technical facilities: (https://www.elearning.uq.edu.au/content/automatic-recordings-and-opting-out).

Student demand for lecture recordings has been the primary driver of uptake, with lecture recording becoming pervasive in Australasian universities with 45 of 47 **Australasian Council on Open, Distance and E-Learning (ACODE)** members using lecture recording systems (Marshall, 2014). Technological advancements in lecture recording systems are exploring options to video record the presenter, enhance access to the recording, and support activities and conversations around the lecture recording.

What are the benefits of lecture recording?

Lecture recordings have been identified as beneficial for:

- students who have difficulty fully participating in lectures—for example, students with disabilities/medical conditions (Williams, 2006)—and, in particular, access to **lecture recordings is included in many student access plans** at UQ
- improving **access for students who are not based on a single campus,** for example students on placements, or based on diverse campuses/teaching sites
- **supporting student revision** (Traphagan et al., 2010)
- enabling students to **review materials from missed classes** (Williams et al., 2012)
- enabling **lecturers to review their own lectures** for professional development.

How does lecture recording affect students' learning?

In general:

- students who **attend class have a better learning experience** and outcomes than students who don't (Philips et al., 2011; Traphagan et al., 2010; Von Konsky et al. 2009; Williams et al 2012)
- students who **attend class and use lecture recordings** as part of effective revision and reflection strategies achieve higher results than students who just attend class (Grassi & Baizer 2010; Von Konsky et al. 2009; Whitley- Williams et al 2012)
- students **who don't attend class and access lecture recordings** perform better than students who neither attend lectures or access lecture recordings (Whitley-Grassi & Baizer 2010; Williams et al 2012)
- **students from non-English speaking backgrounds, and with disabilities and medical**

conditions, gain specific benefits from accessing recorded lecture materials (Leadbeater et al 2013; Williams, 2006)

- The size of these impacts is not very large (in part because lectures are just one element of students' learning experience).

Lectures at UQ should be rich, interactive experiences where students engage with experts and peers. UQ teachers engage in significant work to provide exemplary classroom experiences for our students. Examples of this work include the introduction of collaborative teaching spaces, clickers, and the flipped classroom movement. Recordings of these events will never capture this richness, but they do, however, provide a resource to support student's revision and help students who miss a class to catch up. When there is no difference in what students do in a lecture than watching a video of a lecture there is no difference in the learning outcomes (Clark, 1994).

Studies examining student learning outcomes for a cohort of students when lecture recordings were introduced have observed mixed, low impact results with some increases, decreases and no changes to outcomes when comparing cohorts with and without lecture recordings (Bollmeier, Wegner & Forinash, 2010; Drouin, 2013; Hove & Corcoran, 2008; Settle et al 2011; Zimmerman, Jokiaho & May, 2013). There are no ubiquitous characteristics which have been identified relating to cohorts with statistically significant differences in outcomes. Quasi-experimental studies that have restricted student access to just recorded lectures or just live lectures have had mixed results (Willams 2012). Some studies have observed differences in student approaches to using lecture recordings with related differences in learning outcomes (Owston et al., 2011; Pinder-Grover et al. 2009; Traphagan et al., 2010).

Students generally appreciate lecture recordings for educationally sound reasons (Cardall, Krupat & Ulrich, 2008; Gosper et al., 2007; Holbrook & Dupont, 2009; Soong, Cluet & Hogan, 2007), prefer courses with lecture recordings (Bollmeier et al., 2010; Soong et al., 2006) and, lecture recordings can be a useful aid for students to enhance their studies.

How do students use lecture recordings?

Students engage with lecture recordings to revise for exams (Brotherton & Abowd, 2004; Engstrand & Hall, 2011; Preston et al., 2010; Settle et al., 2011), enhance understanding of concepts from class (Brecth & Ogilby, 2008; Gosper et al., 2010), take notes (Collie et al., 2009) and review materials if they missed a class (Settle et al., 2011).

Studies have identified a variety of approaches undertaken by students in reviewing lecture recordings (Karnad, 2013). High performing students tend to take an active approach to using lecture recordings,

reviewing specific sections of lectures (sometimes multiple times), whereas other students are more likely to take a surface approach and passively play the whole lecture (Owston et al., 2011, Leadbeater et al., 2013).

Does lecture recording affect lecture attendance?

Student attendance is complex and many factors (including work and family commitments, transport, illness, assessment, lecture style, beliefs about learning, and timetabling) impact students' ability and decisions to attend class (Bailey 2013; Bati et al., 2015; Halpern 2007; Hunter & Tetley, 2009; Leufer & Clery-Holdforth, 2010; Westrick et al., 2009). The availability of lecture recordings is a consideration for students deciding whether to attend class, but the actual impact is dependent on the context and is generally smaller than other factors (Collie et al., 2009) including the availability of lecture slides (Traphagan et al., 2010).

Surveys of expectations when lecture recordings are introduced generally show academic staff expect attendance to drop (Bond and Grussendorf, 2013; Collie et al., 2009; Gosper et al., 2008; Maynor et al., 2013). However, student expectations are more mixed, with some surveys expecting no change in attendance (Maynor et al., 2013) and others indicating students are less likely to attend (Harley et al., 2003; Holbrook & Dupont, 2011).

Studies monitoring attendance where lecture recording has been introduced have observed **increased** (Westrick et al., 2009), **no change** (Bailey, 2013; Billings & Mazor, 2007; Bollmeier, Wegner & Forinash, 2010; Holbrook & Dupont, 2009; Hove & Corcoran, 2008; Larkin, 2010; Mather et al. 2015; Pursel & Fang, 2012; Settle et al., 2011; Von Konsky et al., 2009; Westrick et al., 2009) or **decreased attendance** (Drouin, 2013; Gorissen et al. 2012; Gysbers et al., 2011; Owston et al., 2013; Westrick et al., 2009). The studies that have observed a statistically significant change in attendance when introducing lecture recording have found these **changes to be small and not simply attributable to lecture recording**.

> The recording of lectures should not be seen as a sole or significant cause of falling attendance rates by students at lectures. No research study has shown this to be the case. Instead the recording of lectures should be seen as an opportunity to improve teaching and learning (Tarrant, 2014, p.42).

When should I make lecture recordings available to students?

At UQ, recordings are automatically made available to students through Blackboard as soon as they are processed, and staff can manage this process to make recordings available in ways that better suit their students and course structure (https://www.elearning.uq.edu.au/content/make-recording-available-unavailable).

Ideally, lecture recordings should be made available as soon as practicable after the lecture to aid students to revise and catch up before the next lecture. Lecture recording availability throughout the semester supports spaced revision rather than cramming, as spaced practice has been shown to be more effective for learning (Ambrose et al., 2010). Studies of students' use of lecture recordings show many students access the recordings during semester, particularly within the first two weeks of the lecture being recorded (Brotherton & Abowd, 2004; Owston et al., 2011; Traphagan, 2005; Zupancic & Horz, 2002). This research is reflected in UQ usage analytics for lecture recordings, indicating students access recordings throughout the semester, as shown in Figure 1.

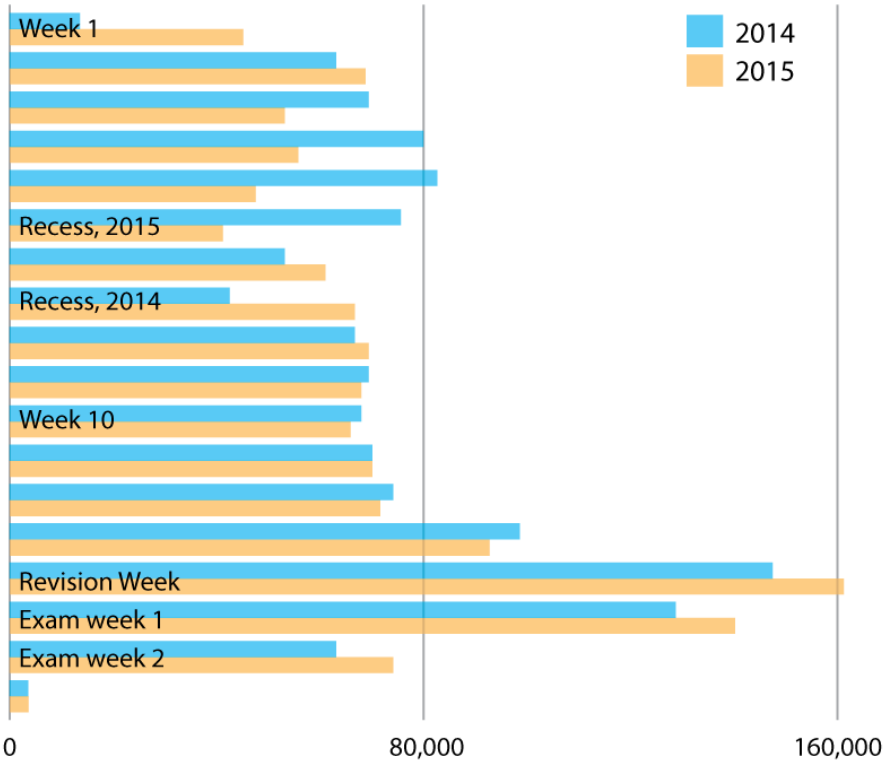

FIGURE 1 - COUNT OF THE VIEWS OF LECTURE RECORDINGS BY WEEK

When should I not record my lecture?

Given the benefits to students, we recommend providing lecture recordings, however there are times when lecture recording is not appropriate, including when:

- playing videos in class, many multimedia resources (including YouTube and Library resources) are provided with licenses that prohibit recording. When using these resources in a lecture, pause the lecture recording.
- discussing confidential content (for example, discussion of students' experiences on practicums and commercial-in-confidence materials).
- guests are presenting who are not comfortable being recorded – always ask before recording and pause or stop the lecture recording if the guest does not wish to be recorded. Preferably guests should be willing to be recorded to add to the richness of students' learning resources.

Who owns the copyright on the recording?

At UQ, **the university owns all intellectual property**, including teaching materials such as lecture recordings, created by teachers while the university employs them (PPL 4.10.13 Intellectual Property for Staff, Students and Visitors).

I'm uncomfortable with the quality of the video not reflecting the quality of the lecture experience.

The **primary purpose of a class at UQ is the learning of the students in attendance**; this objective takes precedence over the production of a video recording. Our lecture recordings do not accurately reflect the experience of attending a lecture. UQ does not release lecture recordings as a replacement for lectures, or as an indication of the quality of our classes, but as a supplement to support students' learning. We recommend supporting students to use lecture recordings as part of effective study habits.

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