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Abstract
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Keywords
attendance, lecture, increase, students, marketing, measures, australian, can, take, universities

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Faculty of Commerce

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University of Wollongong *Year* 2009

Can Australian Universities take measures to increase the lecture attendance of Marketing students?

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Fourth revision

Can Australian Universities Take Measures to Increase the Lecture Attendance of Marketing Students?

Abstract

Lectures are a central element of traditional university learning, but Australian lecturers increasingly face very low levels of lecture attendance (Rodgers, 2001). A significant amount of research exists that investigates the drivers of lecture attendance. However, those studies typically study single factors in an isolated manner, thus overestimating the importance of individual factors. The present study contributes to our understanding of lecture attendance (and non-attendance) by including a range of factors that potentially affect lecture attendance simultaneously, thus accounting for possible interactions between factors and identifying the key drivers of lecture attendance. We used a survey among all students of an Australian university to compute a regression model with the probability of lecture attendance as the dependent variable. Our results indicate that only four of the factors previously investigated are significant for marketing students (that is, the difficulty of the subject, the quality of the lecture as perceived by the student, the quality of the student as indicated by their average mark, and the format of the lecture), which leaves little opportunity for Australian universities to improve attendance with simple measures. Instead, the data suggests that universities need to improve the quality of lectures to achieve better attendance levels.

Keywords: Lecture attendance, Australia, a priori market segmentation

Introduction

Despite the emphasis on quality and flexibility, and the introduction of new technologies, the lecture remains at the centre of most universities' approaches to teaching and learning. The lecture format persists for myriad reasons, not the least of which is related to funding. However, while this approach is steeped in tradition, is it still appropriate for students in the twenty-first century? Lecturers have voiced concerns at the declining attendance at lectures, as indicated by research over the last decade or so (Rodgers, 2001). Estimates of lecture attendance by researchers range from as little as 7% (Massingham & Herrington, 2006) to approximately 70% (Massingham & Herrington, 2006; Purcell, 2007). The majority of research into lecture attendance focuses on the reasons students do not attend lectures, assuming that reversing such conditions might increase attendance (see, for example, Friedman, Rodriguez & McComb, 2001; Kottasz, 2005; Massingham & Herrington, 2006). For example, poor quality lecturing is one of the most common reasons cited for non-attendance at lectures. In response, research highlights the need to enhance the pedagogical skills of lecturers; Massingham and Herrington (2006), for example, suggest that today's students require a more student-centered approach.

Current research suggests that the following factors may influence whether or not students attend lectures: compulsory status of subjects they are enrolled in; the amount of support materials provided outside the lecture that may give the perception that attending the lecture is not necessary; assessment of the quality of the lecturer; quality of the student; perceived difficulty of the subject; logistics of subject delivery; accessibility of the university; and other commitments. The following literature review section contains a detailed examination of this research.

Most of these studies are exploratory. They either elicit multiple reasons for non-attendance

without clearly concluding which combination of factors is most salient, or focus on one single factor. Analyzing single factors could distort their importance and lead to erroneous conclusions, because the relationships among the various potential factors are probably more complex. Isolating one factor may overemphasize the extent to which the single, isolated factor affects lecture attendance.

The current study overcomes this problem by including key factors which were previously hypothesized as affecting lecture attendance into one single model, which is then used to try to better predict the percentage of lectures attended by a marketing student. The results obtained are of practical importance, because they reveal those factors that: (1) can predict higher levels of lecture attendance, and (2) are in the control of the university. Thus this research can empower universities to take active measures to increase the level of lecture attendance.

We focus specifically on marketing students because of the scope of the *Journal of Marketing Education*, but we do provide a comparison with the general student sample population to determine if marketing students differ with respect to drivers of lecture attendance. Because, to the authors' knowledge, such a study has not been conducted for marketing students specifically, we derive the factors to be investigated from the general literature on lecture attendance which is reviewed in the next section.

Literature Review

A review of publications that address student attendance of lectures reveals several factors which have already been studied, and which can now be separated into university-related and student-related factors.

University Factors

Research from the 1990s suggests that students were more likely to attend if attendance was compulsory (Berenson, Carter & Norwood, 1992; Devadoss & Foltz, 1996). However, more recent work has found that penalties for poor attendance do not affect attendance (Keen, 2006; Moore, 2003). For example, Keen's (2006) research reveals that, within the one subject, students are more likely to attend tutorials when they are compulsory, compared to the non-compulsory lecture. He also found that students are more likely to attend lectures in elective subjects, with students citing interest and smaller class size, as opposed to lectures in compulsory subjects, where they may feel more anonymous in a larger group.

The availability of alternative information resources has been proposed as a key reason for students not attending lectures. For example, Grabe (2005) argues that many lecturers are reluctant to provide lecture notes, despite their pedagogical benefit, because of the fear that doing so would reduce attendance at lectures (see also Khan, 1997). Similarly, other researchers report that students will not attend if they can gain the information elsewhere (Friedman, Rodriguez & McComb, 2001; Hunter & Tetley, 1999). Grabe's subsequent research indicates that availability of online resources in the form of lecture notes was associated with lower attendance rates (Grabe, Christopherson, & Douglas, 2005). Further, Bell, Cockburn, McKenzie, and Vargo (2001) report that the availability of online resources contributes to lower attendance, but

surprisingly, does not lead to increased access of online resources. Similarly, Copley (2007) reports no impact on lecture attendance if podcasts of the lectures are available, because students who attend lectures also access the podcasts to aid their revision.

Among the most common reasons for non-attendance at lectures is poor lecture quality, with students frequently describing them as "boring," "not worth attending," "irrelevant," having "poor content" or "uninspiring" (Friedman, Rodriguez & McComb, 2001; Glietman, 2000; Hunter & Tetley, 1999; Kottasz, 2005; Massingham & Herrington, 2006; Romer, 1993). Unsurprisingly then, other studies also show positive correlations between the quality of the lecturer and student attendance (Dolnicar, 2005; Khan, 1997). We might expect that improved lecturer quality would lead to improved lecture attendance, but this is not necessarily the case. While Devadoss and Foltz (1996) found a modest (9%) increase in attendance for lecturers who had received teaching awards, Foreman (2003) argues that even the most entertaining lecturers struggle to keep students engaged for lectures lasting one to two hours. Keen's (2006) analysis of students in an education faculty reveals that while students cite poor lecturer quality as a reason *not* to attend, a perception of the lecturer as being high quality does not necessarily improve attendance.

The logistics associated with the subject also affect student attendance at lectures. The size of the class, for example, influences students, because their absence is more likely in subjects with large enrollments compared to those with low enrollments (Friedman, Rodriguez & McComb, 2001). Keen (2006) suggests that this is because students feel more anonymous in large classes and believe that their absence is less likely to be noticed by the lecturer; further, the smaller class allows them to be more active participants, leading to a superior learning experience. Similarly, the size of the lecture theater was a factor in research by Grise and Kennedy (2003), who reported

that students perceived that smaller theaters allowed for greater interaction between lecturer and students, and thus encouraged their attendance. The time of day was an additional factor, with 10.00 am to 3.00 pm being the optimum lecture times to encourage attendance. Classes scheduled outside this timeframe showed lower attendance rates (Devadoss & Foltz, 1996; Hunter & Tetley, 1999). Attendance has also been shown to decline as the semester progresses (Moore, 2004; Rodgers, 2001; Rodgers & Rodgers, 2003). Finally, the accessibility of the university influences attendance, with students attributing their absences to transport problems (Kottasz, 2005; Shannon, 2006).

Student Factors

While lecturer quality is a dominant theme in the literature, some work has explored the quality of the student. In an early piece of research, Powell (1973) suggested that some students may lack the intellectual discipline required to benefit from the complexity of the university lecture. There has been some indication in research that students avoid attending classes they find difficult. For example, Romer (1993) reported that students were more likely to be absent for classes that have mathematical content.

More recently, the intrinsic motivation of students to attend lectures has been explored in research (see for example, Friedman et al., 2001; Massingham & Herrington, 2006). Dolnicar (2005) labeled students with high levels of motivation as "idealists," noting they were often mature-age students who embraced the lecture environment and its attendant academic discourse. Moore, Armstrong and Pearson (2008) linked reasons for non-attendance to the motivational levels of students, and unsurprisingly, found an inverse relationship between the motivation

levels associated with non-attendance and the number of lectures attended. Sixty percent of their research participants failed to attend lectures for reasons that indicated low motivation levels (for example, too tired, bad weather, engagement in leisure activities); 23% of participants gave reasons that indicated moderate motivation (including putting higher priority on completing other assignments); and 17% represented high motivation levels (unavoidable clashes such as illness or family bereavement). Massingham and Herrington (2006) found that students were less likely to attend if they perceived they could pass without attending lectures.

Other commitments related to students' personal lives were also frequently raised in the research. Most commonly, researchers reported that students' work commitments prevented them from attending lectures (Friedman, Rodriguez & McComb, 2001; Kirby & McElroy, 2003; Kottasz, 2005; Massingham & Herrington, 2006; Shannon, 2006). In contrast, other research found no relationship between lecture attendance and work commitments. These researchers proposed that students who worked to fund their university study were more likely to attend classes to receive the full value of their investment (Devadoss & Foltz, 1996; Dolnicar, 2005). Nevertheless, Devadoss and Foltz (1996) found that work commitments did have a negative impact on students' achievement.

Students also absented themselves from lectures in order to fulfil other university commitments, such as timetabling conflicts, or to work on other assignments (Hunter & Tetley, 1999; Kottasz, 2005; Shannon, 2006). Finally, personal reasons (including illness) influenced students' attendance on particular occasions, rather than as a general pattern (Shannon, 2006).

While the extant research indicates a relationship between attendance and performance (Mallick & Varua, 2008; Romer, 1993; Stanca, 2006), Van Walbeek (2004) claims that this link is not as strong as many assume.

The foregoing review of research indicates many reasons why students choose to attend or miss lectures. However, most research investigates single, rather than several factors acting simultaneously, thereby risking over-interpreting the effect of single, isolated reasons. The aim of the present study is to compute a model in which a range of factors is included simultaneously. However, this study does not include all possible factors, instead limiting the scope of investigation to the main 12 factors identified in the relevant literature.

Methodology

Data

The data used in this study was collected from undergraduate students at an Australian university. Because the items in the questionnaire asked the respondents to think back to a subject studied in the previous semester, only students who had enrolled prior to the year of data collection were involved. An email invitation was sent to the 7,600 eligible undergraduate students, which included a link to the online survey. Students were offered an incentive to complete the survey in the form of entry into the draw for a $250 voucher for the university shop. A reminder email was sent after two weeks, giving a further 10 days for students to complete the questionnaire and enter the draw. A total of 2,379 responses were received, giving a response rate of 31%. After removing 204 cases with incomplete responses, the final number of responses used in the data analysis was 2,175 (a response rate of 29%). Of these, 97 students responded in relation to marketing subjects (defined by either the subject name or subject code).

The survey instrument consisted of 36 items related to three main topics: 1) factors influencing the choice of a tertiary institution, 2) information sources used in considering tertiary institutions, and 3) lecture attendance behavior of the respondents. The focus of this paper is the third area, lecture attendance behavior, which accounted for 19 items in the full questionnaire.

Respondents were asked to choose a subject they had studied in the previous semester when answering the questions. The reason for this was that factors the authors believed might influence lecture attendance behavior vary between subjects, making it difficult for the respondent to give precise responses if asked in a general context. Items relating to the specific subject chosen covered such areas as the level of the subject (for example, 1st, 2nd or 3rd year), typical length of

one lecture, faculty offering the subject, format the lecture was offered in, extra support materials available, perceived difficulty of the subject, and perceived quality of the lecture and lecturer. Respondents were then asked to indicate whether or not several factors influenced their decision to attend the lecture in this specific subject, how many lectures were held for the subject, how many they actually attended, and their final mark in the subject. The respondents were again asked about whether or not certain factors influenced their decision to attend lectures, and how many lectures they typically attended, only this time in a general context.

The dependent variable for the present study (lecture attendance) was computed by dividing the number of lectures each student attended by the number of lectures given.

The questionnaire also collected data about the respondent's demographics (age, relationship status, nationality), distance traveled from home to university, time spent travelling to university, and transport mode used to get to university. The full questionnaire is included in the Appendix.

Data Analysis

A regression analysis was computed to determine which factors affect lecture attendance. Because the dependent variable is a percentage (or a ration between 0 and 1) a linear regression model cannot be used as it would violate the assumptions of the linear model (e.g. the error terms follow identical and independent normal distributions and the dependent variable is continuous on the real line). We therefore used the binomial logistic regression which accepts input calculated through dividing the number of lectures attended by the number of lectures given.

The resulting model for the binomial regression is as follows:

$$Y = f(U + S)$$

Where Y denotes the probability of attendance (between 0 and 1), $f(x)$ denotes the logistic link function ($\exp(x)/[1+\exp(x)]$), U denotes independent variables related to the university (such as subject difficulty), and S denotes independent variables related to the student (such as age).

Independent variables include both metric and categorical data: the subject difficulty (measured on a fully verbalised five point scale, treated as metric), the perceived quality of the lecture and the perceived quality of the lecturer (both measures on an endpoint labelled 100 point scale and treated as metric in the analysis), the age of the student (metric), the average mark of the student (metric), the travel time to the university in minutes (metric), whether or not the subject is compulsory (binary data which was dummy coded), the format of the lecture (1 – weekly lecture, 2 – blocked lecture, 3 – lecture integrated with tutorials, 4 – other, categorical data with only one answer option permitted which was dummy coded with the "weekly lecture" serving as reference category), the cost for the subject (metric), the year in which the subject was held (metric), the supporting materials students have access to (seven options, including "nothing" , categorical data with only one answer option permitted which was dummy coded with "lecture notes handed out in class" serving as reference category), whether or not students have worked full time before (binary data which was dummy coded), and whether they have children (binary data which was dummy coded), where having children is an indicator of other commitments.

First, the binomial regression was computed for marketing students only (see Table 1). Then, a joint binomial regression was computed which contained both samples and allowed us to draw comparative conclusions between the samples (see Table 2). Sample comparisons have to be based on the second regression model only where the marketing students are defined as a subsample of all cases included in the regression.

Results and Discussion

The regression results for marketing students are provided in Table 1. Only four of the hypothesized independent variables are significant (at the significance level of 0.01): the difficulty of the subject, the quality of the lecture as perceived by the student, the quality of the student as indicated by their average mark, and lecture format.

----- *Table 1 – Regression Results for Marketing Students* -----

Figure 1A shows that the lecture attendance of marketing students for subjects which they perceive as very difficult varies; however, the average attendance for such subjects is very low. This is initially a surprising finding, but is actually aligned with the findings reported by Romer (1993); students avoid attending classes they find very difficult (for example, classes with mathematical content). For the other four difficulty levels, lecture attendance shows a linear pattern, with easier lectures leading to lower levels of lecture attendance. This is supported by the regression results, with the coefficient showing lower attendance (negative sign) for easier lectures.

----- *Figure 1 – Subject Difficulty* -----

The results of the perceived lecture quality and lecture attendance show that, among both the

marketing student sample and general student sample, students are more likely to attend lectures which they perceive as being of high quality. This finding aligns with previous research (Friedman, Rodriguez & McComb, 2001; Glietman, 2000; Hunter & Tetley, 1999; Kottasz, 2005; Massingham & Herrington, 2006; Romer, 1993).

The result is not as clear for the factor "quality of the student." Generally, marketing students with better university performance attend lectures more frequently, but many weaker students also attend lectures regularly, while some excellent students do not attend lectures at all. Assuming that student motivation drives high-level performance in university students, these results support the findings by Moore et al. (2008) and Dolnicar (2006).

Regarding lecture format, the "other" option attracted the highest attendance levels among marketing students. However, marketing students only indicated attending weekly lectures or "other" lecture formats, and the alternative options under this question ("blocked" or "lectures with tutorials") were not found within the marketing students. Marketing students who attended lectures in an "other" format had a higher level of attendance. However, only a very small number of respondents ticked options other than the weekly lecture. Therefore, the results should be seen as tentative, and a follow-up study containing more respondents who have attended lectures of alternative formats is required.

----- *Figure 2 – Lecture Format*-----

The age of the student, the time it takes them to get to university, whether or not a subject is

compulsory, whether or not the student has worked full time previously, whether or not the student has other commitments (having children), the cost of tuition, and the entire range of support materials that can be provided to marketing students all did not affect lecture attendance in this survey.

The results relating to the compulsory status of the subject align with the recent findings by Keen (2006): that making lectures compulsory does not lead to increased attendance. Conversely, our study does not confirm that lecture attendance *increases* when the subject is an elective, because class sizes are smaller and the level of student interest is probably higher. Based on our findings, there is no effect of compulsory or elective status of a lecture on the level of attendance.

Regarding supporting materials, our study confirms the conclusion drawn by Copley (2007) in the context of making lecture podcasts available: the provision of additional material does not affect lecture attendance. Results contradict the findings by Bell et al. (2001) and Grabe et al. (2005), who claim that providing materials decreases lecture attendance. One possible explanation is that the underlying motivation of the student explains both the attendance of lecture and the use of additional materials provided; thus weaker students may be less interested in the subject in general, and thus neither attend lectures nor use additional materials.

The quality of the lecturer does not emerge as a significant variable explaining lecture attendance. This is unsurprising, because the perceived quality of the lecture and the perceived quality of the lecturer are highly correlated. In the regression model, lecture quality as perceived by students did emerge as a highly significant factor. This strongly aligns with most previous findings in the lecture attendance literature; however, it contradicts the study by Devadoss and Foltz (1996), who conclude that lecturers who win teaching awards do not attract more students. One explanation may be that criteria for teaching awards may not be highly associated with perceived quality of

the lecture by the majority of students.

Finally, travel time was not found to be a major factor in affecting lecture attendance among marketing students. This finding contradicts the conclusions drawn by Kottasz (2005) and Shannon (2006), who claim that accessibility plays a significant role in lecture attendance.

Compared with all students in the survey, several significant differences can be identified between marketing and non-marketing students. The results are provided in Table 2. The marketing student sample is included as a general variable (in bold), as well as separately, interacting with each independent variable. If the interaction variables are eliminated from the model, the direct sample variable is significant, indicating that differences between the two samples exist. In the model presented in Table 2 these differences are captured by specific interaction terms, thus rendering the original variable insignificant.

----- *Table 2 – Regression Results Including Both Student Samples*-----

The results from Table 2 indicate that significant differences between marketing and non-marketing students occur in five variables (the gray-shaded cells in Table 2): the difficulty of the subject, the general average mark of the student, whether or not students have children, tuition cost, and the lecture format.

Regarding subject difficulty, all students attended fewer lectures if the subject was easy, but this was significantly more so for marketing students. Regarding the quality of the student as assessed by their general average mark, results indicate that among marketing students higher levels of attendance can be seen across the range of student performance levels. When looking at all

students, there seems to be a stronger link between higher student performance levels and higher levels of attendance. As for the case of subject difficulty, this association was significantly stronger for marketing students. The direction of the association changed for the variable relationship status. Students who had children had a higher probability of attending lectures in the general student sample. Conversely, marketing students with children attended fewer lectures. The tuition cost effect per dollar of additional cost is relatively small in general, but marketing students differed from other students in that they were less affected in their lecture attendance by tuition cost.

Finally, the lecture format variable shows significant differences. Lecture format had no effect on lecture attendance in the general student sample, but did for marketing students. As indicated earlier, the sample size of marketing students with "other" lecture formats was small, so this result should not be over-interpreted. We might have captured a few marketing students who attended one specific lecture of a different format who were all very enthusiastic about it. These results need confirmation with a greater sample size of students having experienced other lecture formats.

Conclusions

Lectures still represent an integral component of university learning, typically providing the main platform of personal knowledge transfer, and often the basis of practical exercises in tutorials. If students miss lectures, they may lack knowledge that is essential for passing exams, but also for practical applications of the subject matter in employment. Interestingly, when students were asked whether they preferred alternative pedagogical approaches, they indicated that there is still

a place for the university lecture (Keen, 2006). It may be that today's time-poor students prefer lectures over alternative modes of delivery because they can more easily opt out of attending.

Consequently, universities need to understand which factors lead to high or low lecture attendance. If most factors that lead to higher lecture attendance are *characteristics of the student*, then universities have little room to implement changes to increase lecture attendance. Such limitations notwithstanding, universities may still target a specific subset of students, but this is not a realistic scenario in Australia, where universities must compete for students because they depend on the income generated by student fees. However, if factors can be influenced *by the university*, for example, by providing more or less supporting materials online, universities can take active measures to increase lecture attendance, and thereby maximize learning opportunities for students.

A significant number of studies investigate individual factors hypothesized as affecting lecture attendance. However, no study to date has investigated a range of factors simultaneously, thereby ensuring that the results for single factors are not artificially inflated. This is the contribution of the present study, which investigates the problem of lecture non-attendance among Australian students.

Results indicate that only a small number of factors have a significant effect on the percentage of lectures that marketing students attend; subject difficulty, perceived lecture quality, student performance and lecture format. In general, students are less likely to attend lectures if they perceive the subject to be very easy but more likely to attend if they perceive the lecture to be of high quality or if they are high performing students. High attendance levels were seen among students in general across a variety of lecture formats, although attendance levels were higher for the traditional combination of lectures and tutorials.

Isolating the marketing students shows they exhibit similar attendance behaviour to the general sample in relation to perceived lecture quality and student performance (the higher the lecture quality and the better the student, the more lectures attended). However, in relation to perceived subject difficulty, marketing students display different attendance behaviour. They are most likely to attend lectures if the subject is perceived to be difficult, but least likely to attend if they subject is perceived as very difficult, displaying avoidance behaviour. In relation to lecture format, marketing students indicated they only participated in weekly lectures or other formats, with the latter obtaining higher attendance levels. This particular result is tentative due to sample size restrictions.

Conversely, the following factors did not emerge as significantly affecting lecture attendance of marketing students: the age of the student (however, the variability in this variable was low), the accessibility of the university (which was operationalized as the time it takes a student to get to campus), the compulsory or elective nature of the subject, the cost of tuition (again, the variability of this factor is low), and the range of supporting materials provided, whether or not the student has worked full time before, and whether or not the student has children and thus has commitments outside of university studies.

The results indicate that both characteristics of the students and the university play a role in lecture attendance. Of the factors which a university could control (quality of lecture, perceived difficulty, and format of lecture), lecture format is the area most easily addressed. Current results indicate that weekly lectures achieve the best results — probably because they allow students to include them into a weekly schedule without having to sacrifice other commitments, which may occur with irregular, blocked lectures. However, given the narrow range of variability in this variable in the sample, this conclusion can only be drawn tentatively. The perceived level of

difficulty is hard for the university to control. Therefore, the key recommendation from the current study is that universities should focus on increasing the perceived quality of lectures by students if they wish to increase lecture attendance. In order to improve the quality of lectures, the typical lecture evaluation scores may not provide much guidance, because they usually include a small set of quality criteria defined by the university.

Alternatively, universities could also take the position that what is at stake is not the number of students in a lecture theater, but the quality of learning that occurs. Lectures that are well structured to provide appropriate levels of challenge and are integral to assessment, for example, may engage students more readily. This may require transforming the humble university lecture from a transactional model to an interactional model of learning.

In the current climate of economic constraints on universities, the mass lecture is unlikely to disappear. Given this likelihood, and the changing nature of today's students, universities may need to think long and hard about the role they play in motivating students to engage in their learning. If lectures are to be part of that learning, then enhancing the quality of lectures is essential.

The results of this study are limited because all students were respondents of a single, regional (not metropolitan) university in Australia, which could affect some factors (for instance, the results related to travel time). Another limitation is that respondents were free to choose a subject to report on. This self-selection may have biased the study, as students may have chosen subjects for which their experience was unsatisfactory and so were highly critical in their responses.

Appendix - Questionnaire

When responding to all of the following questions, please think of ONE of the subjects you have taken last session. We will ask you a number of questions about the lecture IN THIS PARTICULAR SUBJECT

A few questions about the lecture

1. Which is the Subject you have chosen for this survey (please choose any subject you have attended in the last session of your university studies)?

    - ❒ Subject Name
    - ❒ Subject Code

2. Is the subject you have chosen a 1st, 2nd, 3rd or 4th year subject?

    - ❒ 1st
    - ❒ 2nd
    - ❒ 3rd
    - ❒ 4th

3. Typically, how long is one lecture in the subject you have chosen in minutes?

4. Which Faculty is offering this subject?

    - ❒ Arts
    - ❒ Commerce
    - ❒ Creative Arts
    - ❒ Education
    - ❒ Engineering
    - ❒ Informatics
    - ❒ Law

- ❒ Science
- ❒ Health & Behavioural Sciences

5. In which format is this lecture offered?
   - ❒ Weekly lecture
   - ❒ Blocked lecture (The lecture is not offered weekly, but on a few days over more hours at a time)
   - ❒ Lecture integrated with tutorials (The lecture and tutorials are offered together, so it is difficult to distinguish which hours are actually lecturing and which tutorial hours)
   - ❒ Other (please specify below)
6. Which extra student support is offered for this lecture?
   - ❒ Lecture notes handed out in class
   - ❒ Lecture notes available in master copy
   - ❒ Lecture notes available for purchase
   - ❒ Lecture notes available online
   - ❒ Audio recordings of the lecture available
   - ❒ Video recordings of the lecture available
   - ❒ Nothing
   - ❒ Other (please specify below)

A few questions about your opinion on the lecture

7. If you could mark the quality of this LECTURE on a scale of 0 (very bad) to 100 (very good), which mark would you give it?
8. If you could mark the quality of this LECTURER on a scale of 0 (very bad) to 100 (very good), which mark would you give him/her?

9. This subject is known to be

- ❒ very difficult
- ❒ difficult
- ❒ average
- ❒ easy
- ❒ very easy

A few questions about your lecture attendance of this particular lecture

10. Please indicate whether any of the following reasons for attending lectures in the subject you have specified above apply to you.

- ❒ To find out what I am supposed to learn
- ❒ To find out about the assessment tasks
- ❒ I can always get a parking spot at that time
- ❒ I enjoy them
- ❒ To make sure I don't miss anything important
- ❒ My friends attend
- ❒ I am expected to be there
- ❒ It is easier than trying to learn it myself
- ❒ The weekday is convenient for me
- ❒ To make the knowledge meaningful
- ❒ It enthuses me
- ❒ To find out the latest thinking
- ❒ The time of day is convenient for me
- ❒ To make sure I learn the fundamentals
- ❒ To work on problems

- ❒ To find out the "real world" applications
- ❒ To get exam tips
- ❒ Other (please specify below)

11. How many lectures have been held in this subject last session?
12. How many of those have you attended?
13. What was your final mark in this subject?

A few questions about your general lecture attendance

14. Generally (not only for the subject you have chosen but for subjects in general), please indicate (1 = yes or 2 = no) which of the following reasons for attending lectures apply to you.

    - ❒ To find out what I am supposed to learn
    - ❒ To find out about the assessment tasks
    - ❒ I can always get a parking spot at that time
    - ❒ I enjoy them
    - ❒ To make sure I don't miss anything important
    - ❒ My friends attend
    - ❒ I am expected to be there
    - ❒ It is easier than trying to learn it myself
    - ❒ The weekday is convenient for me
    - ❒ To make the knowledge meaningful
    - ❒ It enthuses me
    - ❒ To find out the latest thinking
    - ❒ The time of day is convenient for me
    - ❒ To make sure I learn the fundamentals

- ❒ To work on problems
- ❒ To find out the "real world" applications
- ❒ To get exam tips
- ❒ Other (please specify below)

15. In general, how many did you typically attend?

A few questions about the reasons for NOT ATTENDING LECTURES

16. Please state the main reason for NOT ATTENDING lectures at university

A few questions about yourself

17. Which degree are you enrolled in?
18. Is the subject you have chosen for this survey compulsory for completing your degree?
19. Have you worked full-time before you started your degree?
20. If yes, for how many years were you working before beginning studies?
21. How old are you?
22. Are you

    - ❒ Single without children
    - ❒ Single with children
    - ❒ Partnered/married without children
    - ❒ Partnered/married with children
    - ❒ Other

23. What is your average mark across all subjects you have taken at university so far?
24. What mark did you get for the subject you have chosen for this survey?
25. What is your career goal?
26. Please indicate how many kilometres the university is from you permanent family home

    - ❒ 10km or less

- ❒ 11-30km
- ❒ 31-70km
- ❒ 71km or more

27. How long does it take you to get from home to University in minutes?
28. What means of transport do you use to get to University?
29. Approximately how much does it cost you (in enrolment fees or university tuition) to undertake the subject you have chosen for this survey (in Australian dollars)?

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Tables

Table 1

Regression Results for Marketing Students

	Estimate	Std. Error	Pr(> |z|)
(Intercept)	-3.662	1.607	0.023
Subject difficulty	-0.750	0.122	0.000
Perceived quality of the lecture	0.038	0.009	0.000
Perceived quality of the lecturer	0.005	0.008	0.487
Age of the student	0.065	0.035	0.061
Average mark	0.058	0.012	0.000
Has children	-1.191	0.574	0.038
Full time work (yes)	-0.574	0.382	0.133
Travel time to university	-0.002	0.002	0.300
Compulsory subject (yes)	0.089	0.224	0.692
Alternative lecture format	3.957	1.178	0.001
Cost of the subject	-0.000	0.000	0.136
Degree year in which subject is taken	-0.154	0.121	0.201
Lecture notes available for copying	-0.443	1.056	0.675
Lecture notes available online	-1.106	0.837	0.186
Video recording of lecture available	-1.178	1.101	0.285

Table 2

Regression Results Including Both Student Samples

	Estimate	Std. Error	Pr(> |z|)
(Intercept)	-1.060	0.198	0.000
Subject difficulty	-0.155	0.019	0.000
Perceived quality of the lecture	0.026	0.001	0.000
Perceived quality of the lecturer	0.000	0.001	0.805
Age of the student	-0.001	0.003	0.669
Average mark	0.023	0.002	0.000
Has children	0.316	0.074	0.000
Full time work (yes)	-0.144	0.041	0.000
Travel time to university	-0.001	0.000	0.002
Compulsory subject (yes)	0.025	0.038	0.505
Blocked lecture format	0.032	0.070	0.647
Lecture format with tutorial	0.101	0.063	0.108
Alternative lecture format	0.063	0.068	0.355
Cost of the subject	0.000	0.000	0.000
Degree year in which subject is taken	0.062	0.020	0.002
Lecture notes available for copying	-0.422	0.179	0.019
Lecture notes available for purchase	-0.472	0.124	0.000
Lecture notes available online	-0.803	0.105	0.000
Lecture audio recording available	-1.154	0.147	0.000
Lecture video recordings available	-0.336	0.326	0.303
No lecture support available	-0.466	0.116	0.000
Other Lecture support available	-0.832	0.138	0.000
Within marketing students	**-2.602**	**1.619**	**0.108**
Subject difficulty within marketing	-0.595	0.124	0.000
Perceived quality of the lecture within marketing	0.012	0.009	0.167
Perceived quality of the lecturer within marketing	0.005	0.008	0.514
Age of the student within marketing	0.067	0.035	0.057
Average mark within marketing	0.035	0.013	0.005
Has children within marketing	-1.507	0.579	0.009
Full time work within marketing (yes)	-0.430	0.385	0.263
Travel time to university within marketing	-0.001	0.002	0.582
Compulsory subject within marketing (yes)	0.064	0.227	0.779
Alternative lecture format within marketing	3.894	1.180	0.001
Cost of the subject within marketing	-0.000	0.000	0.013
Degree year in which subject is taken within marketing	-0.217	0.122	0.077
Lecture notes available for copying within marketing	-0.021	1.072	0.984
Lecture notes available online within marketing	-0.303	0.843	0.719
Video recording of lecture available within marketing	-0.842	1.148	0.463

Figures

Figure 1

Subject Difficulty

Figure 1A: Marketing Students

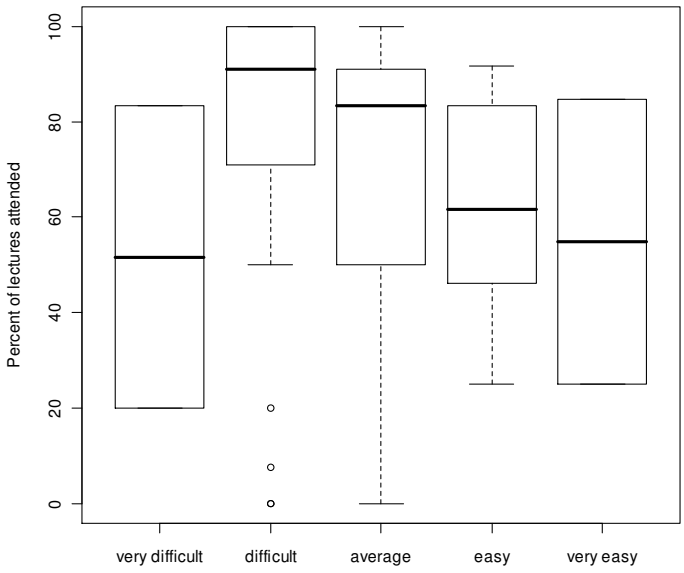

Figure 1B: All Students

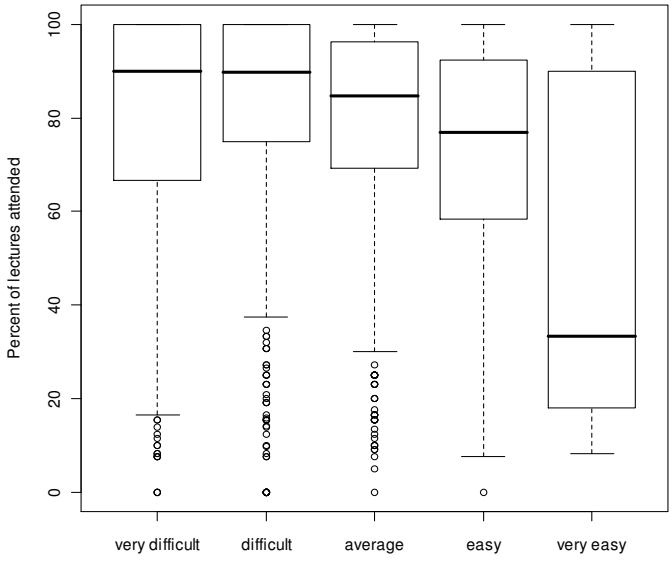

Figure 2
Lecture Format

Figure 2A: Marketing Students

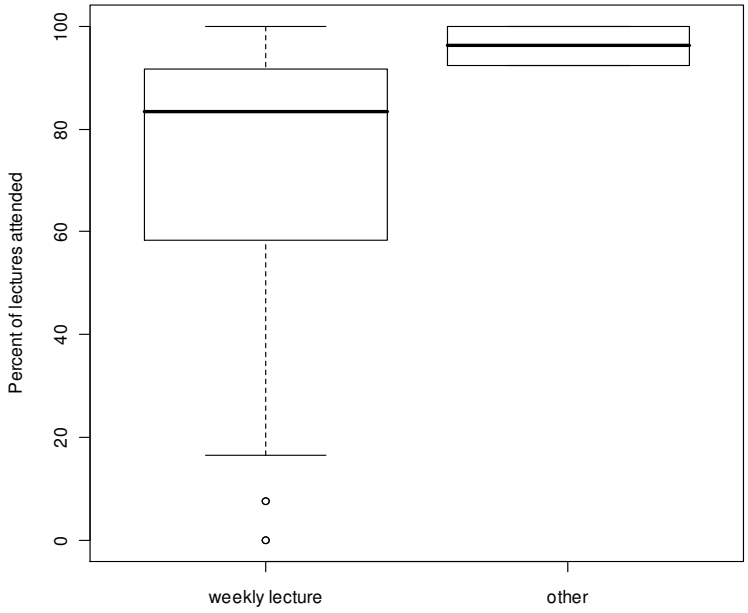
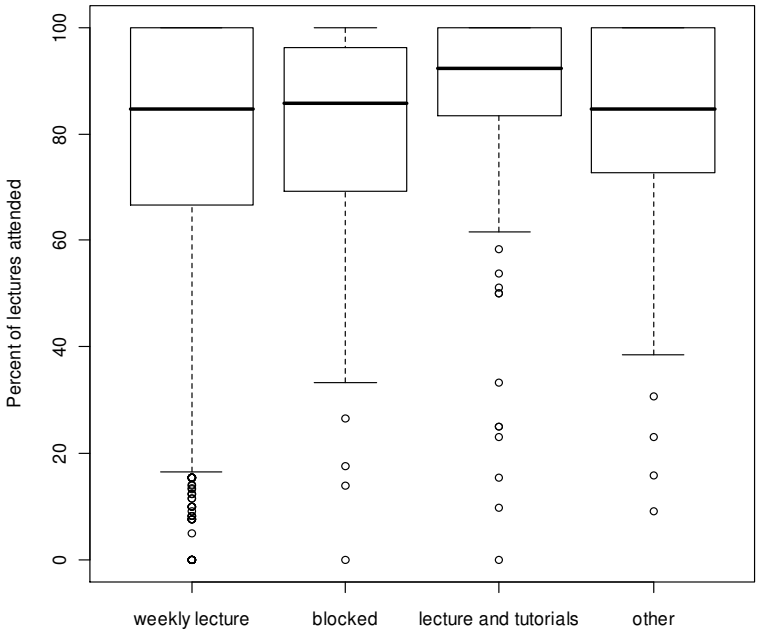
Figure 2B: All Students