

Why do Students still Bother Coming to Lectures, When Everything is Available Online?

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Abstract

Web-based lecture technologies (WBLTs), which deliver recorded lectures and lecture notes, are becoming increasingly widespread. However, there is concern that the availability of online materials may reduce lecture attendance. Given that we did not observe a significant drop in lecture attendance following the introduction of WBLTs in the School of Molecular Bioscience at the University of Sydney, we surveyed 563 undergraduate students to discover why they attended lectures despite the availability of copious online materials. 82 % of responding students reported that they always or mostly attend lectures and 74% expressed a negative emotion when asked how they would feel if lectures were abolished.

Free-form comments indicated that students attend lectures for reasons either positive about lectures or negative about WBLTs. Students feel that lectures provide a better learning environment. They also appreciate the discipline imposed by scheduled lectures where they can concentrate in a scholarly community of learners. Lectures intrinsically contribute to the 'university experience' and the social aspect is also important. Some students are motivated to attend through habit, guilt or by financial concerns. The perceived difficulty of a lecture was often cited as a reason to attend, and WBLTs were appreciated to revisit difficult concepts. Negative comments highlighted perceptions that WBLTs do not fully capture lecture content, can be inefficient and unreliable, and predispose students to procrastination. The majority of students use WBLTs in addition to attending lectures and they perceive distinct roles for each mode. Most students who did not attend lectures claimed they were unable to for logistical reasons, including sickness or timetable clash. Some cited inconvenience or distraction in overcrowded theatres as reasons not to attend. Students also make strategic decisions to prioritise competing commitments, such as work or assessments. Only a minority of students prefer WBLTs to lecture attendance. These students prefer the ability to work at their own pace, at a time of their choosing and without peer-distraction.

This study supports the contention that WBLTs alone do not reduce lecture attendance, and highlights features of lectures which can be improved to increase attendance and student engagement.

Introduction

Web-based lecture technologies (WBLTs), such as iLecture and *Lectopia*, provide students with online access to lectures digitally recorded in real-time. These technologies have been available for about 15 years, and uptake has increased greatly in the past 10 years (Gosper, McNeill, Phillips, Preston, Woo, & Green, 2010) so that now most institutions have not only their major lecture theatres equipped with the technology, but also most satellite auditoriums. On-line availability of recorded lectures provides extra flexibility to the students who, in recent times, are increasingly juggling the competing demands of work, study and family

commitments. The recordings also assist students with diverse backgrounds and study strategies, and are particularly appreciated by those used to the integration of digital technologies in all aspects of their life (Gosper, Green, McNeill, Phillips, Preston, & Woo, 2008). Despite, or perhaps because of, the unsurprising popularity of WBLTs with students, some academics have been reluctant to engage with the technology. In some cases, reluctance is justified when lecture content is confidential or disturbing, copyrighted, highly interactive or otherwise unsuitable for online delivery (Gosper et al., 2008). However, anecdotal and published studies reveal that the major concern is that the availability of online lectures could potentially reduce attendance at live lectures (Chang, 2007). Certainly it is reasonable to intuit that the convenience of WBLTs coupled with competing priorities could tempt students to miss lectures, diminishing their timely engagement with the material, removing opportunities for social learning and ultimately negatively affecting their performance (McKinlay, 2007).

Therefore, a number of studies have investigated the impact of WBLTs on lecture attendance. Clearly this type of investigation is difficult because most studies rely on self-reported attendance figures by students or estimates by lecturers. This leads to controversy in the literature: at the lower end, before the introduction of WBLTs, as few as 33% of students reported attending all lectures in a given week (Hunter & Tetley, 1999). Even the upper estimates of lecture attendance (Gosper et al., 2008) assert that less than 60% of students regularly attend the majority of lectures. Of course, this behaviour is sporadic and students do not fit neatly into 'attendees' or 'non-attendees'. Most importantly, studies do not directly compare attendance pre-and post-introduction of WBLTs. This is partly because there are equity issues in splitting classes into cohorts with or without access to WBLTs. However, it is also difficult because even if students report that they do not like on-line lectures, the fact is that they are still available and may still be viewed on at least a few occasions.

Whilst some studies report reductions in attendance of 10-33% after the introduction of WBLTs (McKinlay, 2007), the majority have found no difference in attendance pre- and post-WBLTs, (Barker & Fothergill, 2004-2005; Bongey, Cizadlo, & Kalnbach, 2006; Massingham & Herrington, 2006; Hove & Corcoran, 2008; Larkin, 2010). Indeed, most students who make extensive use of WBLTs also attend lectures (McElroy & Blount, 2006; Gosper et al., 2008). Additionally, the link between lecture attendance and performance is unclear (McCredden & Baldock, 2009), so in contrast to some teacher assertions, using only WBLTs for study may not be a great disadvantage, at least for learning content.

All these studies imply that effect of any factor (including WBLTs) on the decision to attend is not simple or unilateral (McElroy & Blount, 2006; McCredden & Baldock, 2009). To date, such studies have focused on the reasons given by non-attending students for their decision to be absent. These both deny and confirm the influence of WBLT: so, while 75% of those that did not come to lectures claimed they were unable to attend, implying that the availability of WBLTs do not influence their attendance, nearly 70% of those that did not attend stated they could learn as well from WBLT as from face-to-face lectures.

Although these studies imply that the effect on lecture attendance of providing WBLTs is generally neutral, the sentiment behind those investigations has been to focus on reasons for students discontinuing engagement with live lectures. However, it is apparent that many students DO still attend lectures despite the availability of WBLTs and many other on-line resources. Indeed, the log of student activity in our own course management activity showed that the vast majority of the students make extensive use of all on-line course materials,

including and not limited to the WBLTs. That raised for us the intriguing question of, given the enormous range of web-based materials provided, WHY students still attend lectures.

To some extent this was answered by a large Australian Learning & Teaching Council (ALTC) project (Gosper et al., 2008), which found the main reasons for continued attendance were that: *“they found lectures motivating, they valued contact with the lecturers and their peers and they found the visual aids helpful.”* (Gosper et al., 2008). However, two of the central assertions in this conclusion require reflection. Firstly, only a tiny fraction of students actually have ‘contact’ with their lecturers. The vast majority do not ask questions during or after the session. Secondly, the visual aids (outside of PowerPoint files) are either rarely used by most lecturers or can be adequately captured by the WBLT recording systems.

In contrast, the ALTC project was more convincing in the list of positive features of the WBLTs reported by the students; to revise for exams, to review and clarify complex materials, and to work at their own pace at a convenient time and place. Whilst this showed that the WBLTs were being used differently to lectures, it still did not explain why students were making the effort to attend lectures. In this regard, it should be appreciated that the majority of students at Sydney University live in their parental homes and many face journeys of well over one hour each way. Clearly, the cost, effort and time expended in coming into lectures have to be repaid by some tangible benefits and that these advantages were not adequately explained by previous studies.

It is vital for us to understand the reasons for continued student lecture attendance and, in particular, where this synergises or conflicts with WBLTs and other web-based educational delivery mechanisms. If students still continue to attend live lectures even as the technologies grow in their scope and availability, we must understand their motives and adapt to provide a richer learning experience. It should also be pointed out that what is true about the relationship between lecture attendance and on-line materials for one discipline may not be true for another. Indeed, this association may even differ from lecturer to lecturer. What we need to distil out is the added value of the live lecture, and seeks to build on this.

Therefore, in the current study we performed a preliminary investigation focussing on the reasons why students continued to attend our Molecular Biology and Biochemistry lectures, despite the fact that we provide high amounts and quality of on-line resources.

Methods

We administered a voluntary, anonymous online survey to undergraduate students. The students were all enrolled in Biochemistry and Molecular Biology units (junior, intermediate and senior level) in semester 2, 2009 at the School of Molecular Bioscience, University of Sydney. These units of study are generally presented as two lectures and 3-5 hours of practical class per week. The lectures in each unit are presented in a traditional large lecture format using mainly PowerPoint slides, and minimal use of the whiteboard or document viewer. PowerPoint slides are generally provided to the students in advance for annotation during the lecture.

The survey was advertised on the course content management system and in lectures and was created and administered via survey monkey (www.surveymonkey.com). The link was located next to the link used to access lecture recordings. Thus, all the students were made aware of the survey, not just those who went to lectures.

Questions were designed to qualitatively and quantitatively investigate lecture attendance and the reasons for both attendance and absence. We also asked how they would feel if live lectures were replaced by *Lectopia*. A key feature of the survey was that, to promote participation, only three questions were posed. However space for open-ended responses was provided to encourage students to explain their behaviour and underlying reasons. Another important factor was that the promotional materials and announcements clearly communicated to the students that the purpose of the survey was to investigate why they still came to lectures. Similarly, the title of the survey and the preamble to the questions both communicated this sentiment. An additional subtle undercurrent was that face-to-face lectures might be discontinued. These strategies were deliberately adopted to provoke an emotional response that would both trigger expansive writing and would encourage students to concentrate on articulating what value lectures added to their University experience.

The three questions and the options given were:

1. DO YOU ATTEND LECTURES?

- Always
- Mostly
- Seldom
- Never

2. HOW WOULD YOU FEEL IF THERE WERE NO FACE-TO-FACE LECTURES AND LECTURES WERE ONLY AVAILABLE ONLINE?

- Pleased
- Disappointed
- Angry
- Don't care

3. WHAT YEAR OF YOUR DEGREE ARE YOU?

- First Year
- Second Year
- Third Year

In the first phase of the analysis, free form responses to Question 1 were categorised as positive or negative with respect to lectures; positive or negative experience to WBLTs. Later, these were sub-classified according to clusters that became apparent during the first phase. Where respondents gave more than one reason or insight, each reason was categorised separately. Therefore one statement could be classified into one or more sub-categories. A rough estimate of lecture attendance was calculated on the basis of total respondents in each year of degree.

In addition, 30 academic staff from the School of Molecular Bioscience completed a similarly administered online survey (www.surveymonkey.com) which asked "How would you feel if there were no face-to-face lectures and lectures were only available online?"

Results

Students were engaged by the survey.

From a total enrolment of 1595 students, 563 (35%) responded to the survey (Table 1). For a voluntary on-line survey, the surprisingly high response rate suggests this topic is important to students. Significantly, 78% of respondents provided extra, free-form comments, most of which were expansive and insightful. Indeed, it is the sheer number and considered, articulate nature of these comments which makes us confident that we have genuinely captured the mood of the students. Interestingly, the response rate increased from junior to senior years (30% to 53%). This may reflect the increased ownership/sense of responsibility and reflectiveness of maturing students who have chosen to take the unit, rather than those who take the unit as a compulsory pre-requisite for a number of other units. Although we have

only anecdotal evidence, we feel that the brevity of the form contributed to both the high completion rate and the depth of the students' comments.

Table 1: Response rates of undergraduate students to the voluntary online survey.

Student cohort	Number of students	Number of responses	Response rate (%)
Year 1	1176	348	30
Year 2	230	108	47
Year 3	189	101	53
Total	1595	563	35

The majority of students claim to attend lectures

Confirming the observations by lecturers in our disciplines that attendance is not greatly affected by the provision of on-line materials, nearly 82% of responding students report that they always or mostly attend lectures (Figure 1). Fewer than 6% reported that they never attend, and although it was not possible to formally associate these respondents with a reason for non-attendance, it was clear from the free-form comments that the over-riding factors were logistical, with only a very small minority expressing an exclusive preference for online delivery.

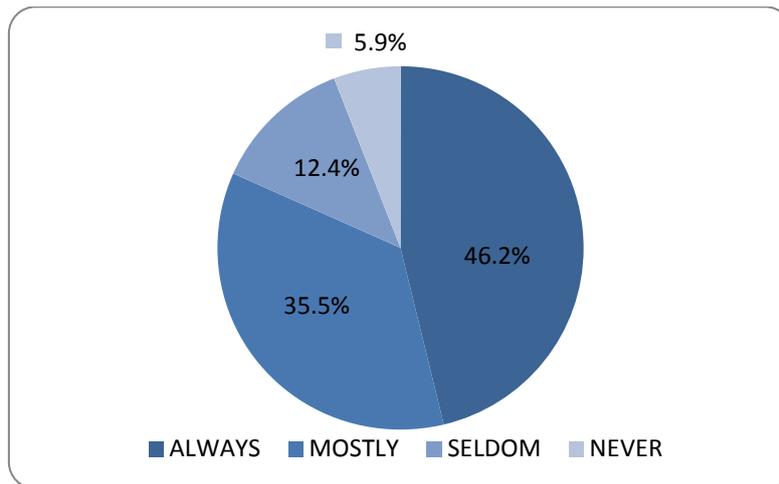


Figure 1: Self-reported attendance at lectures by 563 respondents to survey question 1 “Do you attend lectures?” Answer options that were available are indicated in the key.

Students still attend live lectures for a variety of reasons

Attendance at lectures at the University of Sydney is voluntary, and no attendance records are taken. Therefore, those that attend lectures do so because they are intrinsically motivated to do so. To investigate these reasons, free-form responses to Question 1 were analysed. 78% of respondents supplied free form comments. These comments were categorised initially as follows:

- Positive Face-to-Face – citing specific reasons for wanting to be at a live lecture
- Negative Online – giving specific reasons for finding online resources inadequate or unsatisfactory
- Negative Face-to-Face – citing specific reasons for not coming to a live lecture

- Positive Online – giving specific reasons for using or favouring eLearning resources

Using these broad classifications, reasons given for lecture attendance were either Positive Face-to-Face (F2F+) with 349 comments (62%) or Negative Online (OL-) with 135 comments (24%). There was, of course, considerable redundancy with attending students giving both kinds of comment to explain their habits. Conversely, whilst the 98 comments in the Negative Face-to-Face (F2F-) class could be considered as genuine reasons for a lack of attendance, the 94 Positive Online (OL+) comments did not necessarily represent reasons not to attend lectures, as it emerged that students perceived clearly defined roles of each delivery mode.

These primary categories were then divided into sub-categories related to the experience or study efficiency. Not surprisingly, there was much overlap between comment categories, since the reasons for human behaviour are holistic and are articulated in a wide variety of expressions.

The positive reasons for attending face-to-face lectures

Comments submitted were overwhelmingly positive about lecture attendance. Comments in this section reveal the features of live lectures which can be exploited to enhance attendance and enrich the student experience.

Students actually enjoy lectures

Within this category, comments most often indicated students perceive that they learnt better, engaged more and even enjoyed themselves more when attending lectures in person (n=122, 21%). Students often did not articulate in detail why they felt lectures supported their learning style, but simply made comments stating their preference for the lecture experience. For example*:

- *Listening to the lecturer allows for a better and more effective learning experience.*
- *I enjoy attending lectures.... more engaging than just listening online*
- *Face to face with a lecturer ... is key to learning.*
- *I find that physical presence helps with learning.*

*Note: all student comments are transcribed as originally written with no changes to grammar or spelling.

Indeed, students were passionate about retaining lectures. Thus, probably guided by emotions raised by the second question which suggested that lectures might be discontinued, the students revealed an emotional attachment to this mode of teaching. For example:

*I feel that the university experience is more than just self directed online study. In my opinion it's fundamental that students have the opportunity to attend lectures and physically engage in the experience of tertiary education.
There would be no point going to university*

Lectures provide a discipline for learning

The second largest category contained comments reflecting that students appreciate the discipline imposed by attending regularly scheduled lectures. These sentiments, categorised as +F2F, were alternatively expressed as OL- with students expressing that they may struggle with the self discipline required to view online lectures in a regular and timely manner.

Indeed, over 100 comments (~20%) related to the fact that attending students feel they are less likely to fall behind.

Lectures were appreciated as a way to provide students with discipline for learning by providing an external motivation to maintain a structured study schedule. The imposed schedule supported good study habits such that students more easily kept pace with the material throughout the semester. Students expressed awareness that reliance on *Lectopia* alone requires a level of self regulation to schedule viewing of the lectures: that making the decision to turn on the computer and watch can take more discipline than turning up to the lecture. If using *Lectopia* alone, students note they would be more tempted to procrastinate until the study period before exams, when a backlog can be overwhelming.

Examples comments are:

- *Going to lectures provides structure and makes me work as I go.*
- *hard to motivate myself to listen to lectures online*
- *If I don't learn during the lecture I probably wouldn't look at it until stuvac to be honest, I want to stay relatively on track and not fall too behind.*

The time limit imposed by a set lecture length was also considered by some (n=42, 8%) to be more efficient than the potentially unlimited time spent using WBLT.

- *Because. If I listened to them at home, it would take more than an hour. Far more. I would get distracted by everything on the computer. Then I would not stress myself out writing fast, I would instead play back. Again. And again. And again. Taking my time to get every word. Ever. So. Slowly.*

As discussed later, the option to view WBLT at their own pace – either in preference or in addition to lectures- was considered a plus by other students.

Lectures provide a good environment for learning

Another valued aspect of the discipline imposed by lectures is that students felt they could focus better and concentrate more easily within the lecture setting. The most common negative experience of online learning (n=54, 10%) was the difficulty students had concentrating when viewing lectures online at home where distractions (both online and offline!) are abundant. Comments suggest that the greater focus in the lecture setting is supported by a group dynamic and by respect for the lecturer and peers.

- *It's much easier to take in information when the speaker is directly in front of you and you are surrounded by an entire room of people also all paying attention, makes it pretty hard to get distracted.*
- *It is easier to go to lectures and pay attention and understand than to discipline yourself to go on the internet and pay attention for an hour.... and not end up on Facebook.*
- *Difficult to focus when listening to online lectures. I get easily distracted.*
- *If I start to lose concentration, I look at the lecturer and am reminded that someone went to the trouble to memorise and practice presenting the information.*

In contrast, a small group (n=17, 3%) of respondents stated they found the presence of others in lectures more distracting than studying using WBLT.

- *It's quite hard to not get distracted [in lectures] by the more interesting things on.*
- *friends to chat with, beautiful women to check out, the clock counting down to leave time.etc*

The opportunity to ask questions of the lecturer was given as reason to attend lectures (n=42). This may come as a surprise to lecturers who bemoan the dearth of student interaction, or the interaction of the same few students each lecture. Some respondents admit they rarely ask questions, but the potential to ask is still seen as beneficial.

Lectures contribute to the university experience

Students are social beings, and it is clear that the 'human element' is perceived as an important appeal of lectures. Students comment that the lecture experience is somehow 'warmer and more alive' than WBLT, analogous with the contrast between live and recorded music/theatre performances and sports events.

- *It's nice to hear things as a live audience. It feels more warm and alive. Listening online just isn't the same!*
- *The same feeling that you would like to read a 'real' book rather than to read an electronic book.*

Some students enjoy the social aspect, stating that they attend lectures to see their friends (n=18, 3%), as well as using their peer group to assist learning (n=9, 2%)

- *there are friends to help with anything you don't understand*
- *I get to see my friends which makes me more "awake" and focused*

There is also an inspiration provided by being part of a community of learners in a scholarly environment.

- *I also like being surrounded by my peers/colleagues as it is part of the awesome social network we have at university. It makes university for enjoyable. =)*
- *I don't want to just sit at home and look at a computer all day long.*
- *A lecture theatre is more suitable environment for learning than my living room couch.*

Engaging lecturers stimulate attendance

The physical presence and personality of the lecturer was also seen as a benefit. There is a performance aspect to a lecture which cannot be recreated online. This appears to depend on a lecturer's personality and certain lecturers were particularly mentioned as the main reason students chose to attend, citing not only their pedagogical skills and their ability to present material in an interesting, clear and logical way, but also their personalities as entertaining and inspiring people.

- *Dr X is the best lecturer I have come across at university do far. Her lectures, style of teaching and ability to make the material understandable increased my attendance to lectures.*

Moreover, poor lecturers reduce motivation to attend.

- *The lecturers do not relate to the students enough. They talk at us not with us.*
- *Also if some of my lectures are extremely boring I can't bear to attend*

Students sometimes attend lectures through a sense of obligation and habit

Some students were driven to attend by guilt. These students felt they were disadvantaged by not attending (n=19, 3%), or felt that the financial commitment (n=8, 1.4%) was a motivating factor.

- *I feel guilty if I don't attend, as if I'll be at a disadvantage.*
- *I pay my fees so I should make the most of them!*

Some students (n=43, 8%) state they attend out of habit, or as part of a routine, particularly when they are on campus for other commitments. A clear message here is that attendance is likely to be maximised when timetabling is optimised to avoid single lectures on a particular day.

- *Have other classes on at Uni, so am there anyway*
- *I couldn't be bothered going for one hour, then having a two hour break.*

On-line resources do not fully substitute for the live experience

Some responses classified as being negative to WBLT (n=139, 24%) also provided indirect reasons for lecture attendance. The largest group of comments (n=56, 10%) reflected the awareness that there are components of a lecture that simply cannot be captured by a recording: particularly content presented on whiteboards, demonstrations, hand gestures and body language. These non-verbal cues are perceived to increase understanding, as well as act as memory aides.

- *the gestures or the face expressions that lecturers do when explaining different concepts kind of gets remembered when I read over the lecture notes again and also, sometimes lecturers write on the boards or bring something along to help our understanding which is not shown in the lecture recordings.*

Students perceive they gain insights and understanding via face-to-face tuition not attainable online. There is also a perception that some material, for example, hints about exam material, is either not available in WBLT, or is somehow better communicated in the face to face format. This perception is seemingly not eliminated when the lecturer them-self is also videoed, evidenced by the recent outcry at this university from students in overflow lecture theatres into which the live lecture was streamed. It is not immediately obvious why the students would feel this way, since the recordings are not edited to remove this type of information. Perhaps we lecturers communicate the importance of certain topics in ways other than just the spoken word or gesture!

- *lecturers give out hints to what are in the exam*

Students are cautious about relying on technology

Aside from the sentiment that it was difficult to find the discipline to study at home, the third largest category of negative online was dissatisfaction with reliability or quality of technology (n=23, 4%). It is interesting that these perception remains, despite the fact that capturing the sound and projected images using *Lectopia* was actually highly reliable, and to

the best of our knowledge no sessions from any unit were missing from the content management system.

Further, a few respondents (n=4, <1%) responded that they still have difficulty accessing WBLTs, either due to a lack of a computer or internet connection at home, or with having sufficient bandwidth to download or stream large files. Whilst this problem can be expected to decrease with time, it is still something that we should bear in mind when making assumptions about the ability of students to access on-line materials.

The negative reasons provided for not attending face-to-face lectures

Logistics are the main reason for lack of attendance

Some 99 comments (18%) were classified as a justification for non-attendance at lectures. The reasons most commonly given were logistical issues that could be considered outside the students' control, particularly timetable clashes (n=29, 5%) with other lectures. Many of these students stated they would prefer to attend both lectures, but in the event of a clash were forced to choose to attend the lecture that was not recorded.

Some students (n=26, 5%) cited transport difficulties as a reason not to attend lectures: either long travel times or unreliable services. This was compounded when they had no other commitments on campus (n=10, 2%), and students made a strategic decision not to attend. Unsurprisingly, students who lived near campus, or were on campus for other commitments were more likely to attend lectures (n=24, 4%).

- *the only times I don't come in for the lectures are when it's the only lecture that I have for the day and I would effectively spend more time travelling to uni and back than during the lecture*

Early-morning lectures were another common reason (n=29, 5%) given for non-attendance: late nights of study and early morning sleepiness, which can be further compounded by long travel times.

However, sometimes students also make strategic decisions to prioritise their time for other commitments, particularly for paid work, for assessment tasks or for extra-curricular activities including sport and community service.

- *You do what gets marks essentially,as workloads increase, I at least choose to skip lectures and complete assessable tasks. Your unit makes this particularly easy as you have everything available online. The setback to this is that it is easy to fall behind.*
- *For the ones of us that are not eligible for youth allowance but are living out of home need to work much more than those who get it.*

For some courses, overly crowded lecture theatres were a disincentive to attend (n=5, <1%) but, generally, our findings paralleled those of McElroy (2006) who found that travel time and work commitments were major driving forces.

The positive reasons for using on-line resources

Only very few students actually prefer on-line resources

One of the major reasons for doing this study was our anecdotal observation that the provision of electronic resources had not affected attendances at our lectures. Therefore it

came as no surprise to find that only a minority of students (n=33, 6%) prefer WBLT, or find it equivalent, to lecture attendance. Their comments reflected that these students prefer the ability to work at their own pace, at a time of their choosing and without peer-distraction. As mentioned earlier, the lecture environment, while motivating, engaging and focused for some, is perceived by others as more distracting, and while some enjoy the atmosphere of a lecture on campus, some find the comfort and convenience of the home environment more attractive.

- *I like learning during the evening.*
- *It's easier to listen to it at home then it is to be there. more comfort at home*

Students can become overwhelmed in a difficult lecture

While a concentrated one-hour lecture format is appreciated as efficient by some, other students (n=18, 3%) found this 'time-limited' format was a drawback, as they find themselves unable to keep pace with material that they find difficult. Some students used repeated access to the online recordings in preference to attending lectures, appreciating the possibility to stop and start the recording to take notes, to reflect on, consolidate, or look up additional information.

- *stop and replay the audio of difficult concepts*
- *Lectopia also gives a chance to pause and digest information. The ability to pause is also vital for looking up words or concepts that are mentioned yet that I don't know.*
- *Too much information to process and it just feels like I'm wasting one hour trying to catch up on everything I was supposed to know about the subject.*

However, other students stated that difficult lectures were better approached in person:

- *It's a lot easier to understand difficult concepts and gauge how much material is examinable when you attend lectures.*
- *I attend lectures nearly all the time so I can learn this hard subject. Face to face with a lecturer that clearly has profound knowledge of the topic is key to learning.*
- *in difficult lecture it's easy to ask questions*

The positive reasons for enjoying a blended environment

Enjoying lectures and on-line resources are not mutually exclusive

In agreement with other studies, the majority of students in our study used WBLTs in addition to, rather than as a replacement for, attending lectures, and they perceived distinct roles for each mode. Comments categorised as positive online did not necessarily imply the student didn't like or even prefer lectures. Some students (n=23, 4%) specifically stated they made use of WBLT as a back-up when unable to attend lectures due to illness, misadventure or clashes.

- *With clashes and short term illness etc, online lectures are extremely useful.*
- *If I am unable to attend because of other commitments, it is a great help to have the lectures online*

The ability to stop and start the recording was appreciated by students who attended lectures for the same reasons given by those who exclusively preferred the online environment: i.e. to take more extensive notes, to reflect, and to look up unfamiliar terms. The ability to review a lecture recording can be particularly useful for students of non English speaking backgrounds (Wilson 2003; Eckert 2005).

- *Find I always end up listening to the audios online anyway even if I attended the lectures because I often feel I didn't write down or understand everything I heard.*
- *Lecturer goes too fast sometimes and I don't understand*

The emotional appeal of lectures

Unlike other studies, the second part of our survey investigated the emotional appeal of lectures by asking:

“How would you feel if there were no face-to-face lectures and lectures were only available online?”

Table 2 shows that the majority >74% expressed a negative emotion (disappointed (52%) or angry (22%)). Only 10% said they would be pleased. Indeed, only 16% were neutral, which again indicates that students feel strongly about the subject.

Table 2: Responses to survey question 2 “How would you feel if there were no face-to-face lectures and lectures were only available online?” Answer options were supplied.

Answer Options Supplied	Response Percent	Response Count
PLEASED	10.1%	57
DISAPPOINTED	51.5%	290
ANGRY	22.6%	127
DON'T CARE	15.6%	88
PLEASE TELL US WHY		402
<i>answered question</i>		563
<i>skipped question</i>		0

Academic opinion echoes that of the students

In order to garner the opinion of academics we asked academic staff to complete a similar survey. They too provided expansive (and often emotional) comments. As expected, the vast majority were in were not in favour of the discontinuation of this mode of delivery (Figure 2).

Their comments included:

- *I don't think the face-to-face contact need necessarily be lectures in the traditional sense. I am planning on gradually moving towards having my essential background material in online form and trying to use my lectures in a more flexible fashion as a tutorial. I want the students to feel encouraged to ask questions in the lectures and that means making it part of the culture. Presently I think the culture is 'don't disrupt the lecture because the time delay means we will miss bits later'.*
- *If lectures are not an effective teaching method, my guess would be that just having "on-line" lectures would be even worse. Perhaps the whole teaching model needs to be changed if lectures are to be scrapped.*
- *Lectures provide an opportunity for immediate interaction and discussion between the lecturer and student that isn't available online. The fact that lecturer and student are thinking about the same material at the same time is also beneficial.*
- *I think it would be hard to gauge how appropriate the material is, you are delivering. I look for the glazed over faces, the increase in noise etc to let me know I haven't done a very good job of the last concept I tried to teach.*

- *While I am a hoary old traditionalist and believe that students should come to all lectures and be automatically failed if they don't and that there shouldn't even be all this dreadful private school-esque online spoon-feeding of a generation already mired in a deep sense of undeserving entitlement - I have to admit that the thought of never giving one again has appeal*

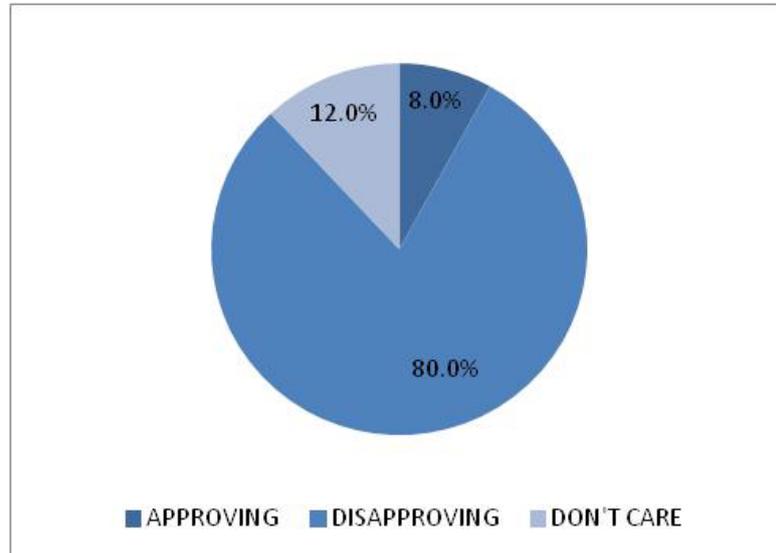


Figure 2: Response of 30 academics to the question “How would you feel if there were no face-to-face lectures and lectures were only available online?” Options were supplied.

Discussion

This paper describes a preliminary investigation into the reasons underlying our observation that the availability of online recordings of lectures does not discourage the majority of students from attending lectures in our School. Since WBLTs seem to replicate the content of a lecture, with the added convenience of 24 hour access, a key emphasis of the study was to find out why students still make efforts to attend.

Whilst the study did not overtly measure lecture attendance or even the effect of on-line materials on attendance, the fact that 82% of respondents claim to attend lectures provides some support for our initial observation. Although these figures are self-reported, the anonymous nature of data collection hopefully encouraged honesty. Our self-reported attendance figures appear to be higher than those recorded elsewhere (Gosper et al., 2008) and are even similar to those reported when attendance contributes a mark to the final grade (Rimer, 2009). However, it should be appreciated that there would have been some bias because the questions carried the implication that lectures might be phased out, which may have contributed to the strong emotional affirmations towards lectures characterising the free form comments.

As it is in their own best interests to be strategic consumers, students will prioritise their time to their greatest advantage, weighing the benefits of attendance – educational, efficiency and social – with the cost in terms of time and opportunity. Attendance at our University is not compulsory, so it can be assumed that students who attend lectures perceive they are getting a better experience than can be delivered online. Our study indicates that students attend

because live lectures provide a learning experience that is not replicated online. Students enjoy the experience of lectures, perceiving them to be integral to the University experience, and value the disciplined structure and learning environment that is intrinsically provided by timetabled classes.

More interesting perhaps are the positive aspects of lectures that can be improved to both increase attendance and enrich the lecture-based learning experience. The surveys showed that students enjoy the personal style of a lecturer, social interaction and the opportunity for peer assisted learning. Innovative teachers could perhaps leverage off this by presenting content online and using lectures for more interactive activities, and to specifically model the culture and thinking style of a discipline (Moore, Armstrong, & Pearson, 2008).

It is pleasing that our students' responses show they had so ably reflected on their own learning. They recognise the need for discipline in their learning and they value the social interaction of learning with, and from, their peers and lecturers. They appreciate the control and flexibility afforded by blended learning, perceiving distinct roles of different modes of delivery. Many have examined their own learning style to make well informed decisions about their attendance.

The surveys revealed that students value the live lecture: if only one mode was available, lectures were overwhelmingly preferred. Students report different uses for each mode, and comments show that WBLTs are also appreciated. Rather than replacing lectures, the majority of students use online recordings in addition to lectures. In agreement with two recent similar studies (Gosper et al., 2008; Larkin, 2010) the students in our study perceive WBLTs as material to support their learning: as a tool for revision, and to enhance understanding of difficult concepts through repetition at a user-controlled pace. WBLTs have the potential to alleviate the need for duplicate notes, and our students report that taking additional personalised notes from recorded lecture helps their learning. It has been reported that, particularly when material is complex, listening without note taking results in higher test scores (McKinney et al., 2009)

Only a minority of students claim not to attend lectures at all, presumably relying on online recordings instead. Our observation was in general agreement with McElroy (2006) who found that 75% state lectures provide a better learning experience and only 18% use WBLTs as alternative to face to face. Even then, the recent ALTC study revealed that the major reason for the exclusive use of WBLTs is an inability to attend (e.g. clash, sickness, etc). Very few students actually preferred WBLTs to lectures, and indeed, a recent study found most students do not value WBLTs enough to pay a fee (Taplin, Low, & Brown, 2011). Some reported negative experiences of lectures related to logistics (too early, too crowded, too much distraction) and it is possible that improving these aspects of lectures may improve attendance by this group of students. Others reported problems with pedagogical aspects of lectures: they found lectures too fast, too dense and so too hard to understand. For this group, online recordings – particularly the ability to stop and start, and to view at a convenient time and place – met their needs better than a lecture could. It may be that there will inevitably be a percentage of students whose learning styles are better served by online delivery of content. What these students did not reveal – and what, by definition, would be useful to probe in a more in-depth study – was what they would acknowledge that they were missing by not coming to lectures: e.g. on campus community, experiencing modelling by expert practitioners that may improve their performance.

Being able to link performance to attendance and attitudes to live lectures and WBLTs would improve the power of this study, but would, of course, make it more complex (Massingham & Herrington, 2006; McCredden, & Baldock, 2009). Certainly there are already clues from the literature, with a finding that lower-performing students prefer educational software, whereas better achieving students prefer traditional lectures, (Albert, 2004), and are more likely to supplement attendance with WBLTs (von Konsky, Ivins, & Gribble, 2009). The link between attendance and performance is not established: performance is influenced by 'engagement' rather than attendance *per se* (McCredden, & Baldock, 2009; von Konsky et al., 2009). Our study and others suggest that students may be more likely to attend lectures they perceive to be difficult, supported by WBLTs (Clay & Breslow, 2006).

Ultimately, the range of learning styles in diverse cohorts of students benefits from a range of delivery styles. Indeed certain aspects of each delivery mode perceived as positive by some students were viewed negatively by others. For example, social interaction was seen as an opportunity for peer learning by some, but as a distraction by others. Being able to do online work at one's own pace was seen inefficient by some, and any advantage of being to study online at a time of one's choosing was lost through ill-discipline in others.

There is anecdotal evidence that academics would prefer WBLTs were abolished, particularly when they are perceived to negatively affect lecture attendance. Our data indicate that it is possible for WBLTs to have minimal impact on lecture attendances, and that attendance is more likely to be increased by providing engaging, interactive lectures rather than by boycotting WBLTs. A number of studies have investigated factors that impact lecture attendance (Moore et al., 2008; Dolnicar, Vialle, Kaiser, & Matus, 2009) and most conclude that when attendance is low, WBLTs are not solely responsible. Indeed, WBLTs may actually be a positive strategy to resolve negative outcomes associated with non-attendance (Borman, 2010).

Although WBLTs may encourage some students to prioritise other activities (Phillips, Gosper, McNeill, Woo, Preston, & Green, 2007) perhaps we should accept that some students will choose not to attend for strategic reasons or because, upon careful reflection, they have decided that WBLTs suit their learning style (Gosper et al., 2008). Indeed we could argue that we should support student autonomy to choose where and when they learn, and to prioritise as they see fit (McElroy & Blount, 2006; Borman, 2010). Boycotting WBLTs "*does not address the fundamental problem of why students should come to lectures if they perceive they learn as well from the technology*" (Gosper et al., 2008).

Whilst our data counters the prevailing belief amongst many academics that on-line lectures mean lower attendances, we have not done a properly controlled study in which the availability of electronic resources is added/removed during identical portions of the same course delivered to the same cohort of students. It is possible that falling attendances, reported anecdotally by other departments, are more related to the subject matter and the delivery style of individual lecturers. Indeed, our data could well be skewed because our Discipline has an overt policy to use our very best and enthusiastic communicators in large lectures and, as revealed by student comments, a key reason for attendance is the perceived added value from attending an engaging 'live' session. To draw any firm conclusions about the effect of *Lectopia* on lecture attendances, a series of stringently controlled studies needs to be conducted across several disciplines and involving lecturers of varying style.

What our preliminary study has shown is that many students feel passionately about lectures. Despite all the alternatives and distractions, most of them still choose attendance as their primary way of initially engaging with the material. They consider that attendance at lectures adds value and discipline to their study program and they feel that live lectures are still an integral part of the contemporary university community experience. Administrators seeking to remove live lectures in the interests of efficiency and economy should be mindful of this. By better understanding the strategic and social reasons for these attitudes and behaviours, skilled teachers can better blend live delivery and eLearning to the benefit of student and lecturer alike.

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