

RECORDED LECTURES DON'T REPLACE THE 'REAL THING': WHAT THE STUDENTS SAY

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ABSTRACT

Many face-to-face lecture programs are supplemented by recorded lectures. In this study on-campus students were surveyed regarding their experiences of face-to-face and recorded lectures. The majority of students favoured face-to-face lectures due to the ability to interact with lecturers and other students and the ability to ask questions in real time. Recorded lectures were seen to be useful for clarification and revision, due to the ability to rewind, pause and review.

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BACKGROUND

Many university courses supplement face-to-face lecture programs with recordings of the lectures, made available to students soon after the lecture has run. Studies of the use of recorded lectures in Australian universities reveal that students use these online lectures to supplement rather than replace the traditional face-to-face lecture (Phillips, Gosper, McNeill, Woo, Preston, & Green, 2007; Larkin, 2010), accessing the recordings when they wanted to spend more time on a particular topic, or to make up for a lecture that they did not attend (Larkin 2010). This is contrary to the idea held by many academics that students will not attend face-to-face lectures when online lectures are available (Davis, Connolly, & Linfield, 2009).

Monash University Lectures Online (MULO) offers teaching staff the opportunity to record lectures given in on-campus classes, providing either audio-only recordings of lectures (with copies of the slides also made available), or full audio-visual recordings (via EchoSystem) in which students see the slides and any annotations made by the lecturer while hearing their voice. Recordings are available for download via the University's Library website soon after the lecture has occurred.

Due to the small class numbers at Monash University's regional Gippsland campus, close relationships with students are formed and lecturers get to know the students and their behaviour. On campus students within the School of Applied Sciences and Engineering tend to fit within two categories – those who usually attend lectures but may occasionally be restricted by clashes and one off events; and those who rarely attend lectures and only attend compulsory classes such as tutorials and laboratory classes. We have observed that these behaviours tend to be independent of subject and lecturer and are apparently unrelated to travel time or distance. Once established, students will continue in a particular pattern of behaviour throughout their course. Those who usually attend lectures seem to do so regardless of how useful they think the lectures are, and whether or not they find the lecturer to be engaging. While there appears to be a general correlation between lecture attendance and academic performance, this relationship may not be causal, since lecture attendance and academic performance may both reflect intrinsic motivation of the student; i.e. do students do better when they attend lectures, or do better students attend lectures? The availability of online lecture recordings has not changed this observed pattern and we were interested to understand why students continue to attend face-to-face lectures when it is often difficult for them to do so, and when an alternative (in the form of a recorded lecture) is available.

The aim of this study was therefore to explore how on-campus students within the School of Applied Science and Engineering at Monash University's Gippsland campus used face-to-face and recorded lectures and to find out what students' motivations were in engaging with these alternative forms of the lecture.

DESIGN AND PROCEDURE

A cross section of students enrolled at the School of Applied Sciences and Engineering, Monash University Gippsland in semester 2, 2010, were selected for this study. All students enrolled in three particular subjects (those coordinated by the authors) received email requests to complete an online survey. A subset of these students was later invited to participate in a focus group discussion. The subjects were first level biology, second level biochemistry and third level environmental science. Face-to-face lectures were available in these three subjects; and recorded lectures were available in two of these three, as well as in other subjects taken by these students, so all students had experience of units where recorded lectures were available. Survey questions and group discussions did not focus on students' experience of these three subjects, rather students were encouraged to reflect widely on their experience of face-to-face and recorded lectures.

SURVEY

Students were invited, by email, to complete an anonymous survey via SurveyMonkey regarding their use of face-to-face and recorded lectures. They were asked to comment on how often they used the two types of lectures and the usefulness of each. The survey questions are shown in Table 1. All students enrolled in the three units (a total of 47 students) were invited to participate and the survey was available for 3 weeks from the time of the initial invitation to participate; 38 students responded to the survey: 22 were female and 16 male.

Table 1: Survey Questions

1	Study Mode
2	Age
3	Sex
4	How often do you ... (always/usually/sometimes/hardly ever or never/NA) a) Attend face-to-face lectures b) Listen or watch recorded lectures (Open text box also provided for comments)
5	How useful do you find the following: (extremely useful/useful/of some use/of little use/not useful/NA) a) Face-to-face lectures b) Recorded lectures (Open text box also provided for comments)
6	What do you get from attending a face-to-face lecture that you don't get from a recorded lecture? (Open text box provided)
7	What do you get from a recorded lecture that you don't get from a face-to-face lecture? (Open text box provided)
8	For each of the following statements, indicate your level of agreement based on your activities while attending or listening to lectures (always/usually/sometimes/hardly ever or never/NA) a) I like it when the lecturer poses questions to the class b) I feel comfortable responding to questions c) Lectures help me understand the material d) Lectures motivate me to learn e) Lectures help me relate material to other knowledge f) Lectures keep me up to date with work requirements g) Lectures provide good preparation for exams h) Notes that I take during lectures provide a good basis for revision i) During lectures I multitask, focussing on the lecture as well as one or more other activities j) I am able to remain focussed throughout most of the lecture k) I prefer face-to-face attendance at lectures to downloading and listening later (Open text box also provided for comments)

FOCUS GROUP

A semi structured focus group discussion was held over lunch with 17 students from the second and third year subjects and three members of the teaching staff from the school. The discussion was

audio-taped and transcribed with the permission of the students. The discussion was conducted in a relaxed fashion and led by a staff member who was not their lecturer, however lecturing staff were present and also participated in the conversations. One of the main areas of discussion explored students' use and experience of face-to-face and recorded lectures. Other areas of discussion included style and content of lectures and the usefulness of other materials available to students to support their learning.

RESULTS & DISCUSSION

The proportion of students who attended face-to-face lectures and/or accessed recorded lectures is shown in Table 2. The majority of students who responded to the survey regularly attended face-to-face lectures and only 8% regularly used recorded lectures; though many more reported that they accessed the recordings 'sometimes'. Nearly all of the students surveyed found face-to-face lectures useful or extremely useful, while 42% of students found recorded lectures to be useful or extremely useful (Table 2). This figure is low compared with other studies in which the vast majority of students found recorded lectures to be useful (Soong, Chan, Cheers and Hu 2006). Two-thirds of the students surveyed stated their preference for face-to-face lectures (Table 3).

Table 2: Summary of student responses to questions about frequency of use and usefulness of face-to-face and recorded lectures. Values given are percentages of all student responses.

	Question 4 How often do you ...				Question 5 How useful do you find ...			
	Always or usually (%)	Sometimes (%)	Hardly ever or never (%)	N/A	Extremely useful or useful (%)	Of some use (%)	Of very little use/not useful at all (%)	N/A (%)
Attend face-to-face lectures	87	13	-	-	95	5	-	-
Listen or watch recorded lectures	8	18	74	-	42	24	18	18

The majority of students surveyed indicated that lectures (either face-to-face or recorded) assisted them to understand the material presented, kept them motivated and up to date with the course, provided good preparation for exams and helped them to integrate and contextualise the material presented (Table 3). Analysis of transcripts from the focus group discussion showed that 80% of the students did not feel they would be successful in the unit if they did not have access to the lectures in some form, and declared a preference for face-to-face lectures over recorded lectures.

I find face-to-face lectures, where it is interactive and I am able to discuss with others and ask questions, the easiest way of learning.

Students did not attend lectures for a number of reasons including clashes/timetable issues and workload during semester:

Assignments are the main reason I don't come to lectures ... every day I'm working on assignments and stuff.

One student commented that she never went to any lectures – when questioned about how she kept up, she replied:

... just like what I've been doing my whole school life, just cram towards the end ... not good, but it works for me.

A number of themes were identified when students were asked about what they value most from face-to-face and recorded lectures (Table 4). Many students reported the interaction both with their lecturer and their peers as the most important feature of face-to-face lectures and raised the opportunity to ask questions and to immediately clarify their understanding as another valuable aspect of attending a face-to-face lecture. Bassili (2008) partly explains this requirement for interaction, discussion and clarification in terms of media richness theory, proposing that when information is

difficult to understand and a person is uncertain of their understanding; that person will prefer a communication medium that allows clarification and an exploration of shared understanding.

Table 3: Summary of student responses regarding the lecture experience and their attitudes towards lectures. Values given are percentages of all student responses.

	Strongly Agree/ Agree (%)	Neutral (%)	Disagree/ Strongly Disagree (%)	N/A (%)
I like it when the lecturer poses questions to the class	71	13	13	3
I feel comfortable responding to questions	61	26	13	-
Lectures help me understand the material	92	8	-	-
Lectures motivate me to learn	61	39		
Lectures help me relate material to other knowledge	84	16		
Lectures keep me up to date with work requirements	81	16	3	-
Lectures provide good preparation for exams	71	21	5	3
Notes that I take during lectures provide a good basis for revision	50	32	10	8
During lectures I multitask, focussing on the lecture as well as one or more other activities	39	24	32	5
I am able to remain focussed throughout most of the lecture	47	37	16	-
I prefer face-to-face attendance at lectures to downloading and listening later	66	18	8	8

Table 4: Themes Drawn From Student Responses

<p>Q6 What do you get from attending face-to-face lectures that you don't get from recorded lectures?</p> <ul style="list-style-type: none"> • Opportunity to ask questions /clarify (immediate feedback)/interaction with lecturer • Better understanding/retention of material • Feel part of the class /social aspects/interaction with peers • Motivation • Scheduling/routine • Whiteboard diagrams • Easier to pay attention/focus; less distraction • Reliability (no tech crashes) • Physical gestures/body language
<p>Q7 What do you get from recorded lectures that you don't get from face-to-face lectures</p> <ul style="list-style-type: none"> • Ability to rewind, review, repeat and pause • Ability to pause (to allow exploration of a point by extra reading) • Flexibility of schedule • Good back up • No attendance/travel requirement

Many students also commented that they were better able to retain information from an interactive face-to-face lecture experience than from watching a recorded lecture. The ability of the lecturer to engage the students is an important aspect of this interactivity.

.. I find face-to-face lectures very useful ... but only if the lecturer is able to clearly deliver the material, using diagrams and examples. ... When the lecturer simply reads off the slides or speaks in a monotone it's very difficult to stay focused.

The face-to-face lecture was also described as an opportunity to gain an overview:

Once you get all the stuff from the lecture in your head then you can go back and get more detail from the textbook ...

Students used recorded lectures in a number of different ways, for clarification or revision of the content, as preparation for class, and as a replacement for a lecture missed due to scheduling or travel difficulties. One of the most important aspects of recorded lectures, as reported by our students, is the possibility to move around within the material; to pause and rewind or review aspects of the lecture at the student's own pace. Interestingly, prior attendance at the face-to-face lecture improves the students' ability to sample the recorded material in this way.

I am able to attend face-to-face lectures however I still use the recorded video for more detailed note-taking as I can pause [and] rewind etc.

Several students reported that they use the pause function in the recorded lecture to allow time for additional reading around complex or poorly understood concepts before returning again to the lecture content. This use of recorded lectures for revision and for checking understanding is also reported by Davis et al. (2009) and by Le, Joordens, Chrysostomou, & Grinnell (2010), for students following complex mathematical proofs.

Some students used the recorded lecture as a spring-board prior to attending the lecture, for example listening to a previous lecture in preparation for the next:

I listen to it while driving on the way to uni ... give it just one quick run through and then have a better listen later on and actually take notes...

Recorded lectures seem to be most valuable when a lecture has been missed although most students recognised that the recording was not as good as the 'real thing'. Many students also used recorded lectures for content revision, particularly when they had problems understanding the material and wished to hear an explanation again. Some students even accessed recordings from lecturers who delivered parallel lectures in the same subject, thus receiving an alternative explanation of the content:

Due to class clashes, and work, I have to sometimes listen to recorded lectures. These are useful in terms of catching up, but I find it much harder to take in'.

... last semester when I had a lecturer I didn't particularly get a lot from ... I went online and listened to [another staff member's] lectures..."

As discussed by Larkin (2010), our students did not see the recorded lectures as a substitute for the face-to-face lecture. Students sampled the recorded lectures as required, so that the recordings 'reinforced rather than replaced the face-to-face event' (Davis et al., 2009: p.10). There was no evidence that student attendance at the face-to-face lectures was influenced by the availability of recorded lectures. This has also been reported elsewhere (Buxton, Jackson, deZwart, Webster, & Lindsay, 2006; Jones, 2007; Buchanan, Macfarlane, & Ludviniak, 2010; Larkin, 2010) and is of particular interest, since one of the most common concerns raised by staff in relation to the provision of recorded lectures is the potential adverse impact that the production of this resource may have on lecture attendance (Davis et al., 2009). This is good news for teaching staff, since although 'student attendance is not a learning outcome' (Larkin, 2010; p247); it is important for teaching staff to have an audience in order to generate the interactivity and engagement that are so highly valued by our students. The quality of the lecture is arguably improved by the presence of the students and a higher quality lecture is better in both face-to-face and recorded modes. This idea is further explored by Jones (2007) who considers the lecture as a performance art. Jones (2007) argues that the face-to-face lecture can be an experiential, rather than just a constructivist, learning tool and compares the face-to-face lecture to a live music performance, suggesting that a skilled teacher will interact verbally and non-verbally with students in the classroom and adjust the pace, delivery, emphasis and even content in response to the audience. He argues that participation in this live experience is sought after by students and is not easily replicated either by texts or recorded media. We agree, and would add that such experiences are also important to teaching staff who know that their performances are enhanced by a good audience.

Our students were smart about their use of recorded lectures, which they accessed less frequently and for different purposes compared to face-to-face lectures. The recordings were largely used as a

supplementary resource from which students could sample. Lecture attendance enabled the students to be strategic in their use of the recordings for review and repetition of key or difficult concepts. Students who used recorded lectures as their sole or main source of content acknowledge that their experience is inferior when compared to the experience of the live lecture, recognising the value and motivation incorporated in a learning experience that is shared with their peers and their lecturer (Buchanan et al., 2010).

CONCLUSION

Our observations are that engaged, committed students attend their lectures regardless of other learning materials which are made available. They value the intangible experience of the live lecture, including the potential for interactions in real time and space. For these students, the choice to attend appears relatively inflexible and is not influenced by lecture format or quality. Many of these students maintain their commitment to lecture attendance, even in subjects taught in ways or by lecturers that they find less than ideal. These students use recorded lectures strategically, most often sampling these along with other supplementary learning materials for clarification and revision. For these students, it is our responsibility to ensure that their participation in the lecture experience is rich and rewarding. Our students identified interactivity and questioning as key components of a good lecture and these elements should be encouraged within lectures. Improving the student experience of the lecture may not increase attendance, but it will further enrich the learning experience of those who do attend.

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