

Lessons from a student engagement pilot study

Benefits for students and academics

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Better learning outcomes flow from higher levels of student engagement. When the perception is that student engagement is in decline, there is genuine concern amongst committed academic teaching staff. This paper reports on a pilot study designed to foster an understanding of the factors that influence engagement in undergraduate students in the business school at a regional Australian university. Two focus groups were conducted with the assistance of 22 students enrolled in the major study areas of the school, and the information obtained informed the development of an on-line questionnaire aimed at exploring the drivers of engagement and disengagement. Eighty-five students completed the questionnaire, and 67 usable responses were available for analysis—a response rate of 17 per cent, which could be seen as illustrative of student disengagement. However, the findings of the pilot study suggest that the majority of students believed themselves to be engaged with their studies. Students reported that the instructors' approach, class and assignment structure, learning support and other personal factors affected their level of engagement. A *preliminary model of student engagement* was developed from the findings. Key factors have been drawn from this to inform learning and teaching policy and practices within the School.

Prologue: scene from a business school lecture

During the lecture, the academic turns and faces the assembled students—makes a mental note that approximately 25 per cent of the students are missing, some are fidgeting with lecture notes, others are sneaking a look at their mobile phones, a few are conducting private conversations with their neighbours and some just look 'bored out of their brains'—not the elements that portray an engaged student cohort.

Why is it so? The majority of students claim to be in full-time employment (84 per cent, in fact), but nonetheless they are also enrolled in what amounts to a full-time study load. Could this situation lead to anything other than a disengaged, pass-seeking student body? Perhaps one solution could be for business schools

to develop and deliver programmes and courses in a manner that accepts that today's student cohorts appear to be balancing learning commitments with other more demanding responsibilities such as earning enough money to survive and meeting family/social commitments. In addition, there are practical steps that can be taken to improve student engagement in the classroom.

Introduction: student engagement

This paper reports on a pilot project that looked into student engagement within a school of business in a regional university. The principal purposes of the project were to identify the drivers of student engagement and to develop a preliminary model of student engagement, and in addition to identify any improvements in

research design and administration processes when subsequent, more thorough studies are undertaken in the near future.

Higher levels of student engagement have been linked with better student learning outcomes, such as the quality of their output. Given the general perception that there has been a decline in students' engagement, it is important to identify the factors that influence their disengagement.

According to the National Survey of Student Engagement (NSSE) findings, two factors appear highly salient to teaching today (Kuh, 2001). These are first, active and collaborative learning, and second, enriching educational experiences. Businesses want to employ people who have the ability to manage rather than merely having knowledge about management concepts (Cunningham, 1995). Consequently, business schools should 'design a curriculum to assist students' to achieve identifiable outcomes (Wee, Kek & Kelley, 2003, p. 150). Wee *et al.* believe that problem-based learning (PBL) goes some of the way to achieving the outcomes. They also acknowledge that 'The PBL approach is only one way to transform the curriculum ... To produce graduates with the skills required by the business world, marketing educators must first be able to produce self-directed learners' (Wee *et al.*, 2003, p. 160).

In their study of what constitutes a master teacher, Smart, Kelley and Conant (2003, p. 77) concurred with earlier studies that teaching success requires, 'strong communication skills, a real-world perspective, caring / empathy, an involvement orientation, and organisation / preparation'. Further, participants in the study indicated a number of other attributes they believed were crucial to effective teaching and student learning, e.g. interactive lecturing, considerable questioning to lift student involvement, and assessment pieces 'that require critical, integrative thinking' (Smart *et al.*, 2003, p. 77).

Interestingly, class participation may not be the central issue. Peterson believes that *course participation*, i.e. 'readily speaking, thinking, reading, role taking, risk taking, and engaging oneself and others, and it may occur inside or outside the classroom confines' (2001, p. 187) is more pertinent. These elements are indicative of *active learning*. Active Learning has the capacity to make students 'the centre of their learning' (Warren 1997, as cited in Peterson, 2001, p.188); the skills gained in this type of learning are those sought by employers. Active learning should involve open-ended questions rather than just seeking the 'right answer'. That is, questions such as 'was there anything

in the readings that surprised you?' and 'was there anything with which you disagreed?' are appropriate.

In addition to fostering active learning, providing students with more enriching experiences is another route for business educators. Students obtain a deeper understanding when an active learning route is adopted, where they apply concepts in 'real-world' tasks (Hamer, 2002). Hamer suggests 'that experiential learning techniques can be used to increase the definitional knowledge acquired by students of low and moderate overall performances' (2002, p. 32). This student profile may be a fair description of the cohort that is the research subject of this paper. Such students 'need to be encouraged to elaborate on course materials outside of the class' (Hamer 2002, p. 33). These are the essential elements of learning and teaching necessary to foster student engagement according to the literature.

This research took the form of a pilot study designed to tap the students' perspective of the factors that influence engagement amongst undergraduate students in a business school. The aim of the research was to consider these factors and through an enhanced understanding of student engagement, inform the School's learning and teaching policies and practices.

Research design

The project was built around focus groups conducted at the start of the research, followed by an on-line survey. Two focus groups were held to garner students' views on their perspective on how engaged they believed they were; the factors that drove students' engagement levels; and what they believed the business school could do to improve their engagement. The 22 participating students were randomly selected from the School's database and the groups were generally representative of the major study areas and other categorical factors such as gender, stage in the degree, and part-time/full-time enrolment. In line with the ethical requirements for university research, all students were asked to sign an *Informed Consent Form* and were given a *Plain Language Information Statement* to advise them of the key aims and objectives of the research. These were to:

1. Explore and understand if and why the engagement levels vary across the school's three discipline areas (marketing, tourism and e-business; management, and commerce).
2. Explore any issues relating to gender.

3. Develop a set of recommendations to address learning and teaching concerns.

The findings from the focus groups were used as the basis for designing the on-line survey, along with information gleaned from the literature review. The research design aimed to explore the level of student engagement and to identify its drivers. Students from all disciplines represented in the business school, that is accounting, applied economics and finance, entrepreneurship, human resource management, marketing and tourism were invited to participate in the research project by completing the on-line questionnaire.

In the focus groups, students stated that they wanted to be engaged. In fact, in general, students felt that they *were* engaged and they identified the factors that engendered an environment that improved engagement

in the classroom setting. Interestingly, students did not believe that they were responsible for driving their own level of engagement—they considered that this was the academic's responsibility.

Where the responsibility demarcation sits was raised by Bryson and Hand (2007, cited in Crosling, Heagney and Thomas, 2009). They believe that engagement is also the responsibility of teachers who should create a participative environment. Students preferred smaller teaching groups (fewer than 100 students in lectures and fewer than 15 students in tutorials), believing that lower student numbers would result in the lecturer (and tutors) making the effort to learn their names, which would in turn aid interaction. Students valued an informal lecture environment (i.e., the lecturer's approach should be relaxed) that was non-judgmental (i.e. students should not be made to feel embarrassed if they provided a wrong answer).

This would also provide students with the opportunity and confidence to ask questions or respond to the lecturer's requests. They wanted lecturers to *add value* to the lecture notes distributed by the School, rather than merely reading from those notes. Added value could be demonstrated by the lecturer relating the theory from the text to a current event reported in the media. Finally, students wanted time to be allocated during lectures for undertaking case studies or other exercises that would then be discussed by the entire class.

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Students also listed a number of factors outside their control that impinged upon their level of engagement. Many students believed inappropriate timetabling hampered their motivation. For example, if lectures and tutorials in a given subject were scheduled on the same day, students would be more likely to attend both, whereas if they were scheduled on different days they may opt to stay home, go to their paid employment or work on any assignments that were due. This balancing of priorities, in particular, the decision to go to their paid employment rather than attend classes was also identified by Devlin, James and Grigg who stated 'One quarter of the undergraduates who were working reported regularly missing classes or equivalent activities because of employment activities' (p. 5, 2007). Disturbingly, they identified that the proportion

doing so was increasing. Further, Devlin *et al.* state 'Student involvement in paid work affects the quality of their study: 43 per cent of employed undergraduates ... reported that their work adversely affected their study' (p. 6, 2007).

A further factor mentioned by students was that their engagement levels could be shaped by the nature of assignments and the nature of the feedback on assignment performance. For example, final year students expected assignments to be more practical than theoretical, thereby providing an opportunity to apply their knowledge and to develop the skills required in the workforce. They noted the varying practices of different lecturers with respect to assignment feedback. Students' preference was also for specific feedback on the aspects that earn or cost them marks. However, this 'outcomes' orientation is contrary to Cunningham's proposition (1995) about the qualities businesses require in staff. That is, businesses require staff with an understanding of processes such as research and analysis.

Finally, students felt that group work had a bearing on engagement levels. A well-managed group generally attains higher grades and therefore, students seek to form groups with students they trust to contribute in terms of both quantity and quality. Groups that suffer from negative aspects such as poor meeting attendance and language barriers result in one or two members feeling aggrieved at 'carrying' the group. Consequently, those students that felt they contributed more than their fair share for an assignment appeared to carry

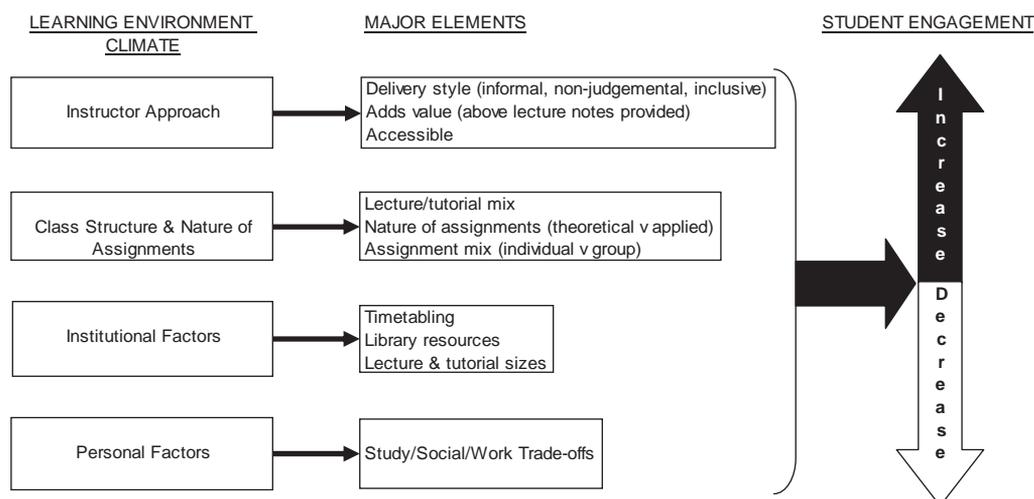


Figure 1: Preliminary Model of Student Engagement

some resentment towards future group assignments. Not surprisingly, their level of engagement appeared to be lower in units that have group work as a major part of the overall grading.

A student engagement model

Findings from the literature review and the focus group output were combined to develop a list of issues that were then sorted into the major *Learning Environment* categories that formed the basis of the *preliminary model of student engagement* shown in Figure 1. With minor wording changes, they evolved into the major sections in the questionnaire used in the pilot on-line survey. The aim of the survey was to investigate the suggested relationships indicated in the *preliminary model of student engagement*.

The questionnaire (see Appendix 1) was distributed as an online survey. This was chosen as the best means of encouraging student participation. In addition to the learning environment categories shown in Figure 1, the questionnaire also sought background information on students, as well as asking students to rate their level of engagement during the current teaching period. In addition, at the end of each section students had the opportunity to make further comments. Figure 2 shows the major sections in the questionnaire, and the rating scales used.

Students were contacted via the University-provided email address, requesting that they visit a designated website to complete the survey. Colleagues were asked to promote the survey during classes and posters were attached to internal and external walls. Incentives were offered for students' participation, i.e., they

Survey Sections	Rating Scales
1. Engagement (1 item)	Not engaged (1) to Totally engaged (5)
2. Lecturer's Approach (9 items)	Not at all important (1), Only slightly important (2), Generally important (3), Definitely important (4) and Extremely important (5)
3. Class Structure & Assignments (18 items)	Strongly agree (1), Moderately agree (2), Neither agree nor disagree (3) Moderately disagree (4) and Strongly disagree (5)
4. Learning Support (12 items)	Strongly agree (1), Moderately agree (2), Neither agree nor disagree (3) Moderately disagree (4) and Strongly disagree (5)
5. Personal Application (2 items)	Very poor (1), Poor (2), Average (3), Good (4) and Very good (5)
6. Personal feelings (7 items)	Very poor (1), Poor (2), Average (3), Good (4) and Very good (5)
7. Background Information (14 items)	Coded responses

Figure 2: Item Rating Scales

were entered into a number of prize draws depending upon how rapidly they responded. The survey was available for six weeks.

Survey results: a summary of questionnaire responses

Eight-five students responded to the survey – a response rate of about 21 per cent of the approximately 400 students recorded in the school database. However, 18 survey responses had to be discarded due to the extent of missing responses, reducing the response rate of usable questionnaires to 17 per cent. Whilst this response rate is low, it is not unusual. Devlin et al (2007, p.3) reported that ‘response rates by institutions were mostly between 17 and 23 per cent’ from their study on student finances and student engagement. A higher response rate would have been preferred, and the authors spoke to students from their classes to assist with understanding better the reasons for the low response rate. It transpired that many students have personal email addresses with external Internet providers and therefore they do not bother to access the official university email system. In addition, end-of-term assignments and examination preparation resulted in students foregoing what they considered ‘non-essential’ activities. Of course, it is possible that the response rate was simply a reflection of the engagement levels of many students in university activities.

As with all quantitative research, a critical question is whether the respondents are representative of the total population. In this instance, the only statistic that appeared to be askew from what the researchers would consider to be ‘as expected’ was the gender distribution of respondents. Whereas questionnaire respondents suggested a preponderance of female students (about 70 per cent), the overall female undergraduate population in business programmes is approximately 47 per cent (DEEWR 2007). Despite the skew with gender, the researchers believe the participants were reasonably representative of the total student body and that the resultant statistical analysis could be taken as ‘indicative’ (with some confidence).

The ‘average respondent’ can be described based on the response frequencies from the ‘background information’ section of the questionnaire (as shown in Table 1). The ‘average’ respondent can therefore be defined as: younger than 22 years of age and more likely to be female, in the early stages of their study programme, undertaking a full-time or near full-time study load in

the business or management programmes and specialising in human resources management or marketing, in addition to working full-time. This student is also likely to have been born in Australia, and to be living with their parents or renting with friends.

Two interesting but conflicting statistics from a student engagement viewpoint, i.e. 84 per cent claim to be employed full-time but at the same time 57 per cent stated that they were enrolled in 3 or 4 units, indicating that they were also enrolled as full-time students (see Table 2). This may be an important indicator to understand student engagement better. On the point of extra-curricular activities, a study of economics students at a university in Hong Kong indicated that students heavily involved in such activities produced lower rates of absenteeism than other students (Chong, Cheung & Hui, 2009). However, it is not clear from that study whether paid outside work was included as an ‘extra-curricular activity’.

Table 2 provides a summary of the major results of the survey (see Appendix 1). The authors reviewed the

Item	Variable	No.	%
Total valid responses		67	100
Age	<= 22 years	37	64
Gender	Female	47	70
	Male	20	30
Number of units completed so far (<i>Undergraduate programmes comprise 24 units</i>)	<= 4	26	39
	5<=12	12	18
	13<=20	16	24
	21+	13	19
Current enrolment	3 or 4 units	45	57
Birthplace	Australia	55	82
	Asia	8	12
	Europe	4	6
Programme	B.Business	20	30
	B.Commerce	16	24
	B.Management	22	33
	Other programmes	7	13
Specialisation	Accounting	12	18
	Human resources mgt.	14	21
	Marketing	19	28
	Other	22	33
Employment	Full-time	56	84
	Part-time	11	16
Living arrangements	Parents/guardian	23	34
	Renting	20	30
	Own accommodation	13	19
	Other	11	17

Table 1: Student Background

Major Survey Sections	Individual Items (abbreviated descriptions)	Mean	SD	t	Sig. (at .05)
Engagement	Rate your engagement	3.37	.935	-1.111	Yes
Lecturer's Approach	Delivers lectures without just reading the slides	4.60	.629	14.274	Yes
	Adds value with practical applications	4.33	.683	9.929	Yes
	Creates a non-judgmental environment	4.31	.656	10.147	Yes
Class Structure & Assignments	Advantage when lecture & tutor are the same person	1.60	.986	-7.499	Yes
	Group assignments no more than 40% of the unit's total marks	1.76	1.088	-5.556	Yes
	Tutorials limited to maximum of 15 students	1.90	.890	-5.560	Yes
	Group assignments not necessary for all units	2.01	1.273	-3.119	Yes
Learning Support	More copies of required texts in library	1.45	.784	-10.986	Yes
	Library should have latest texts	1.49	.766	-10.763	Yes
	School needs dedicated person for course advice	1.58	.907	-8.284	Yes

Table 2: Major Statistical Findings

focus group findings to establish the expected mean of student responses to questions on *engagement*, the *lecturer's approach* and *class structure and assignments*, which had a scale of 1 to 5—this mean was then used in univariate t-tests. The responses provide useful information about possible drivers of student engagement, and will assist in subsequent research in the area.

Engagement

In this study, engagement was defined for the students at the commencement of the Student Engagement Survey as follows:

For our purposes in this research, 'Student Engagement' is considered to be revealed in the attitudes students bring to their study, the work students produce during their lectures and tutorials, and the extension of that learning beyond the formal lecture/tutorial times.

This definition encompasses aspects put forward by previous researchers but is perhaps not as broad as others: for example, 'student engagement is the extent to which students are actively engaged in—actively committed to and actively involved in—their own learning' (Markwell, 2007, p. 2) or it is 'a broad phenomenon which encompasses academic as well as certain non-academic and social aspects of the student experience' (Coates, 2006, p. 4).

Students rated their level of engagement on a scale from (1) *not engaged* to (5) *totally engaged*. As far as the overall level of engagement was concerned, the mean rating was 3.37 with a standard deviation (SD) of

0.935. The mean score was not statistically significant (at the 05 level) Only 8 students indicated that they were not engaged.

Lecturer's approach

The rating scale for this question went from (1) *not at all important* to (5) *extremely important*. In analysing the important elements relating to students' perception of the Lecturer's Approach, the lecturer's ability to deliver the material 'without just reading from the slides' (mean = 4.60) was considered important, as was the lecturer's capacity for 'adding value' with practical applications (4.33). Students also valued the creation of a non-judgmental environment (4.31), and wanted lecturers that cared about student progress (4.22). T-tests revealed these results to be statistically significant (at the 05 level). The second and third aspects had been specifically mentioned in the focus groups. The item 'Tries to include as many students as possible in class discussion' generated the lowest mean (3.64). Whilst on face value this may be seen to be at odds with their stated level of engagement, perhaps it reinforces that 'engagement' is multi-dimensional, i.e. there is more to engagement than contributing in class.

Class structure and assignments

The rating scale for this question went from (1) *strongly agree* to (5) *strongly disagree*. Students agreed that there is an advantage when the lecturer is also the tutor (1.60) and that tutorials should be limited to a maximum of 15 students (1.90). There were also some strong views on group assignments, with students believing that they should be a maximum of

40 per cent of a subject's total marks (1.76) and that group assignments were not necessary in every unit (2.01). T-tests revealed these to be statistically significant (at the 05 level). Again, the benefits of small tutorial classes and the angst caused by group assignments had both been raised in the focus groups.

Learning support

The rating scale for this question went from (1) *strongly agree* to (5) *strongly disagree*. Students agreed that the library should carry more copies of the required texts (1.45) and that the library should have the latest texts (1.49). Students also believed that the School needed to have a person specifically responsible for providing advice about programmes and units (1.58). T-tests revealed these to be statistically significant (at

the 05 level). Many focus group participants raised the issue of their frustration with obtaining conflicting and/or wrong advice about their courses from administrators within the School and also academics. This was highlighted by Light (2001, p. 81, cited by Markwell, 2007, p. 8) who states 'Good advising may be the single most underestimated characteristic of a successful college experience'. Twenty students (30 per cent) indicated that they believed that 'timetable clashes have adversely affected my choice of subjects' whilst 19 (28 per cent) stated that the Internet allocation was inadequate for their study needs.

Personal application and feelings

The rating scale for this section went from (1) *not at all important* to (5) *extremely important*. Students were asked how they felt about seven aspects of their learning environment. They reported that they felt positively about lecture content (4.09), the support obtained from lecturers (3.97) and how lectures were delivered (3.79). Again, t-tests revealed these to be statistically significant (at the 05 level). However, these findings were at odds with comments made during the focus groups where students tended to raise the negative aspects of their learning experiences. Perhaps it is reasonable to speculate that the students who

responded to the questionnaire were those that were more engaged and therefore, have had more positive learning experiences.

Further, students tended to report average/negative responses to three other items relating to 'support'. These responses were received in reference to the support provided by administrative staff (52 per cent of responses), by student services (47 per cent) and by library staff (42 per cent) (Scale: (1) *Very poor*; (5) *Very good*.)

Examination of student study habits revealed interesting, conflicting and worrying results. Seventy per cent reported being on campus 3-4 days per week during the teaching period. However, many of these were full-time students who also effectively had full-time work commitments. The suggestion that the

If the maxim of three ex-class hours to each in-class hour is applied, a full-time student should be spending at least double what the respondents reported. Such commitment conflicts can be expected to have a negative impact on the end of semester assignment preparation and results, which would be likely to exacerbate student feelings of disengagement.

increasing trend of paid employment for Australian university students was one factor that had a negative impact on student engagement was put forward by Krause, Hartley, James and McInnis (2005). Twenty-five students (37 per cent) said they spent 1-5 hours per week on all learning tasks (excluding class attendance), whilst another 23 (34 per cent)

spent between 6-15 hours per week. Students spent 10.8 hours per week (weighted average) on learning tasks outside class times. If the maxim of three ex-class hours to each in-class hour is applied, a full-time student should be spending at least double what the respondents reported. Such commitment conflicts can be expected to have a negative impact on the end of semester assignment preparation and results, which would be likely to exacerbate student feelings of disengagement.

Are highly engaged students different?

To determine if 'highly engaged' students were different from others, the level of engagement was reduced to two levels - 'low or moderate' and 'high' and cross-tabulations conducted on all other categorical items. Five statistically significant relationships ($p < 0.05$) plus two near-significant relationships were found. A summary of these is shown in Table 3.

Item	p-value	'High engagement' students were more likely to report...
Q2. Lecturer demonstrates that he/she cares about your progress	0.041	Greater importance
Q6. Content of lectures	0.001	Very good
Q6. Delivery of lectures	<0.001	Very good
Q6. Support from lecturer	0.050	Very good
Q6. Support from library staff	0.010	Very good
Number of units completed	0.051	0-4 units i.e. First year students
Programme	0.028	Double degree

Table 3: What do Highly Engaged Students Report?

As shown in the table, the highly engaged student was likely to prefer nurturing lecturers, and to appreciate the content and delivery of lectures, as well as the support received from lecturers and library staff. An obvious inference and concern is that students appeared to be less engaged towards the end of their programme; 'highly engaged' students were more likely to be in first year. This is an interesting outcome given the emphasis on, and concern about, the first year experience in Australian universities (Krause *et al.*, 2005).

What has been learned from the pilot study?

Several useful pieces of information have been drawn from the current study. Statistical information from the focus groups and questionnaire has been used to inform school policy, and some practical matters that have been brought to light have been proposed to inform the conduct of subsequent studies. For example, on the former, the findings reveal that the *Lecturer's Approach, Class Structure and Assignments, Learning Support* and *Personal Factors* appear to affect student engagement. Critical aspects appear to include how the lecturer delivers the lecture, how the lecturer adds value in lectures, +the place and importance attached to group assignments and course advice provided to students. Hence, there is some support for the *preliminary model of student engagement*.

A particularly positive outcome of this study is that the School has had the opportunity to consider the research findings develop and enhance its learning and teaching initiatives. Further, the findings can be taken into account when considering the structure, content and delivery of the School's programmes in future offerings. Coming at this from another angle

though, perhaps the School finds itself with a much bigger problem than it first imagined because of the changing nature of university education. As Devlin *et al* state 'The traditional idea of a linear school, university, work progression, which still forms much policy and practice in higher education, no longer holds true' (2007, p. 7). With so many students undertaking part-time and full-time work the seeds

of disengagement can be traced back to the demands that come with having employment commitments (Devlin *et al*, 2007). However, on the basis of the study reported here, the authors conclude that the School is some way from addressing the elements of teaching practice that could potentially lift the level of student engagement.

Relating to practical matters, prior to undertaking this pilot study, numerous assumptions had been made by the researchers. For instance, it was expected that it would be possible to divide the students into their respective discipline areas to discover the varying levels of, and drivers of engagement across academic specialisations. However, the relatively low response rate undermined the ability to conduct this more in-depth and rigorous analysis and limits the ability to generalise the findings to the total student cohort.

In addition, it was assumed that all students would be familiar with electronic communication, and hence the survey was distributed on-line. Attempts were made to inform students about the research project, and invitations for them to participate were forwarded based on the 'official' email address allocated to them by the university. However, it transpired that many students rarely used this avenue of e-communication, preferring instead to use personal email addresses. This knowledge alone will ensure that a broader section of the student population will be accessible in future studies.

Despite the lower than expected response rate in this pilot study, further research is being planned. One-on-one in-depth interviews with students are being considered, to follow up on issues such as the discrepancy between the favourable rating of lectures reported via the questionnaire and the negative opinions expressed in the focus groups. In addition, students from the University's other

schools will be invited to participate in a larger scale research project.

How learning and teaching policies and practices have changed

This pilot study has been a partial but significant spur in boosting the profile and activity level of the Learning and Teaching Portfolio over the past two years. Academic representation on the Learning and Teaching Committee (L&TC) has increased by three—ensuring all discipline groups are fully represented. To improve student learning and lift the level of student engagement (and in turn to increase student retention rates) the L&TC has, for example:

1. Broadened its range and frequency of student workshops that are designed to build confidence in their academic skills—examples of topics covered are time management, academic writing and referencing, and essay preparation.
2. Produced policy statements and resources or run workshops and information seminars for academics on topics such as identifying 'students at risk', plagiarism, assessment feedback and student mentoring guidelines.
3. Made a concerted effort to standardise the format and content of Course Descriptions, and greater consideration given to assessment objectives and tasks so as to add more structure to course delivery.
4. Started the roll-out of extensive study guides for all courses delivered.

These, and other actions, reflect the views expressed by Whetten (p. 339, 2007) when he states 'I've come to understand that the most important professioning I do as a teacher involves my thoughtful choice of reading material, assignments, activities, and, most of all, learning objectives.' These pieces of the student learning puzzle should be driven by what students need to learn and how the academic can best facilitate the learning process (Whetten, 2007).

Further, Crosling *et al.* (2009) in their study on student retention in higher education surveyed a number of teaching and learning approaches—induction and continuing support processes, student diversity, curriculum design, student-centred active learning, integration of study skills and formative feedback. The current activities of the L&TC are addressing student engagement issues that broadly fit under the teaching and learning approaches reported by Crosling *et al.*

Major conclusions and recommendations

It is in the best interests of both students and academic staff to have highly motivated, engaged students that complete their studies. For the lecturers, such students give incentive to them in their teaching practices, and encourage more innovative and creative ways of achieving optimal outcomes in both learning and teaching. For the students, remaining engaged throughout their studies will ensure optimal performance, and is likely to generate grades that will enhance their future career advancement.

It is important to understand and appreciate the reasons why students are not engaged. This study provides insights into what shapes student engagement, and as such, it has implications for student retention. Less than optimal levels of student retention mean that relatively scarce resources are wasted. Student failure means high financial costs for students, both direct and indirect. The automatic loans provided to students to cover tuition fees must be repaid whether students have passed or failed and students must meet the opportunity cost of absences from the labour market that might be necessary for students to repeat units. Non-completing students might also find their passage into meaningful employment blocked.

Of course, this study had a number of limitations, particularly the response rate to the on-line questionnaire. The researchers considered that this lack of engagement in a project, which had well publicised rewards for participation, was indicative of the general malaise described by lecturers as 'lack of engagement' in university community activities generally, and in their studies, in particular. Clearly, the study would need to be replicated in a wider sample before any generalisations could be made about the findings of this pilot study.

It seems reasonable to presume that the survey should be repeated periodically to monitor student engagement regularly. Such surveying should therefore be built into the regular duties of a member of staff. Having established some of the major reasons for the low rate of response (that is, sending invitations to email addresses that students chose not to access and timing the pilot survey with a relatively busy time for students) it will be possible to appreciate a wider range of students' opinions and to act on them as appropriate.

Students' attitude to group work and to group projects means that the school needs to become

more pro-active with this issue; it clearly causes grief to students and to academic staff alike. Issues such as whether group work should be assessable or the proportion of a subject's marks that should be made up of group work need to be closely examined. Group size and submission and presentation of group work also need consideration. Findings could be used to formulate policies covering the adoption of standardised group work models.

Perhaps there is also an issue relating to staff training. If some lecturers are failing to excite their student audiences, specific staff development could address this need. In fact, this initiative has been introduced into the school over the past 12 months through peer review and curriculum development workshops and modelling effective teaching practices in First Year. Part of the problem for some staff could be that high teaching loads prevent them from undertaking research, which would add value to their teaching, as desired by students.

Obtaining a higher student response rate would provide richer information about the wider student body and the extent of its engagement. Specialisation-related information and more detailed correlations between students' engagement and hours spent in the paid work force, time spent travelling to campus, or the impact of non-academic activities would add to the school's capacity to maintain an engaged student body.

However, the pilot study has provided a rich source of information that has formed the basis of a series of recommendations fed into the school's learning and teaching committee. These issues have been addressed and policy changes implemented in the previous 12 months. On-going evaluation of these initiatives and their potential impact on student engagement will go some way toward satisfactorily engaging students in self-directed active learning.

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Appendix 1: Student Engagement Questionnaire

Student Engagement Survey

This survey should take approximately 20 minutes to complete. We are interested in your perceptions, and your co-operation is very much appreciated. Your individual responses are confidential.

For our purposes in this research, 'Student Engagement' is considered to be revealed in the attitudes students bring to their study, the work students produce during their lectures and tutorials, and the extension of that learning beyond the formal lecture/tutorial times.

1. YOUR ENGAGEMENT

How would you rate your engagement during the current teaching period (TP3, 2007)? Please circle the number that best represents your level of engagement.

Not engaged	1	2	3	4	5	Totally engaged
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2. LECTURER'S APPROACH

Using the scale below, please tick the relevant box that best expresses how important each aspect of the lecturer's approach is to your enjoyment of your learning.

	Not at all important (1)	Only slightly important (2)	Generally important (3)	Definitely important (4)	Extremely important (5)
Creates a casual environment					
Creates a non-judgmental environment					
Tries to include as many students as possible in class discussions					
Adds value to lecture material with practical applications					
Is accessible for meetings					
Responds to phone calls/emails within 24 hours					
Demonstrates that he/she cares about your progress					
Provides lecture notes prior to the lecture					
Delivers the lecture without just reading from the slides					

If you wish, please elaborate on any of the areas in Q2 above: _____

3. CLASS STRUCTURE & ASSIGNMENTS

Using the scale below, please tick the relevant box that best represents your level of agreement for each item.

	Strongly agree (1)	Moderately agree (2)	Neither agree nor disagree (3)	Moderately disagree (4)	Strongly disagree (5)
The two-hour lecture & one-hour tutorial mix suits my learning style					
The one-hour lecture & two-hour tutorial mix suits my learning style					
Lectures and tutorials for a unit should be held on the same day					
The 90 minute lecture and 90 minute tutorial mix suits my learning style					
Lectures should include class group exercises/small case studies					

Group assignments are not necessary in every unit					
Group assignments should be limited to a maximum of 40% of the unit's total mark					
Assignments in first year units should mainly be theoretical					
Assignments in second year units should mainly be a balance of theory & application					
Assignments in third year units should mainly be practical application of theory					
Tutorials should be limited to a maximum of 15 students					
Tutorials should only cover the application of lecture material through set questions					
Some tutorial time should be allocated to group assignments					
Tutorials should only cover the application of lecture material through interactive experiences					
Monitoring in tutorials by the lecturer of group assignment progress helps my learning					
It is an advantage to have the lecturer as the tutor					
Lecturers & tutors do not communicate with each other					
Lecturers & tutors seem to disagree on various topics					

If you wish, please elaborate on any of the areas in Q3 above: _____

4. LEARNING SUPPORT ISSUES

a) Using the scale below, please tick the relevant box that best represents your level of agreement for each item.

	Strongly agree (1)	Moderately agree (2)	Neither agree nor disagree (3)	Moderately disagree (4)	Strongly disagree (5)
Timetable clashes have adversely limited my choice of units					
The 'Allocate' system has helped me with scheduling classes					
Assignments in all units always seem to be due the same week					
The library needs to have the latest texts					
The library needs to have more copies of required texts					
The library needs to provide more work stations					
The library needs to provide more quiet areas					
The library needs to increase the no. of document deliveries per student					
The School needs a specific person for offering course and unit advice					
Units need to offer employer placement opportunities					
There number of computers in labs. is insufficient					
Internet allocation is adequate for my study needs					

If you wish, please elaborate on any of the areas in Q4 above: _____

b) Students are given a monthly internet allocation. Do you believe the system of Internet allocation needs to be changed? Yes [] No []

If yes, please give your views: _____

c) Using the scale below, please tick the relevant box that best represents how often you have experienced the following situations.

	Never (1)	Rarely (2)	Sometimes (3)	Often (4)
Timetable clashes have forced me to choose between which unit to undertake				
Timetable clashes have forced me to choose between which class to attend				
Timetable clashes have forced me to choose between classes & work commitments				
Timetable clashes have forced me to choose between classes & assignment completion				

5. PERSONAL APPLICATION

5a. During semester, how many days per week (including evenings and half-days) do you typically spend on campus? Please circle the appropriate number.

1 to 2 days	1	3 to 4 days	2	5 days or more	3
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5b. On average, how many hours per week (including weekends) do you spend on class preparation? This includes the following activities – pre-lecture reading, note-taking, literature research, tutorial preparation, writing, studying and other learning activities. Please circle the appropriate number.

None	1-5	6-10	11-15	16-20	21-25	26-30	31+
1	2	3	4	5	6	7	8

5c. What aspects of your course do you enjoy the most?

Please rank your top THREE. Place a “1” in the box next to the aspect that you enjoy the most, a “2” for the second most enjoyable aspect and a “3” for the third most enjoyable.

<input type="checkbox"/> Achieving high grades	<input type="checkbox"/> Responding to lecturer’s questions in class
<input type="checkbox"/> Developing skills which will benefit my career	<input type="checkbox"/> Social activity with other students
<input type="checkbox"/> Gaining knowledge in a subject	<input type="checkbox"/> Voluntarily contributing to class discussions
<input type="checkbox"/> Group work with other students, when successful	<input type="checkbox"/> Other (Please specify)....

5d. What are the aspects of your course that you least enjoy?

Please rank your top THREE. Place a “1” in the box next to the aspect that you enjoy the least, a “2” for the second least enjoyable aspect and a “3” for the third least enjoyable.

<input type="checkbox"/> Difficulties in working in some groups	<input type="checkbox"/> Irrelevant assessment tasks
<input type="checkbox"/> High workload	<input type="checkbox"/> Poor explanation of the awarded grade
<input type="checkbox"/> Inadequate written feedback on assignments	<input type="checkbox"/> Responding to lecturer’s questions in class
<input type="checkbox"/> Introductory units are too basic	<input type="checkbox"/> The unit does not meet my expectations
<input type="checkbox"/> Too few practical opportunities to apply concepts / theories learnt	<input type="checkbox"/> Too much theory
<input type="checkbox"/> Other (Please specify)	<input type="checkbox"/> Voluntarily contributing to class discussions

6. PERSONAL FEELINGS

Overall, please indicate the way you feel about the following aspects of your study. Please tick the appropriate box. If you have not, for example, used Student Services, please tick the *Not Applicable* box.

	Very poor	Poor	Average	Good	Very good	Not Applicable
The content of lectures						
The delivery of lectures						
The support from the lecturer						
Group work						
Support given to you by:						
.....the School’s admin. staff						
.....Student Services						
.....Library staff						

If you wish, please elaborate on any of the areas in Q6 above: _____

7. BACKGROUND INFORMATION

7a. Your year of birth:		7b. Sex: Male Female	
7c. How many units have you successfully completed? No. <input type="checkbox"/>			
7d. How many units are you currently enrolled in? No. <input type="checkbox"/>			
7e. Are you of Aboriginal or Torres Strait Islander origin? Yes <input type="checkbox"/> No <input type="checkbox"/>			
7f. Where were you born?			
<input type="checkbox"/> Australia		<input type="checkbox"/> Europe	
<input type="checkbox"/> Africa		<input type="checkbox"/> Middle East	
<input type="checkbox"/> Asia		<input type="checkbox"/> New Zealand/Pacific Islands	
<input type="checkbox"/> Central/South America		<input type="checkbox"/> North America	
7g. Where were your parents born?			
Father		Mother	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7h. What is the primary language that is spoken in your home? (Select only ONE)			
<input type="checkbox"/> English		<input type="checkbox"/> Hindi	
<input type="checkbox"/> Aboriginal language		<input type="checkbox"/> Italian	
<input type="checkbox"/> Chinese		<input type="checkbox"/> Turkish	
<input type="checkbox"/> Greek		<input type="checkbox"/> Other	
7i. In your last year of secondary schooling, what type of school did you attend?			
<input type="checkbox"/> Catholic		<input type="checkbox"/> Independent/Private	
<input type="checkbox"/> Government		<input type="checkbox"/> Overseas school	
7j. In what type of programme are you enrolled?			
<input type="checkbox"/> Bachelors of Business		<input type="checkbox"/> Bachelor of Management	
<input type="checkbox"/> Bachelor of Commerce		<input type="checkbox"/> Double Degree	
<input type="checkbox"/> Others...Please specify:			
What is your main area of study? (Specialisation). Select one only.			
<input type="checkbox"/> Accounting		<input type="checkbox"/> Entrepreneurship	
<input type="checkbox"/> Applied Economics and Finance		<input type="checkbox"/> Marketing	
<input type="checkbox"/> Brewing		<input type="checkbox"/> Organisational Management and Leadership	
<input type="checkbox"/> Business Law		<input type="checkbox"/> Tourism	
<input type="checkbox"/> Human Resource Management			
7l. What is your enrolment type?			
<input type="checkbox"/> Full-time		<input type="checkbox"/> Part-time	
7m. What are your living arrangements? Your main type of accommodation for this semester is?			
<input type="checkbox"/> Family/Guardians		<input type="checkbox"/> Renting with friends or co-tenants	
<input type="checkbox"/> Halls of Residence		<input type="checkbox"/> Own house/unit/flat	
<input type="checkbox"/> Private board		<input type="checkbox"/> Other	
7n. What are your major sources of financial support for expenses while at University? (Please choose up to 3; rank 1 as the major income source).			
<input type="checkbox"/> Any form of unemployment benefit		<input type="checkbox"/> Personal savings	
<input type="checkbox"/> Full time work		<input type="checkbox"/> Scholarship	
<input type="checkbox"/> Parental support		<input type="checkbox"/> Spouse/Partner	
<input type="checkbox"/> Part-time casual work		<input type="checkbox"/> Youth allowance/AusStudy	
<input type="checkbox"/> Personal loans from financial institutions		<input type="checkbox"/> Other	

Thank you very much for your cooperation. If there are aspects of this survey that you would like to discuss, please contact any member of the research team.