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An analysis of factors influencing the attendance of first year university students

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1 Introduction

For some time now, absenteeism from lectures has been recognised internationally as a concern (Rodgers, 2001; Romer, 1993; Wyatt, 1992). This paper contributes to the cumulative body of knowledge in this area by investigating the factors that influenced attendance at a first year Accounting class at National University of Ireland, Galway (NUI Galway). Attendance data was gathered over a full academic year using sign-in sheets. Further information was gathered using a questionnaire, interviews, and secondary data sources. Our work differs from previous studies in that it groups students into three categories (good, moderate and poor attendees), thus allowing the factors affecting the attendance of each group to be examined separately.

2 Literature review

Previous studies from the US (Devadoss & Foltz, 1996; Romer, 1993), Australia (Massingham & Herrington, 2006), Europe (Kirby & McElroy, 2003; Paisey & Paisey, 2004) and Asia (Lin & Chen, 2006) have found positive correlations between lecture attendance and examination grades. However, the extent to which attendance impacts academic performance is moderated by other variables such as academic ability (e.g. GPA score, entry points) and prior knowledge of a subject (Van Walbeek, 2004). Our literature review uncovered a number of factors which can potentially affect lecture attendance, classified here under the headings: unavoidable, individual, and course-related factors.

2.1 Unavoidable factors

Of the various factors that may be regarded as being 'unavoidable', illness is the most frequently cited in the literature, though the extent to which it is a substantial issue varies from study to study (Brown, 2003; Kottasz, 2002; Massingham & Herrington, 2006; Paisey & Paisey, 2004). Family commitments (Hunter & Tetley, 1999; Wyatt, 1992) can also be a factor, as may the availability of transport (Kottasz, 2002; Morgan, 2001).

2.2 Personal factors

'Personal' factors are defined here as those which are essentially intrinsic to an individual student, though we acknowledge that some of these factors may not entirely be matters of choice and are subject to external influence. The main factors in this category are:

- **Interest in subject:** Students' level of interest in the subject being taught has been found to be a key variable affecting attendance. Dolnicar (2004) noted that if students find lectures interesting they are more likely to attend. Morgan (2001) found that interesting lectures had a positive effect on attendance while both Kossatz (2002) and Brown (2003) found that 'boring' lectures were off-putting to students.
- **Motivation:** Morgan (2001) also dealt with the issue of student motivation. He found that students were not intrinsically motivated; rather they were extrinsically motivated by rewards or punishments. Van Blerkom's (2001) study agreed with these conclusions, and he found that extrinsic rewards affect students' attendance levels.
- **Influence of peers:** Peer pressure can be an important factor. Morgan (2001) found that a significant number of business students would or would not attend lectures based on the actions of their peers. Hunter & Tetley (1999) reported similar findings. Hubbard (2007) found that a number of students attended lectures simply to catch up with friends, to find out what assignments/tests were coming up, or to help them identify what the lecturer believed to be important.
- **Social life:** Morgan (2001) found that the effects of student social life can have a significant negative effect on attendance.

2.3 Course-related factors

'Course-related' factors are those which are essentially within the control of the lecturer, though some of these factors may be constrained by institutional rules and resource issues. The main factors here are:

- **Time of class:** Kossatz (2002), Massingham & Herrington (2006) and Morgan (2001) all found that the timing of lectures had a significant effect on attendance. In particular they found that early-morning and late-evening lectures tended to have especially poor attendance levels.
- **Difficulty of material:** Hunter & Tetley (1999) pointed out that lectures which dealt with more complex material are often better attended as students may feel that if they do not attend they will fall behind.
- **Perceived impact on examination performance:** Van Blerkom (2001) observed that students do not attend lectures if they feel it would not affect their overall examination performance.
- **Quality and style of teaching:** Devadoss & Foltz (1996) found that the quality of teaching had a significant influence on whether or not students attended. They found that lecturers who gave real-life examples and whose classes were entertaining were more likely to have higher attendance rates.
- **Availability of course notes:** A lecturer's method of providing notes has also been found to be an important factor influencing attendance. Hunter & Tetley (1999) and Kossatz (2002) found that students would not attend class if friends could get the lecture notes for them or if they were available elsewhere. Dolnicar (2004) and Brown (2003) found that the provision of lecture notes on-line was one of the main reasons for non-attendance.
- **Stage of year:** Rodgers (2001) and Van Blerkom (2001) both found that attendance levels worsened as the semester progressed. Similarly, Van Walbeek (2004) observed that attendance levels dropped from 80% at the beginning of semester to 55% towards the end of the semester.

3 Research method

The focus of this study was on a first year Accounting class in the 2006/2007 academic year. Accounting is taught on a number of undergraduate programmes at NUI Galway but our research was concerned only with students who were registered as new entrants or internal repeat candidates within the Faculty of Commerce. Though Accounting is a compulsory subject in first year, attendance at lectures is not mandatory. The class was divided into 2 groups: those who had studied accounting for the Leaving Certificate (Group A) and those who had not (Group B). The Leaving Certificate (LC) is the final national examination for secondary level students in Ireland, similar to the UK GCSE. There were 3 lectures per week for Group A and 4 lectures per week for Group B. The duration of each lecture was approximately 50 minutes. Lectures ran for 2 terms of 12 weeks each, from September to December and January to March.

A questionnaire, partly based on that used by Kirby & McElroy (2003), was voluntarily completed by students during the final 10 minutes of the last lecture. The questionnaire asked students to provide their ID numbers so that responses could be matched with attendance records, but they were assured that the data was entirely confidential and that it would be used for anonymous statistical analysis only. The questionnaire mainly comprised 5-point Likert scale items which measured opinions about factors that potentially affect attendance. It also gathered some profile characteristics and open-ended comments. Of the 383 students who were registered to attend the course, 170 completed questionnaires were received, corresponding to 44% of the population. Data from the questionnaires was combined with attendance records, admissions data, and individual case files maintained by the Faculty Student Advisor (FSA).

In addition, volunteers were sought from the 'poor' and 'good' groups to participate in follow-up informal interviews. 1 student from the good attendees group and 2 students from the poor attendees group agreed to participate. The interviews, which took place in the office of the FSA, lasted about 20 minutes. So as not to inhibit the participants, the interviews were not tape recorded, but two of the authors were present at all times so that recollections and interpretations could be cross-checked.

Based on attendance data collated from weekly sign-in sheets, the entire class was divided into 3 distinct groups: 'good', 'moderate' and 'poor' attendees. These divisions were based on attendance percentages. 'Poor' attendees were defined as those who attended 50% or less of lectures, which precisely corresponded with the lowest quartile. 'Moderate' attendees were defined as those who attended between 50% and 75% of lectures. The remainder were classified as 'good' attendees.

Attendance levels on the day of the survey were somewhat lower than the average for the year, with the result that only 170 questionnaires were received. As should perhaps be expected, the 'good' and 'poor' groups are not proportionally represented within the questionnaire respondents. Though 'poor' attendees represent 25% of the entire population, just 15% of the respondents fell into this category. Conversely, 37% of the population were categorised as 'good' attendees, but a disproportionate 44% of questionnaire respondents are in this category. The 'moderate' group were proportionally represented, constituting 38% of the population and 40% of the respondents. There is an issue with the reliability of some of the attendance data because all 3 interviewees mentioned that students often sign their friends in, or sign and leave immediately.

4 Analysis of results

4.1 Unavoidable factors

Illness; family commitments: The good attendee noted at interview that illness was a primary reason for non-attendance. This comment was supported by remarks from the survey and by notes from the Faculty Student Advisor's (FSA) database which suggested that illness and/or injury was a factor in non-attendance for some students. The FSA database also showed that a small number of students were unable to attend due to family commitments.

4.2 Personal factors

To begin, a number of background variables were examined (available for the entire student population from admissions records). These were:

- **Gender:** The average attendance at lectures throughout the year was 64%, with females on average attending 70% of lectures and males attending 59%. 17 of the top 20 attendees were female. Of the bottom 20 attendees, 15 were male. A greater proportion of females fell within the 'good attendees' group, and conversely there was a greater proportion of males within the 'poor' attendees (see Table 1). A Mann-Whitney test revealed that, overall, there was a statistically significant difference ($p < .001$) between males and females as regards the percentage of classes attended. This finding is further supported by data collected by the FSA throughout the year. Students who missed 50% or more of their lectures were contacted via post by the FSA. In the academic year in question, 87 letters were sent: 56 to males, 31 to females.
- **Age:** The age of a student was found to have no effect on attendance.
- **Prior knowledge of subject:** The average attendance for those who had studied accounting for the Leaving Certificate (LC) was 63% while the average attendance for those who had not was 67%. Whether students took accounting at LC level was not found to be a factor that impacted attendance. Within the groups, it was found to be a factor (Mann-Whitney, $p < .1$) only for poor attendees, where students who had previously studied accounting were less likely to attend.

Table 1. Characteristics of study population *

		Poor attendees	Moderate attendees	Good attendees	Total
Gender (N=383) **	Male	67 (33%)	83 (41%)	54 (26%)	204
	Female	36 (20%)	60 (34%)	83 (46%)	179
Age (N=369)	18 or less	22 (19%)	56 (50%)	35 (31%)	113
	19	49 (26%)	60 (32%)	78 (42%)	187
	20	10 (24%)	19 (46%)	12 (29%)	41
	21 – 23	5 (33%)	3 (27%)	7 (40%)	15
	Over 23	4 (31%)	4 (31%)	5 (38%)	13
Studied accounting at LC (N=383)	Yes	61 (29%)	79 (38%)	69 (33%)	209
	No	42 (24%)	64 (37%)	68 (39%)	174

* Some cases have missing values

** Entire student population

For other personal factors, non-parametric statistical tests (Spearman, Kruskal-Wallis) were run (from questionnaire source (N = 170)). The findings are summarised as follows:

- **Interest in subject:** 2 separate questions were asked in order to calculate a score for the level of overall interest students had in accounting. These were: (a) has your interest in accounting increased since starting university? and (b) if accounting was an optional subject would you choose it? In the poor attendees group, moderate correlations with attendance levels were found for both of these questions ($r_s = .470$, $p < .05$; $r_s = .518$, $p < .01$ respectively), suggesting that interest in the subject, or lack thereof, is a factor that impacts attendance.
- **Motivation:** As regards motivation, 2 aspects were examined: (a) did the student regard the subject as being as beneficial to his/her future career and (b) are family expectations a factor? The factor 'benefit to future career' was found to be weakly correlated with attendance ($r_s = .196$, $p < .05$), though the impact of this factor was more pronounced within the 'poor' attendees group ($r_s = .407$, $p < .05$). The variable 'family expectations' proved to be insignificant across all 3 groups, indicating that family expectations were not an important factor in determining attendance. However, in the interviews the good attendee commented that she felt obliged to attend as her family were paying for her tuition and she wanted to get the most out of the course. She also noted that it was only 3 hours per week and that she would feel ashamed if she failed the subject as a result of not attending lectures. It also emerged from interviews that first year is not taken very seriously by some students who regard it as a 'gap year' or a year of relaxation after the LC. This is further emphasised by comments from the 2 poor attendees who stated that first year in university was a year to 'enjoy yourself.' They felt 'entitled' to relax for the year after going through the LC. They also felt that it was 'probably the only year that you could get through without attending a lot of lectures'.
- **Influence of peers:** Consistent with the findings of Morgan (2001) and Hunter & Tetley (1999), questionnaire respondents felt that the behaviour of their friends affected their own attendance ($r_s = -.260$, $p < .01$). It is notable that this was a negative correlation, suggesting that those with high levels of agreement with the Likert scale item ('The attendance behaviour of my friends has a significant effect on my own attendance') were likely to have low attendance levels, and vice versa. There was a significant difference between the groups' responses in relation to this variable (Kruskal-Wallis, $p < .01$), with the good attendees being considerably less likely than the other two groups to be influenced by the actions of their peers.
- **Social life:** Involvement in sport/clubs was not found to have any impact on lecture attendance. As with the influence of peers, a moderate negative correlation was found between level of agreement with the Likert scale item ('I have missed lectures due to the effects of my social life') and recorded attendance level ($r_s = -.390$, $p < .001$). However, there was a significant difference between the groups' responses in relation to the effect of student social life (Kruskal-Wallis, $p < .001$). The poor attendees were the most likely to agree that social life affected their attendance, while the good attendees were least likely to do so.

4.3 Course-related variables

For course-related personal factors, non-parametric statistical tests were also run. The findings are summarised as follows:

- **Time of class:** Lectures for Group A were scheduled for Mon 13:00, Tue 09:00 and Wed 14:00. Lectures for Group B were scheduled for Mon 13:00, Mon 17:00, Tue 15:00 and Wed 14:00. Consistent with the findings of previous studies (Kottasz, 2002; Massingham & Herrington, 2006), the time of class ($r_s = -.279$, $p < .001$) and day of week were found to negatively impact attendance ($r_s = -.222$, $p < .01$). This finding is supported by the observations of staff that early morning classes in general are not well attended. However, there was a significant difference between the groups in relation to time of lecture (Kruskal-Wallis, $p < .001$). Moderate attendees were most likely to be affected by this variable, while good attendees were least likely to be affected. This may be because good attendees are likely to attend regardless of time/day, poor attendees are not really bothered by time/day (because they are very often absent anyway), so the moderate attendees are most sensitive to class timing.
- **Difficulty of material:** This variable was found to be insignificant across all three groups, suggesting that these students are no more or less likely to come to lectures dealing with complex material. This is in conflict with findings from previous studies such as Hunter & Tetley (1999) who found that students would attend in these circumstances. Overall, there was a weak correlation ($r_s = .199$, $p < .05$) between level of attendance and opinions about the difficulty of material. Though not statistically

- **Perceived impact on examination performance:** This variable was found to be insignificant in all three groups. Students did not believe that their overall attendance would have an effect on their examination performance. This finding was supported in the interviews, where the 2 poor attendees said that they felt that it was possible to get through first year without attending many lectures, and that it was possible to pass the examinations using notes alone. Further, students did not believe that taking of lecture attendance influenced their attendance; this was found to be insignificant across the three groups. Marks are not awarded for attendance at NUI Galway, therefore attending or not attending in itself has no direct effect on examination results.
- **Quality and style of teaching:** In the poor attendee group, 'stimulating lecturing style' was found to be moderately correlated with lecture attendance ($r_s = .465$, $p < .05$). This is in agreement with comments from the interviewees who noted that if the lecturer made the class exciting, explained material thoroughly and gave specific examples they would be more likely to attend. These findings concur with Devadoss & Foltz's (1996) observation that the quality of teaching was an important factor in determining whether a student would attend lectures or not. However, the lecturer's method of presenting material was not significant in explaining why students missed lectures. This suggests that the method of presentation is not as important as the nature of the content being discussed. One other issue regarding teaching style emerged from the interviews, where poor attendees commented that they would not go to a lecture that was 'too interactive' in case questions were asked of them.
- **Availability of course notes:** Overall, the effect of 'course materials being available after lectures' was found to have a moderate correlation with lecture attendance ($r_s = .352$, $p < .001$). This is consistent with the findings of Hunter & Tetley (1999) and Kottasz (2002) who found that the availability of lecture notes either before or after the lecture would often influence students not to attend the lectures. A Kruskal-Wallis comparison of the attendee groups revealed a significant ($p < .01$) difference in tendencies, with the poor and moderate attendee groups much more in agreement that this factor affected their attendance than the good attendee group.
- **Stage of year:** Analysis of attendance records revealed that the overall pattern of lecture attendance was relatively stable throughout the year, with attendance marginally increasing in the poor and good attendees group as the year progressed. These findings are at odds with those of Rodgers (2001) and Van Walbeek (2004), both of whom found that lecture attendance tended to decrease over the academic year. Interviewees in the poor attendee group said that they were more likely to attend lectures close to examination time, but that during the year their lecture attendance was sporadic.

6 Conclusions and further work

One of the most striking findings from this research was the difference between male and female attendance patterns. It is currently unclear why this difference exists, but the FSA has noted that considerably more time is spent following up males in relation to attendance than is spent on females.

The variables that most significantly affected the poor attendee group were quality and style of teaching; prior knowledge of accounting; interest in the subject; availability of notes; social life and influence of peers. These findings were supported by interview comments from the 2 poor attendees and information gathered by the Faculty Student Advisor (FSA) throughout the year during meetings with these students. Poor attendees are more likely to be present at lectures in which material is simplified and explained thoroughly. Students in this group who met with the FSA during the year often complained of the lecturer moving too fast through material and using too few examples. They found this frustrating as most of them are coming from second level education where information is 'taught' in easy to understand steps. Lecturers may attract more students from this group by slowing down and simplifying the presentation of information and by changing their style of teaching slightly to include more examples. This may also serve to increase the students' level of interest in the subject. At interview, the poor attendees also mentioned that they avoided classes where the lecturer asked questions of the audience. It is very difficult for these students to speak out in a class of more than 200, particularly if they do not know the answer. Again, this was supported by information gathered by the FSA.

The factors which most significantly affected the moderate attendees were the availability of lecture notes on the Blackboard e-learning system after the lecture, time of class and influence of peers. The attendance patterns of moderate attendees suggest that they are the group most likely to be swayed in their commitment to attend. In meetings with students from this group, the FSA noted that their constant intention is to attend, but that if anything comes up which deters them from doing so, they stay away and

fall back on downloaded notes. It is not possible at this point for lecturers to stop uploading notes to the internet, but it may be possible to make the notes less comprehensive so that they are not possible to understand fully without lecturer input. If notes are to be made less comprehensive, the students should be made aware of this at the beginning of the course.

The good attendees' decision to attend lectures was influenced most significantly by the fact that they do not believe that their prior accounting knowledge is enough to get them through examinations. During the year, the FSA met with a number of students from this group and noted that even those who had taken accounting for LC attended because they wanted to keep up with the subject, and because they wanted to become familiar with the lecturer's methods, as well as with any new material that may be presented. It has been noted that students in this group tend to be more conscientious and committed overall, and are less likely to be influenced in their decision to attend lectures.

An obvious extension of this research would be to look at the impact of attendance on examination performance. An exploration of the factors students perceive as having an impact on their performance could also be carried out. It would also be interesting to conduct a follow-up study on final year undergraduates so as to compare and contrast them with first year students.

7 Contact details

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