

Full Length Research Paper

Grades and attendance: Is there a link between them with respect to first year undergraduate criminology students?

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This paper discusses the findings of research concerned with analysing the relationship between student attendance to core first year undergraduate criminology and criminal justice modules and the grades they receive in their first summative assessed coursework task for these modules. The research took place against the background of a concern with improving student retention and minimising academic failure. The research found evidence of an association between student attendance and grade outcomes. But it also notes that this association was not as strong as perhaps would have been expected. The paper concludes that its findings reinforce the need to further consider other factors (such as entry qualifications, age, gender and personal circumstance) which may well influence the grades students achieve. However, most importantly, it is argued that the findings presented reinforce the need for teaching departments to proactively support first year criminology students as they make the transition into higher education, particularly given the current economic climate surrounding higher education funding in the United Kingdom.

Key words: Assessment, attendance, student retention.

INTRODUCTION

This paper reports the results of research concerned with examining the relationship between first year criminology student attendance and their assessment outcomes for core programme modules. It does this against the background of a concern with addressing academic failure and promoting student retention. In the face of the current economic climate - which sees higher education institutions worldwide vying for a piece of the competitive fee-paying educational marketplace while operating within the context of a global recession - it is arguably more important than ever before that criminology programmes focus upon the issue of student retention (Gosling et al., 2009).

Student retention: A multi-dimensional issue

The research reported in this paper was conducted as part of broader concern with improving undergraduate

criminology student retention. This aspect of the paper will outline relevant academic literature to highlight the importance of analysing student attendance and grade outcomes in relation to the issue of student retention. Over the last three decades research studies have highlighted a number of commonly occurring personal and academic factors surrounding why students leave a degree programme (Tinto, 1975, 1987; Rickinson and Rutherford, 1995; Yorke, 1997; Johnson, 2002; Wilcox et al., 2005; Zepke et al., 2006). Davies and Elias (2003) found the main reasons for student withdrawal were a mistaken choice of course', 'financial problems' and 'personal problems'. Unpacking 'personal problems', Rickinson and Rutherford (1995), Gann (2003) and Collins and Lin (2003) found financial and job worries, poor accommodation, as well as feelings of homesickness, loneliness and isolation, were commonly self-reported by students withdrawing from their studies or transferring to another university (often so they could

be nearer to the parental home). Poor study skills, a lack of self-confidence, and a general sense of dissatisfaction with their higher education experience, all also play a role in student withdrawal (Assiter and Gibbs, 2007). Finally it has also been noted that socio-economic background and race and ethnicity can play a role in influencing the decision to withdraw (Parry, 2002).

Clearly there are a number of factors which can to some extent influence student's decision to withdraw from studies. Student withdrawal is a multi-dimensional issue, not easily solvable by a single 'one-sized fits all' intervention (Zepke et al., 2006). Furthermore it is arguable that 'in house' transfers between academic programmes, or academic transfers between universities, are a consequence of the contemporary emphasis placed upon promoting opportunity and student choice within a consumer led higher education marketplace (Johnson, 2002). Similarly, it can be said that students postponing or withdrawing from their studies for health, financial or family reasons, will to some extent always be a reoccurring feature of the higher education system (Johnes and McNabb, 2004). However it is equally arguable that a concern with equity and widening participation means universities need to do all they can to help students with the complex interplay of academic and personal issues which can cause them to withdraw from their studies (Cavico and Mujtaba, 2010). Most importantly, particularly in today's competitive global educational marketplace (Yorke and Longdon, 2004).

Richardson and Skinner (1991) suggest academic and other university departments (that is, student welfare and study skill support services) can address the issue of student retention through working in tandem with students and associated student-led organizations, as well as local and national voluntary and statutory agencies, in relation to the following three key areas: 1) student recruitment, financial aid and admissions, 2) outreach work, peer mentoring, accommodation and the student experience of university life outside of the educational process, 3) the learning environment, teaching and assessment strategies, as well as learning and study skill support. Critically reflecting upon the third key area highlighted by Richardson and Skinner (1991), and in particular looking at learning and study skill support for students, Syndow and Sandel (1996) argue that individual academic teaching departments within universities should develop 'a process for monitoring student behaviours associated with failure (for example, excessive absenteeism, failing grades, failure to turn in assignments etc)...and intervention strategies should be employed to help these at-risk students succeed'.

It is important that teaching staff identify, follow up and meet with students who fail an assessment, provide what support they can to help each student, as well as where necessary refer them to specialist services for further guidance and support. The assumption that all students who fail an assessment are under-prepared or

intellectually deficient must be challenged (Tinto, 1975). Students are not solely responsible for academic failure and therefore should not be solely responsible for seeking support to address it (Yorke, 1999). Indeed academics concerned with student retention (Johnson, 2002; Yorke and Longdon, 2004; Wilcox et al., 2005; Zepke et al., 2006) argue that it is important - particularly during a student's first year of university - to focus upon course design and teaching and assessment methods, in addition to providing targeted learning support, to address study skill issues as well as learners' self-awareness of how they approach educational tasks. Research shows that integrating study skills sessions within interactive and collaborative teaching and learning methods on discipline-specific topics for first year students, seems to be to be beneficial in fostering peer-group and staff-student relationships, which in turn can help student retention and address academic failure (Lowe and Cook, 2003; Yorke and Thomas, 2003; Wilcox et al., 2005).

Focusing on student attendance

One possible way of addressing student retention and is to assign a core first-year teaching module as an 'induction module' which contains within it a targeted referral process as part of a broader focus upon helping students manage the transition into the higher educational system (Lowe and Cook, 2003; Wilcox et al., 2005). Integrating a referral process within a subject-specific module, which utilises an interactive as opposed to didactic teaching approach during targeted sessions through the use of small-group work and formative assessment, could arguably support students develop their understanding of the approaches to learning and study skills necessary to succeed in higher education, while also developing discipline-specific content knowledge (Ward et al., 2000).

Any referral process designed to address the issue of student retention in general, and the risk of academic failure in particular, must first identify those students who need further targeted pastoral and academic support. Syndow and Sandel (1996) and Gibbs (2003) note that poor attendance can be a useful indicator when seeking to first identify students at risk of academic failure as well as those who are struggling more generally to adjust to the requirements of the higher education system. It is certainly a commonly held belief amongst academic teaching staff that student attendance and grade outcomes are linked (Yorke, 2000; Taylor and Bedford, 2004). Furthermore, there is supportive published research evidence for the viewpoint that student attendance can be a useful indicator of assessment outcome, although other factors such as student age and degree entry qualifications have been show to also play a role (Woodfield et al., 2006). This said analysing student

attendance in relation to the outcomes of an assessment task could arguably be a useful starting point for developing a protocol for identifying and supporting students at risk of academic failure, particularly in their first semester at university (Syndow and Sandel, 1996; Gibbs, 2003; Halpenn, 2007). It was therefore decided to test the assumption that student attendance and assessment outcomes are linked to provide an evidential basis for the implementation of a referral process identifying undergraduate criminology students at risk of academic failure as part of a broader departmental and university wide concern with addressing student retention.

RESEARCH METHODS

Given the research aim it was necessary to, first, obtain a record of student attendance, and second, statistically compare this record of attendance with the grade obtained by a student on an assessed learning task. As of September 2009, one hundred and twenty three students were registered on the first year of the undergraduate degree criminology programme. Ten students withdrew from their studies between September and December 2009. Three of these students withdrew in the first three weeks of the academic year; seven had withdrawn by December 2009. The reasons for withdrawal included homesickness, transfer to another programme within the university and transfer to a programme at another university. These students were excluded from the data analysis process on the grounds of incomplete data due to them not submitting coursework for assessment. This left a research sample of one hundred and thirteen undergraduate criminology students.

Research data was obtained from the university record system which all academic teaching staff have access to. All first year students must complete two core criminology programme modules, respectively, entitled 'introduction to criminology' and 'introduction to criminal justice'. Departmental policy requires student attendance to lectures and seminars be formally recorded each week, with the resulting data being forwarded to the departmental office. The attendance records for the introduction to criminology and introduction to criminal justice modules were obtained for the September 2009 to December 2009 teaching period and entered into a research database alongside student's marks for their first assessments for these two modules. Both these assessments were written academic essays due at the end of the first semester. The final student grade results were available by mid-February 2010 after their work had been marked and moderated. Student assessment outcomes and their attendance data was pre-coded as ordinal levels of measurement. Attendance to lectures was banded in four categories – 1) attended none, 2) attended between 1 and 3 sessions, 3) attended between 4 and 6 sessions, and 4) attended 7 or more sessions. Grade was banded into the five categories associated with final degree result grading – 1) first class degree (70% plus mark), 2) Second Class First Division (60 to 69% mark), 3) Second Class Lower Division (50 to 59%), 4) Third Class (40 to 49%), and 5) Fail (0 to 39%).

The null hypothesis for the research was that there is no relationship between student attendance and assessment grade, while working hypothesis was that there is a relationship between student attendance and assessment grade. Causation, in basic terms, is the process that makes an outcome happen (Bryman and Cramer, 2008). With regard to the variables used in this research, if student attendance is the independent variable and assessment grade the dependent variable, then attendance will influence the assessment grade achieved by a student. However it is important

Table 1. Spearman's Rank result for attendance by grade result.

Session	Spearman rank
Criminal justice lecture and grade	-0.189 Sig 0.045
Criminology lecture and grade	-0.423 Sig 0.000

to note that outcomes are rarely influenced by a single cause. Causation is too complex to reach outcomes with total certainty; therefore it can be misleading (Bryman and Cramer, 2008). There are sufficient conditions of causation. This means that it is not true to say the all assessment grades achieved by a student will be influenced by their level of attendance, as there may well be other factors which influence the grade achieved. For example a student may have attended all their lectures but experienced a severe personal issue prior to assignment submission which led them to submit work that does not necessarily reflect their academic ability or subject topic knowledge. Correlation, on the other hand, is the pattern associated between two variables or the statistical measure used to find such patterns (Treiman, 2009). This is relevant for the variables examined here as it cannot be absolutely true that assessment grades will be influenced by attendance, as this is a causal explanation. However it can be stated that there will be a correlation, but the strength of the relationship needs further research.

The type of statistical test which can be applied to the data to test for a correlation is predicated by their level of measurement (Treiman, 2009). Both attendance and grade awarded are classified as ordinal level data because they can be categorised and put into a rank order, but no mathematical calculation or specific measure of relative scale can be absolutely made in relation to the distances between each category, as they could in the case of height or age for example. Given the level of measurement of each variable, the strength of association between the variables can be measured using the Spearman's Rank statistical test (Bryman and Cramer, 2008).

FINDINGS AND DISCUSSION

Table 1 shows the results for the Spearman's Rank test. The results show a negative association between student attendance and grade outcomes for both modules; although this is perhaps not as strong as one would have expected, and furthermore, it appears the association is stronger for the introduction to criminology module than introduction to criminal justice. This may be explained by the more theoretical nature of this module compared to the policy orientation of the introduction to criminal justice module. Consequently the research project's null hypothesis must be tentatively rejected as it appears attendance and assessment outcomes do share an association. But it nevertheless should be added that the strength of the result reinforces the need for further research to be conducted into the topic.

The research found tentative evidence of a negative correlation between student attendance and assessment outcome, however although significant the strength of the association is relatively low, and consequently, it arguably reinforces that other factors also play a role in determining student assessment outcomes. Before this is discussed further the limitations of the research need to be acknowledged. This was a relatively small scale research

project concerned with the outcomes of first year criminology student's first submission as they enter the higher education system. By and large students have not studied criminological theory before entering higher education and this may go some way to explaining why there is a stronger relationship between student attendance and grade outcomes in relation to this module than the more policy focused introduction to criminal justice module. Furthermore, how students approach assessment tasks may well change as their studies progress and their learning styles develop and possibly even change to suit particular contexts (Biggs, 2003). It therefore would be useful to undertake longitudinal research with a larger research sample to find out more about how criminology student's approaches to learning tasks change as they progress through their undergraduate degree and they become more familiar with the criminological corpus.

Although the study's limitations are readily acknowledged, the findings presented in this paper are nevertheless supported by the published research literature. This by and large finds a stronger association between student attendance and assessment outcomes than the one found by the research reported here, but most importantly, it equally shows that entry qualifications, age, gender and personal issues (that is, part-time employment, health problems, or family situation) all play vitally important roles in influencing the grades students obtain (Martins and Walker, 2006; Halpern, 2007). This lends further weight to the argument that further research is needed to expand upon the findings presented here. Such research could collect qualitative data from students alongside relevant statistical data, to more fully explore the intervening variables which seem to mediate the relationship between student attendance and assessment outcomes, such as entry qualifications, age, gender and part-time employment and so on.

It should also be noted that it is arguable that evidence of a weaker correlation between student attendance and assessment outcome than commonly found in the published literature fits with a constructivist view of learning and teaching (Gibbs, 2003). This is the view that knowledge cannot exist outside of the mind, nor can it be transferred from one mind to another, rather new knowledge is personally constructed by an individual in and through direct personal experience (Hendry et al., 1999). If one accepts this position then what matters is not student's attendance to lectures *par se*, but rather the nature of their total engagement with their disciplinary subject as well as the general higher education environment they find themselves in (Gibbs, 2003). Consequently the research discussed in this paper can be said to arguably reinforce the view that it is vital academic departments and teaching staff focus upon study skill support and developing student's self-awareness of how they learn, instead of focusing upon transferring core disciplinary subject knowledge; particularly in the first

year of a student's degree programme (Duffy and Cunningham, 1996; Gibbs, 2003). In relation to the development of support for students to tackle academic failure and help them manage the transition into higher education, this means teachers must play close attention to how they structure teaching episodes and provide students with learning resources so they can take more personal responsibility for their learning outcomes (Johnson, 2002). For example, tutors may wish to make greater use of online resources and module discussion boards to stimulate student-led engagement with course materials outside of designated teaching sessions, as well as to facilitate informal student-led group discussion and self-appraisal of progress with module learning and assessment tasks (Cavico and Mujtaba, 2010).

Conclusion

In conclusion, the research presented in this paper was undertaken to aid the development of a referral process to help identify first year criminology students in need of further study skill and pastoral support as they make the transition into the higher education system against the background of a concern with promoting student retention. The research findings presented reinforce the validity of the viewpoint that it is important to focus holistically upon the multi-dimensional factors at play in generating student assessment outcomes when seeking to address instances of academic failure. Not least of all because if these are not identified early enough and indeed are left unchecked, then they may well lead to a student withdrawing from their studies. After all, although it is undoubtedly the case that for various academic or personal reasons not all students who enter university will be able to successfully complete their programme of study, the fact nevertheless remains that in today's increasingly competitive economic marketplace it is vitally important individual teachers and their academic departments do all they can to help both themselves and their students succeed.

REFERENCES

- Assiter A, Gibbs GR (2007). Student retention and motivation *Euro. Pol. Sci.*, 6: 79 – 93.
- Bryman C (2008). *Quantitative Data Analysis with SPSS 14, 15 and 16: A Guide for Social Scientists* London: Routledge.
- Cavico FJ, Mujtaba BG (2010). An assessment of business schools' student retention, accreditation and faculty scholarship challenges. *Contemporary Issues Educ. Res.*, 3(1): 107 – 118.
- Collins R, Lin H (2003). *The challenge of transition* York: Higher Education Academy.
- Davies P, Elias P (2003). Dropping out: A problem of quality or student finance? Paper presented to the British Educational Research Association Annual Conference, University of Sussex, 2 – 5 September 2003.
- Department for Education and Skills (2003). *The future of higher education* London: Department for Education and Skills.
- Duffy TM, Cunningham DJ (1996). *Constructivism: Implications for the design and delivery of instruction*, in Jonassen D.H (1996 Editor)

- Handbook of Research for Educational Communications and Technology New York: Macmillan.
- Gann R (2003). An investigation into recruitment, retention and programme preferences of first year social science students at UCLAN: report of findings C-SAP Project 10/SP/02. Available online at: www.c-sap.bham.ac.uk.
- Gibbs G (2003). *Implementing learning and teaching strategies* London: Open University Press.
- Gosling G, Heagney M, Thomas L (2009). Improving student retention in higher education *Australian Universities Review*, 51(2): 9- 18.
- Halpenn N (2007). The impact of attendance and student characteristics on academic achievement: findings from an undergraduate business management. *J. Further Higher Educ.*, 30(4): 335 – 349.
- Johnes G, McNabb R (2004). Never give up on the good times: Student attrition in the UK *Oxford Bulletin of Economic Statistics*, 66(1): 23 – 47.
- Johnson V (2002). Improving student retention – by accident or by design *Exchange*, 1: 9 – 11.
- Lowe H, Cook A (2003). Mind the gap: are students prepared for higher education? *J. Further and Higher Educ.*, 27(1): 53 – 76.
- Martins P, Walker I (2006). Student achievement and university classes: Effects of attendance, size, peers and teachers IZA Discussion Paper December 2006.
- Parry G (2002). A short history of failure, in Peelo, M and Wareham, T (editors) *Failing students in higher education* London: Open University Press Public Accounts Committee: Tenth Report (2008) *Improving Student Retention* London: House of Commons.
- Richardson RC, Skinner EF (1991). *Achieving quality and diversity: Universities in a multicultural society* New York: Macmillan.
- Rickinson B, Rutherford D (1995). Increasing undergraduate retention rates. *British J. Guidance Counselling*, 23(2): 161 – 172.
- Syndow DL, Sandel RH (1996). Making student retention an institutional priority. Paper presented at the National Institute for Staff and Organizational Development Conference on Teaching and Leadership Excellence, (May 26-29, 1996).
- Taylor JA, Bedford T (2004). Staff perceptions of factors related to non-completion in higher education *Studies in Higher Education*, 29(3): 375 – 394.
- Tinto V (1975). Dropout from higher education: A theoretical synthesis of recent research. *Rev. Educ. Res.*, 45(1): 89 – 125.
- Tinto V (1987). *Leaving college: Rethinking the causes and cures of student attrition* Chicago: University of Chicago Press.
- Treiman (2009). *Quantitative Data Analysis: Doing Social Research to Test Ideas (Research Methods for the Social Sciences)* New York: Jossey Bass.
- Yorke M (1997). How significant is the problem? Select Committee on Education and Employment Sixth Report DFEE.
- Yorke M (1999). *Leaving early: Undergraduate non-completion in higher education*. London: Fulmer Press.
- Yorke M (2000). The quality of the student experience: What can institutions learn from data relating to non-completion. *Quality in Higher Educ.*, 6(1): 61 – 75.
- Yorke M, Thomas L (2003). Improving the retention of students from lower socio-economic groups. *J. Higher Educ. Pol. Mangt.*, 25(1): 63 – 74.
- Yorke M, Longdon B (2004). *Retention and student success in higher education* London: Open University Press.
- Ward I, Crosling G, Marangos J (2000). Encouraging positive perceptions of economics: The effectiveness of the orientation tutorial. *Econ. Papers* 18(3): 273 – 282.
- Wilcox P, Winn S, Fyvie-Gauld M (2005). It was nothing to do with the university, it was just the people: The role of social support in the first-year experience of higher education. *Stud. Higher Educ.*, 30(6): 707 – 722.
- Woodfield R, Jessop D, McMillan L (2006). Gender differences in undergraduate attendance rates. *Stud. Higher Educ.*, 31(1): 1 – 22.
- Zepke N, Leach L, Prebble T (2006). Being learner centred: One way to improve student retention? *Stud. Higher Educ.*, 31(5): 587 – 600.