The relationship between lecture attendance and academic performance in an undergraduate psychology class

Andrew Thatcher
Discipline of Psychology, School of Human and Community Development, University of the Witwatersrand, WITS, 2050, South Africa
andrew.thatcher@wits.ac.za

Peter Fridjhon
School of Statistics and Actuarial Science, University of the Witwatersrand, Johannesburg, South Africa

Kate Cockcroft
Discipline of Psychology, School of Human and Community Development, University of the Witwatersrand, Johannesburg, South Africa

This article reports on a preliminary investigation into the impact of non-attendance at lectures on the performance of students in a second-year psychology class. Results suggest that the frequency of lecture attendance is significantly, but moderately, related to better academic performance and that 'always' attending lectures is the best indicator of academic performance. These results are discussed in relation to understanding lecture non-attendance and improving academic performance.

Keywords: academic performance; lecture attendance; teaching psychology; undergraduate psychology classes

Internationally there is considerable evidence to suggest that lecture attendance levels are moderately (but significantly) related to academic performance (Devadoss & Foltz, 1996; Park & Kerr, 1990; Romer, 1993; St Clair, 1999), including in psychology classes (Federici & Schuerger, 1976; Nye, Crookes, Powley, & Tripp, 1984; Van Blerkom, 1996). Some research argues that attendance is merely a proxy for student motivation (Durden & Ellis, 1995), although Romer (1993) found a statistically significant relationship between performance and attendance after controlling for motivation. Studies on attendance rates and academic performance at South African Higher Education Institutions are few. While Van Walbeek (2004) found that lecture

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attendance was not significantly related to academic performance in a first-year economics course, others have found that there is a significant relationship between attendance and academic performance (Holtshousen, 1992) and have suggested a more student-centred approach to the lecture environment (Pickworth, Snyman, White, & Beukes, 2005). The South African studies all examined attendance at first-year level only and not at higher levels of study.

The primary mode of teaching and learning delivery at the University of the Witwatersrand is full-time, contact lectures, supported by contact tutorials. This mode of delivery implies that students regularly attend face-to-face activities such as lectures, tutorials, and seminars. Teaching in psychology is characterised by large class sizes (often in excess of 250 students). Apart from first-year tutorials and some second-year tutorials, attendance at all levels in psychology is not compulsory. Instead, students are expected to take responsibility for their learning and to make choices about attending (or not attending) the face-to-face lectures. Many of the teaching and learning interventions that have been implemented in psychology, however, have been based on the assumption that students attend lectures regularly. Anecdotal evidence from members of staff in psychology has suggested that, while course registrations in psychology are large, there are far fewer students present in lectures, who would therefore benefit from in-class teaching and learning initiatives.

METHOD AND RESULTS

Registers were distributed in a second-year cognitive psychology class of 289 students, asking students to write their name next to their student number (to control for signing the register for friends). The registers were administered at different times of day and days of the week. In total, nine registers were collected over a seven-week period when 21 lecture slots were used. Fourteen students (5%) did not sign the register at all and only 13 students (5%) signed all nine registers. The proportion of attendance varied between 40 per cent and 65 per cent. Attendance was generally lower towards the end of the course when assignments were due (for this course and other courses that students were undertaking). Almost half the students (48%) attended fewer than half the lectures (four lectures) where registers were taken. For the analysis, the data were recoded to form four attendance groups: ‘never’ (0 or 1 registers signed), ‘seldom’ (2 to 4 registers signed), ‘frequently’ (5 to 7 registers signed), and ‘always’ (8 or 9 registers signed). This recoding was performed due to the fact that there was some mistrust regarding the absolute accuracy of class registers (some students reported not receiving the register to sign in class, and other students reported signing for friends). Further, if 10 categories had been used, there would have been insufficient numbers of students per group. Statistically significant (but moderate) correlations were found between attendance and three academic assessments (a test, an essay, and the examination) and the total/final mark as shown in Table 1 (all correlations are significant at $p < 0.01$). Students who

failed to submit an assignment or attend a test/examination were not included in the analysis, accounting for the differences in student numbers per assessment.

Table 1. Correlations between academic performance and attendance levels

	Test	Essay	Exam	Total/Final mark
N	269	265	268	257
r	0.28*	0.18*	0.20*	0.26*

Note: * $p < 0$ .01

All one-way ANOVAs were also statistically significant (at $p < 0.01$, as shown in Table 2), but with slightly different patterns of significance. Post-hoc testing, using Bonferroni post-hoc tests, was used to reveal these different patterns. In the test, the group that 'always' attended performed significantly better than the two poorest attending groups ($t > 3.18$, $p < 0.01$, 'always' > 'never', 'always' > 'seldom'). The group that attended 'frequently' was also significantly higher than the group that 'never' attended. In the essay, the group that 'always' attended performed significantly better than the group that 'seldom' attended ($t > 3.18$, $p < 0.01$, 'always' > 'seldom'), but not better than the group that 'never' attended. In the exam, the group that 'always' attended performed significantly better than the group that 'never' attended ($t > 3.18$, $p < 0.01$, 'always' > 'never'). For the total/final mark (a weighted composite of the three assessments), the group that 'always' attended performed significantly better than the groups that 'never' or 'seldom' attended ($t > 3.18$, $p < 0.01$, 'always' > 'never', 'always' > 'seldom').

Table 2. ANOVAs and means for academic performance at different attendance levels

Academic Performance	F	*df*	Never	Seldom	Frequently	Always
Test	8.19*	3, 265	49.74	57.07	59.46	68.00
Essay	4.20*	3, 261	59.46	58.99	60.83	65.26
Exam	4.07*	3, 264	34.97	40.17	41.16	48.11
Total/Final mark	6.34*	3, 253	45.84	49.85	51.57	56.97

Note: * $p < 0.01$

DISCUSSION

The results clearly demonstrate that students who 'always' attend lectures show statistically significant academic performance advantages over students who 'seldom' or 'never' attend lectures. Durden and Ellis (1995) found a similar result after students had missed four or more lectures during a semester. However, these results do not tell

us why high attendance at lectures conveys academic performance benefits (or even the direction of the relationship). It could be that missing sufficient numbers of lectures could result in comprehension deficits (Van Walbeek, 2004), or it could be that students with high ability also have high attendance habits (Galichon & Friedman, 1985; Kember, Jamieson, Pomfret, & Wong, 1995). This is a certainly an issue for further investigation. Naturally, academic performance is not only a function of attendance levels. Individual factors such as ability (Park & Kerr, 1990), prior knowledge (Federici & Schuerger, 1976), and motivation (Durden & Ellis, 1995; St Clair, 1999) also play a significant role in predicting academic performance and in influencing attendance levels (Devadoss & Foltz, 1996). Additionally, the teaching style and levels of motivation engendered by the lecturer would also play an important role in determining student performance and attendance (Park & Kerr, 1990).

Relatively low attendance rates are reported in numerous other studies (Galichon & Friedman, 1985; Romer, 1993; Van Walbeek, 2004). There are a number of possible reasons why students would not attend lectures. These reasons include undertaking part-time (or even full-time) work, transport problems, financial problems, accommodation problems, illness, family commitments, boring lectures or lecturers, the time of day of the lecture, or preparation for assignments. Apart from Van Walbeek (2004), the reported attendance rates have all been for universities in relatively affluent societies (i.e., the United States, the United Kingdom, and Australia). The attendance factors for students from disadvantaged backgrounds in a relatively poorer society (e.g., financial constraints, travelling distance, part-time employment, etc.) have not been systematically investigated. Our future research will endeavour to uncover the reasons behind the poor attendance at face-to-face lectures within the South African context.

The important question that arises from these results is how to deal with low attendance rates. One solution would be to make lecture attendance mandatory (Romer, 1993). However, St Clair (1999) provides evidence that making lectures compulsory has no significant effect on improving academic performance and may, in fact, have a detrimental effect on student motivation. Another alternative would be to make the lecture notes available online. However, Wentzel and Jacobs (2004) suggest that lecture attendance is reduced significantly if course content is placed on the website (perhaps further exacerbating academic performance problems). It is our contention that any intervention strategy should be informed by the reasons for non-attendance.

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