

The Lecture: have reports of its death been greatly exaggerated?

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Lectures are a cornerstone of university education and have been so for centuries. Changing populations of students and online, flexible provision of learning have led some to claim that the lecture is obsolete. Decreasing attendance provides support for this view, but many students still choose to attend lectures. This study investigates their reasons for doing so. First year students ($n=768$) from five different faculties of a traditional New Zealand university completed a survey about their reasons for attending lectures and why they did not attend. The results showed that most students (88%) value lectures as a means to help them learn, allowing them to make their own notes (75%) and find out about assessments (80%). A small percentage found lectures boring (20%) or a waste of time (7%). Comparisons between faculties showed that lectures are seen as being more valuable for some subjects than for others. Comparisons between those who attended all lectures and those who missed some confirmed that students' attitudes towards lectures also affected their attendance. These findings have implications for the design of courses. Careful integration of lectures and other teaching methods across the curriculum will help students to exercise greater choice about their study.

Keywords: Lecture attendance; large classes; student engagement

Introduction

An apocryphal story says that, following the earthquake in Christchurch New Zealand in 2011, students preferred to walk across town and sit in a hastily erected, unheated marquee rather than miss lectures. There is, of course, much more to this story. The event has led to various studies looking at responses to the earthquake and proposing sustainable teaching models in anticipation of the future (Mackey, Gilmore, Dabner, Breeze, & Buckley, 2012). Nevertheless, students' reported desire to attend lectures even when they have the perfect excuse not to do so does suggest that the lecture itself is not as dead as some would have us believe (Bates, 2014).

Lectures have been part of the university experience for hundreds of years and the object of criticism for nearly as long:

Lectures were once useful; but now, when all can read, and books are so numerous, lectures are unnecessary. If your attention fails, and you miss a part of the lecture, it is lost. You cannot go back as you can upon a book.
(Boswell, *Life of Dr Johnson* (1709-1784) in Quiller-Couch, 1927).

They have not, however, gone away. The vast majority of our universities still have numerous large lecture theatres and many thousands of students are still taught in them; though, perhaps in decreasing numbers as courses progress.

At my institution, a fairly traditional university in New Zealand with approximately 22000 students, lecturers at all levels and in all disciplines regularly voice concern about lecture attendance. In particular they are anxious to know that their personal experience is not different; is it the students of today or is it something about the subject that puts them off? They also want to know the extent to which having lectures online will affect attendance and about the incentives they can use to encourage students to attend. We know anecdotally that many students do not attend and that attendance tends to decline as the semester progresses, but a lack of hard data precludes us from drawing conclusions about possible reasons. In this study, I will explore these beliefs by studying some of the reasons behind students' attendance at lectures and what keeps them away.

Review of the literature

What are lectures for?

Lectures are "oral presentation(s) of information with the purpose of conveying knowledge to an audience about a particular subject." (Alzhanova-Ericsson, Bergman & Dinnétz, 2015, p.2). They allow for "the imparting of information to large numbers of students simultaneously" Hunter and Tetley, (1999, p.2). As a result, lectures are both cost and time effective (Alzhanova-Ericsson et al., 2015) and, therefore, "an integral component of university learning" (Dolnicar, Kaiser, Matus & Vialle, 2009, p.209).

The impression given by these definitions is one of a very dry, straight forward transfer of information with very little effort from either party. However, lectures can also be challenging and provocative (Bligh, 2000), allow students the excitement of intellectual discovery (Massingham & Herrington, 2006) and provide a motivational learning environment (Sawon, Pembroke, & Wille, 2012).

Why should students attend?

Non-attendance at lectures is generally portrayed as a bad thing. Students will miss important pieces of content (Hubbard, 2007), miss information about assessments (Dolnicar, 2005) and be unaware of the particular way in which a lecturer summarises and analyses complex material (Massingham and Herrington, 2006). Students may also lose the benefits of timely engagement with the material as well as social learning opportunities (Gysbers, Johnston, Hancock, & Denyer, 2011).

Does non-attendance at lectures matter? This question has mostly been explored in terms of the relationship between attendance and performance. On the whole, the link has been found to be a positive one: students who attend more lectures tend to score better in assessments (Alzhanova-Ericsson et al, 2015; Clark, Gill, Walker & Whittle, 2011; Massingham and Herrington, 2006; Newman-Ford, Fitzgibbon, Lloyd & Thomas, 2008). A clear correlation between attendance and attainment was found by Newman-Ford et al. (2006) in a series of psychology, criminology, history and creative writing courses at their UK university. They discuss the role of motivation as a mediating factor and conclude that "attendance is a direct determinant of academic performance and attainment" (p.713). Although Clark et al. (2011) report significant differences in performance in geography coursework when comparing high attending groups (70% plus attendance) with a low attending group (less than 25% attendance), they found much smaller differences in exam performance. They suggest that

students' motivations, based on their beliefs about the purpose of lectures, can also affect attendance and students' behaviour in class.

Motivations and other factors

Factors associated with attendance have been widely researched. Kelly (2012) identified a number of predictors of attendance including living on and off campus, timetabling, day of the week and the weather. Having a part time job had an effect depending on the level of interest in the lecture, though the quality of the lecturer was not found to be a predictor of attendance. Kelly (2012) concludes that the university might encourage attendance by increasing on-campus housing, improving timetabling and investigating student fees. She also suggests that lectures should be made more interesting or engaging as a way of encouraging attendance.

Students may have different degrees of motivation to attend lectures. In a study of students' personal characteristics in relation to lecture attendance, Dolnicar (2005) found that students demonstrated different types of motivation and that their beliefs about lectures and attendance were related to these. For example, she found that 'pragmatic' students (those who wanted to know what they needed to learn, obtain information about assessments and not miss anything relevant) reported the lowest lecture attendance rates whereas 'idealist' students (enthusiastic and meaning oriented) had much higher rates. Moore, Armstrong, and Pearson (2008) studied students' motivations by examining their reasons for not attending lectures. They found that reasons that signalled low motivation (e.g. too tired; playing computer games, did not wake up) were associated with low attendance levels in comparison with medium (working on an assignment) and high motivation reasons (illness, bereavement). O'Sullivan et al. (2015) found students who justified their absences from lectures rather than excused them, perceived them to be less valuable. Looking at students' reasons for attending Clark et al. (2011) found that students estimated the value of lectures differently which in turn affected the attendance-performance correlation.

Online alternatives

Concern around attendance has increased as online solutions have allowed lectures to be streamed or simply recorded and posted on the web (Clark et al., 2011). The fear is, that students will no longer attend lectures if a more flexible alternative is provided. The evidence suggests, however, that online materials are generally used to complement lectures rather than replace them. Yoon, Oates, and Sneddon (2014) found that, amongst undergraduate maths students, face-to-face lectures were more conducive to learning and allowed them to interact with other students. Those students who intended to watch the online lecture did so because they felt it would consolidate their understanding. Other students found recorded lectures superfluous. Other studies have shown that many of those students who do not attend lectures are also unlikely to access the recordings (Sawon et al, 2012). Despite the evidence that online provision is unlikely to substantially affect students' attendance at lectures (Davis, Hodgson, & Macaulay, 2012), concern about diminishing numbers remains.

A limitation of many of the studies on attendance is the focus on a single discipline or faculty. For example, Gysbers et al. (2011) studied students enrolled in biochemistry and molecular biology units while Sawon et al (2012) focused on students studying for a business degree. Clark et al. (2011) comment that wider research in other academic contexts would help to improve understanding of the issues associated with attendance while Moore et al. (2008) suggest that a more intensive investigation of specific phenomena would lead to new

insights. This study follows Clark et al.'s call by focusing on the experiences of students from different faculties in our university.

Background to the study

In this paper I present some of the findings from a survey undertaken with students across five different faculties at a New Zealand university in response to concerns relating to lecture attendance. It follows on from a study of attendance at lectures across a whole campus in 2013. Records of students attending 443 lectures during weeks three and ten of a semester found a huge spread of attendance patterns (Gilbert, 2014) with 84% of registered students attending in week three and 58% in week ten. There were large variations between faculties; students from Commerce averaged 45% attendance in week ten compared with 60% of Humanities and Social Sciences students.

Attendance, attitudes and behaviours

These findings provided the impetus to carry out further research on students' attitudes to lectures. My aim was to gain a greater understanding of students' attitudes towards lectures, and the reasons they give for non-attendance. Given that the records of attendance revealed differences between disciplines, I decided to make further comparisons between the university's faculties.

Kelly (2012) has suggested that non-attendance at lectures is of particular concern in the first year of study and, although I did not find evidence of this in my attendance records, I decided to limit the data collection to larger first year courses (with 120-650+ students). I therefore selected ten first year courses and approached the course co-ordinators for permission to contact the students.

Selecting courses was a relatively complicated process. First, I wanted to avoid collecting data from the same students twice. I therefore selected courses from different disciplines and from areas which were not co-requisites. Second, I selected larger courses in order to increase the chances of getting sufficient responses to enable statistical analysis of the data. Finally, I wanted to compare different faculties; I selected two courses from each of five faculties (see Table 1).

Design of the survey

I developed and distributed the survey using Qualtrics™ software. The questions covered

- Course related activities by students in lectures and their perceived utility;
- Non course-related activities by students in lectures;
- Attitudes towards lectures;
- Attendance and reasons for not attending during the preceding week;
- Demographic and background information.

The data I will report in this paper relates to students' attitudes to lectures and information about their attendance.

I contacted all students registered for the courses via email. The letter invited all students, and emphasised that responses from those who did not attend lectures would be particularly welcome as I anticipated that this group might be less likely to respond. I did not attend lectures to advertise the survey as I wanted to ensure that all students would hear of the survey in the same way. Students were invited to participate and offered the chance to go in a draw to win one of 20 x \$20 shopping vouchers as an incentive.

Participants

I invited all registered students of the selected courses (N=2520) to participate which yielded 768 usable responses (an overall response rate of 30%) once empty responses and anomalies were removed. Table 1 shows the response rates for each of the ten courses.

Table 1: Courses participating in the lecture survey

Faculty	Course	Enrolled	Lectures per week	Response rate
Architecture and Design	A1	304	2	33%
	A2	192	1	26%
Commerce	C1	682 (2 streams)	2	28%
	C2	121	2	37%
Engineering	E1	356	3	23%
	E2	189	3	16%
Humanities and Social Sciences	H1	137	3	37%
	H2	121	2	38%
Sciences	S1	147	3	46%
	S2	260	3	39%

Results

Respondents answered a series of questions relating to their reasons for attending lectures and their attitudes towards them. Table 2 summarises these findings and compares responses between the different faculties under study.

Total responses

Overall, the majority of respondents from all disciplines agreed that lectures helped them to learn (88% strongly agreed or agreed), preferred to write their own notes (75% strongly agreed or agreed) and attended lectures to find out about assessments (80% strongly agreed or agreed). Most respondents (60%) disagreed or strongly disagreed with that they would prefer to watch lectures online with only 18% agreeing with the statement. Opinions were split about whether they would prefer to learn in other ways (30% strongly agreed or agreed, 44% were neutral and 26% disagreed or strongly disagreed).

Half of the respondents strongly agreed or agreed that they enjoyed lectures (50%) though 38% were neutral and only 12% disagreed or strongly disagreed. In contrast, the majority of respondents (76%) disagreed that lectures were a waste of time (7% strongly agreed or agreed

with the statement). Around 20% of the respondents reported that lectures were boring with 43% responding neutrally and 37% disagreeing or strongly disagreeing with the statement.

Table 2: Comparison of responses relating to beliefs about lectures by Faculty

	Arch. and Design		Com.		Eng.		Hum. and Social Sciences		Sci.		Total	
	SA/A	D/SD	SA/A	D/SD	SA/A	D/SD	SA/A	D/SD	SA/A	D/SD	SA/A	D/SD
	%	%	%	%	%	%	%	%	%	%	%	%
I think lectures help me to learn (p<0.05)	79.3	6.7	87.7	4.7	88.9	6.1	90.5	7.4	92.3	4.5	87.7	5.6
I need to attend so I can take my own notes (p<0.005)	75.2	9.0	81.0	6.2	58.6	18.2	80.0	10.5	72.9	12.9	74.7	10.5
I prefer to watch lectures online than attend them (ns)	18.7	56.0	19.0	59.7	11.1	71.7	18.9	52.6	20.5	60.3	18.1	59.9
I attend lectures to find out what I need to know for assessments (p<0.001)	85.2	5.2	76.7	5.7	84.8	5.1	77.9	11.6	78.2	7.1	80.0	6.6
I attend because that is what is expected (p<0.05)	72.4	7.5	61.6	14.7	54.5	23.3	73.4	11.7	65.4	12.8	65.1	13.7
I prefer to learn in other ways (ns)	33.6	21.6	31.1	25.9	27.3	28.3	37.9	25.3	21.2	30.1	29.7	26.3
I really enjoy lectures (p<0.05)	50.4	11.1	42.9	10.8	49.5	17.2	51.6	14.7	59.6	10.3	50.2	12.2
I like to catch up with my friends at lectures (ns)	23.7	44.4	32.2	41.2	34.7	36.7	35.8	36.8	31.6	38.1	31.3	39.9
I think lectures are a waste of time (p<0.001)	12.8	57.9	8.1	76.6	2.0	77.6	5.3	76.8	3.8	87.8	6.8	75.7
I think lectures are boring (ns)	22.2	34.1	20.5	33.8	21.2	38.4	24.2	33.7	14.7	42.9	20.1	36.5

Note: p values represent significant differences between faculties

Comparison between faculties

Some interesting differences are present between the different faculties studied. Levene's tests (Field, 2000) revealed a lack of homogeneity of variances in the data, so differences between faculties were analysed using Kruskal-Wallis tests. These indicated differences across faculties. For example, there was a significant difference between faculty groups with respect to the view that lectures help students to learn (p<0.05). Respondents from Architecture and Design tended to view lectures as being less useful in helping them to learn (79% agreed compared with 88% overall) but were more likely to attend to find out what they needed for assessments (85% agreed compared with 80% overall). There was a significant difference

between faculties in relation to the view that lectures are a waste of time ($p < 0.001$): 88% of respondents from Science disagreed with the statement compared with 58% of those from Architecture and Design.

Non-attendance

From the responses received, about one third (33%) of those who responded admitted to missing at least one lecture during the preceding week. This number does seem a little optimistic: counts of attendance at lectures during the week revealed an overall attendance rate of about 51% of those registered for the courses. The difference between the 67% who

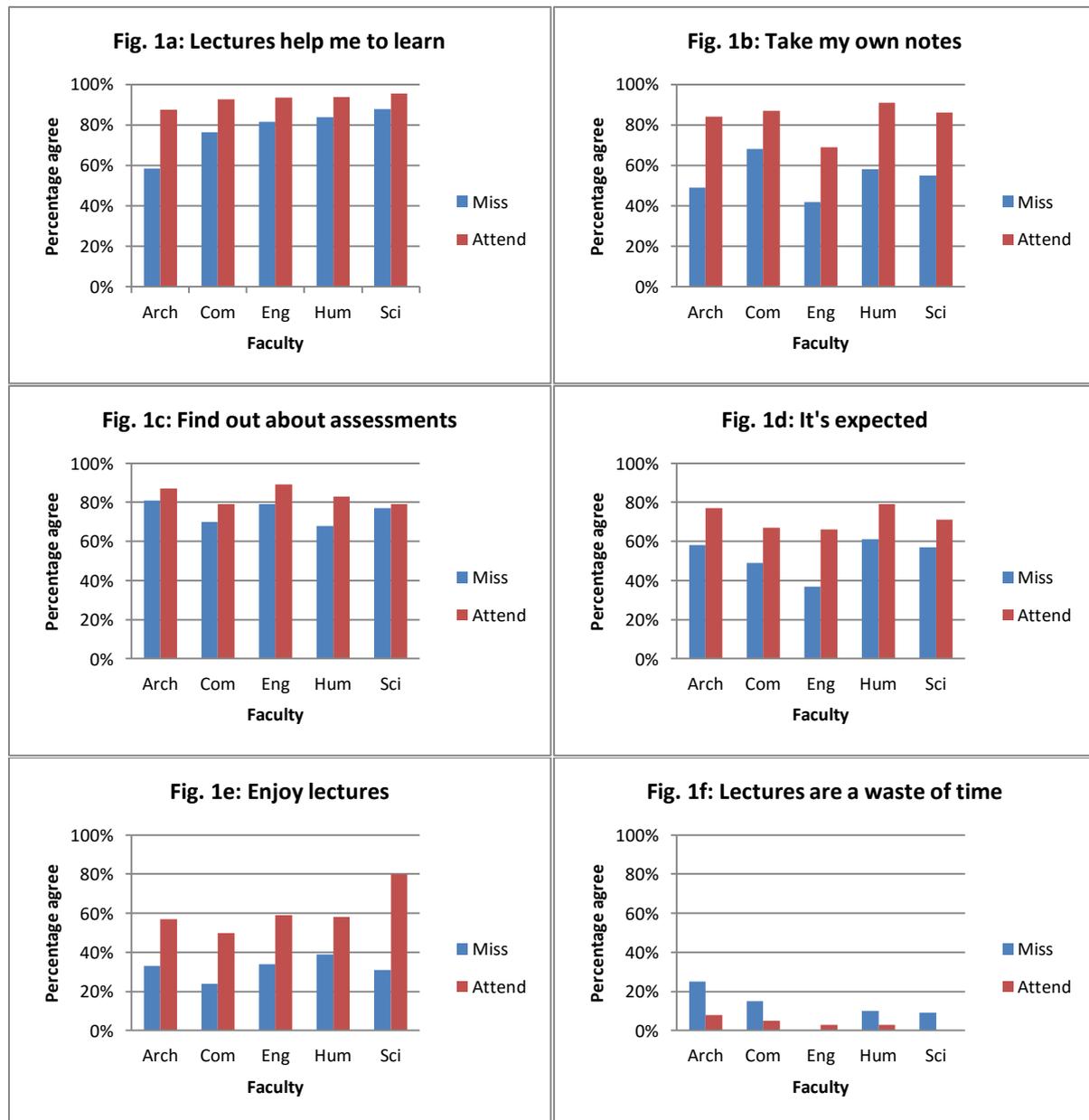


Figure 1 a-f. Bar charts comparing students who attended all lectures or missed some according to their agreement with statements relating to lectures

reported attending all lectures and the 51% observed in a head count (Gilbert, 2014) probably reflects the likelihood that attending students would be more likely to complete the survey. I will discuss this issue later in the paper.

In order to investigate some of the differences between students who attended all lectures and those who missed some, I compared these two groups' responses to the survey questions shown in Table 2. Comparisons are shown in the bar charts in Figure 1.

Reasons for non-attendance

Table 3 shows the reasons given by students for not attending lectures. The survey allowed for two different reasons for each lecture in the week so students were able to select a number of different reasons for non-attendance.

Table 3: Reasons for non-attendance at lectures

Reason	Missed one lecture	Missed two lectures	Missed three lectures	Percentage of respondents (n=226)
Other work for this course	40	8	6	24%
Work for another course	90	17	7	50%
Timetable clash	8	5	0	6%
Employment	11	3	2	7%
Asleep	42	8	3	23%
Sick	32	6	4	19%
Did not feel like it	41	15	0	25%
Given up the course	5	1	0	3%
Other	32	5	7	19%
Total	301	68	29	

Note: Percentages add to more than 100% because respondents were allowed to select more than one reason on any day.

Students most often cited coursework as being a reason for their non-attendance. Chi square tests comparing responses by faculty found significant differences between faculties for only two of the variables ('Doing other work for *this* course': $X^2(8, n=54) = 17.45, p < 0.05$ and 'I was asleep': $X^2(8, n=53) = 18.78, p < 0.05$). Percentages show that Architecture and Design students most often reported missing lectures to work on related coursework (37% of the total in this group) while Science, Architecture and Design and Commerce students reported being asleep (21%, 32% and 26% respectively). Only two courses (A1 and one stream of C1) had lectures before 11:00 am.

Most students who reported missing lectures for other reasons did not add further comments. Of those who did give a reason, the most common was related to the weather and travel due to a storm which kept some students from coming into the campus (n=8).

Discussion

Students' responses to the survey suggest that there is still a place for the lecture in 21st century higher education. Most students report that lectures are helpful for their learning (over 80% of those who responded) and a relatively small percentage (<30%) would rather

learn in other ways. Of those responding to the survey, half (50%) agreed that they enjoy lectures. Comparisons between those who attend all lectures and those who miss even one during a week reveal some interesting differences in attitudes, supporting Gump's (2006) finding that attendance and attitudes to lectures are related.

There are variations. Science and Humanities and Social Science students' responses were generally very positive with respect to lectures while Architecture and Design and Commerce students were less so. These differences may indicate different motivations of the type identified by Dolnicar (2005). For example, a relatively large proportion of Architecture and Design students reported that they were working on other course work when they did not attend lectures, suggesting that they perceived their other work to be more important.

Attendance at lectures does not necessarily mean that students learn well from them (Sawon et al., 2012). There is a danger that students see the lectures as 'the notes' (Hunter and Tetley, 1999, p. 6) and that those taking a surface approach to their study will come to rely too heavily on them (Clark et al., 2011). I believe that this is not a reason to abandon lectures altogether but rather to explore how they can be better tailored to promote students' learning within a well aligned course. Other researchers have argued that, in order to improve lecture attendance, lecture quality needs to improve (e.g. Dolnicar et al., 2009; Kelly, 2012; Massingham and Herrington, 2006) and my research supports this view. However, it is important that we consider how such improvement might be achieved given that there are some students for whom lectures are not valuable and some courses where lectures of any quality do not belong.

Creating lectures which provide valuable learning opportunities for students requires consideration at the level of the lecturer, programme and even the university. Lectures currently fit neatly within programmes alongside labs, studios or tutorials. In order for students to obtain value from these, greater consideration should be attached to how these elements complement one another so that students do not feel that they have to prioritise completion of work over attendance at lectures. This has less to do with the way in which lectures are delivered, though clearly engaging and motivating lectures would be preferable to dull ones, and more to do with the overall design of the course. Timetabling and programme alignment therefore become increasingly important.

Furthermore, lectures do not suit all students, particularly in practical disciplines such as Architecture and Design. The decision regarding how to present material in a course should therefore allow for flexibility so that students can access course content in different ways. This may mean that decisions about whether to lecture and what students might do in large group learning situations would also be dependent on the desired outcomes of the course.

Limitations of this study include the possibility that conscientious students who usually attend lectures are more likely to participate. I attempted to ameliorate this by contacting all students in the same way and emphasising that I particularly wished to hear from non-attending students. My decision to compare responses from students who attended all lectures with those who missed even a single one in a given week was based on this likelihood and the differences observed between the two groups support this approach. Another limitation is that, with only ten different courses, specific teaching approaches employed by a single lecturer may have had an impact on the data. All of the courses were selected without reference to pedagogical approach, other than they all included lecture-based teaching. Furthermore, all were taught by more than one lecturer which also helped to minimise this

effect. Nevertheless, it is likely that students in each course experienced very different types of lectures and contexts which, as noted by Clark et al. (2011), requires further study.

Conclusion – not dead

For many students, the lecture is definitely very much alive. Although some may find lectures a little boring, many still see them as an important part of their university study and the majority believe that they help them to learn the material. This study has highlighted the differences between students of different disciplines and helps to explain the variations in findings across the literature. Rather than abandon lectures altogether, it is important to consider the role that they play in any course so that those who do value learning in this way can continue to do so.

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