Student Engagement: A Case Study of the Relationships Between Student Engagement and Student Persistence

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Abstract

This case study was conducted in a New Zealand urban polytechnic as part of a wider Teaching and Learning Research Initiative (TLRI)-funded project, "Learning Environments and Student Engagement with Learning in Tertiary Settings", that researched student engagement in nine tertiary education institutions. The polytechnic is located in an area of significant social and economic disadvantage where participation rates are below the average for the country as a whole. The purpose of the polytechnic is to serve its immediate region with regard to the provision of vocational education through the creation of workable pathways that take students from the lowest levels of study through to degree and postgraduate levels in the career of their choice. The polytechnic also works in the wider region and throughout New Zealand in its more specialised areas of study.

The polytechnic is committed to high enrolled/pass rates as its measure of student persistence and therefore it is interested in how to ensure that students are retained in their courses and gain passing grades. A considerable amount of successful work has been done to lift pass rates and the task now is to work at a more fine-grained level to identify those aspects of programme improvement that are most influential in supporting student persistence, and thus ensure that resources are focused where they will have the best outcomes.

Student retention is an issue for many programmes of study and it is a particular issue for students who are traditionally under-represented in higher education. The case presented in this paper suggests a delivery-centred approach to improving retention. This study suggests that where lecturers and students have dissonant conceptions of student engagement in learning, retention is poor and where such conceptions are congruent, student retention is higher.

This study used a survey to identify student priorities in terms of what supports their learning and their views on what learning support was delivered in their classes. The questionnaire was completed by students in six different programmes. These programmes came from a variety of disciplines and levels of study: teacher education, baking, computing, engineering, foundation studies and business studies. Correlations between student priorities and experience of their delivery were calculated and then linked with retention data. Student retention was highest in programmes where student priorities were most highly correlated with their experience in class.

The survey findings will assist programme leaders and lecturers to understand their students' priorities and their perceptions of the learning environment provided to them. Further, the data from this study will assist programme leaders and lecturers to develop plans for the improvement of teaching. This can be instrumental in influencing

lecturers to focus on quality of delivery rather than reinforcing the stasis that results from blaming student characteristics and therefore assuming there is no course of action that needs to be taken.

Introduction

The case study presented in this paper was conducted in a New Zealand urban polytechnic as part of a wider Teaching and Learning Research Initiative (TLRI)-funded project, "Learning Environments and Student Engagement with Learning in Tertiary Settings", that researched student engagement in nine tertiary education institutions.

The paper offers another thread in the discussion about what makes for successful engagement of students in their studies. A central component of the overall TLRI study was a student survey that considered aspects of student engagement. For the case study discussed here, one of the questions addressed was "What is the relationship between student priorities with regard to their learning and how well do students perceive that the institute delivers on these priorities?" This approach was taken to tease out any possible differences between the polytechnic's understanding of what students may find as engaging and the students' concept of what matters in learning. To test the relationship between "engagement" and "success", data were also collected on the success of the programmes involved in the survey.

Within this case study polytechnic, interest in retention of students had already prompted closer attention to actions that can be taken to strengthen programmes. This focus assumes that the issue is one of "engagement" rather than student risk characteristics and thus provides an avenue for action. The concept of a "student cycle of engagement" grew out of the author's search for a usable framework for planning intervention in unsuccessful courses (Anderson, 2007). Use of this cycle produced significant improvements in retention across 18 courses in a first study and was replicated across 13 courses in a following study (Anderson, 2009). This work is summarised below to support the direction taken with the student survey used in the case study on engagement.

Method

This case study was a linear, multiple investigations case study (Merriam, 2009) working within one tertiary education institution to identify factors that may enhance student engagement and hence improve retention and success (pass rates). The part of the case study that is reported in detail here relates to the findings from a section of the student survey. Two previous studies in this institution, on programme improvement as the key mechanism for increasing pass rates, are also summarised below.

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The survey

The survey has been written about in some detail in other papers on the overall TLRI student engagement project (for example, Zepke et al., 2009a, 2009b, 2010). Conceptually it refers to the work of Kuh (2001) and following iterations, such as the work of the Australian Council for Education Research survey of student engagement. In brief, the tool was built to investigate the concept of student engagement across multiple scales drawn from the literature on motivation and agency; transactions within the institutional setting; external factors; and time spent on specified activities. It was trialled for delivery effects and implemented in nine tertiary education institutions in New Zealand. The current case study offers the results for one institution with regard to one section of the survey. This target section considered student identification of their current study-related priorities—the importance of item to them—and their perception of how well each item is delivered. An example is provided in Figure 1.

Figure 1 **Example of survey scale**

	How important are the following to you this year?					How well are they being done?				
	Very Important ▼	Important ▼	Little . ▼	No Importance ▼	Not Applicable ▼	Very well ▼	Quite Well ▼	Not Well ▼	Poorly ▼	Not Applicable ▼
Teachers providing prompt feedback	□	□	□	□	□	□	□	□	□	□
Teachers providing feedback that improves my learning	□	□	□	□	□	□	□	□	□	□
Teachers challenging me in helpful ways	□	□	□	□	□	□	□	□	□	□

The students

The participants in this case study are students in an urban polytechnic in New Zealand. The students were all studying one of five programmes. These programmes came from a variety of disciplines at both degree and predegree levels of study including teacher education, baking, computing, foundation studies, engineering and business studies. The polytechnic is located in an area of significant economic deprivation and its students are frequently first generation tertiary education students. The retention and success outcomes for the polytechnic demonstrate a

complex set of relationships between programme characteristics, teacher skill, and student experience. The survey was completed by 512 students from 11 classes across six programmes.

The programmes

Programme A is a Level 3 one-year programme with a history of high pass rates. Programme B is a degree programme. The survey was conducted with groups from each of the three years of the qualification. Programme C is a six-month Level 4 certificate programme, with variable retention, and success rates frequently falling below the institute's benchmark of a 75 percent enrolled/pass rate. Programme D is a six-month Level 4 programme with retention and success rates consistently below the institution's benchmark. Programme E is a Level 5 diploma programme with night and day classes that show different outcomes. Programme F is a three-year degree programme with survey respondents from each of the three years.

Analysis

Survey responses were analysed using SPSS V17. Responses to items in the "priorities/importance" section were correlated with the responses to items in the "how well being done" section to create a measure of the degree of agreement between students' priorities and students perceptions of how well their priorities were being met (Spearman rho).

Summary of precursor studies

Two investigations have been conducted previously on programme improvement as the key mechanism for increasing programme pass rates. To understand how enhancing student engagement could help increase programme pass rates, it is important to understand something about the previous projects.

Work in the area of staff and academic development has revealed a number of non-evidenced-based and subjective reasons for why students fail in such numbers in tertiary education. The reasons are generally located with student non-performance and many unsupported assumptions made by staff about the student cohort which cannot be evidenced by either international or local research. Some of these statements are:

- students do not get the secondary education they used to so they are not prepared for tertiary study
- external factors are the primary reason students fail
- students are not committed as they used to be.

Maynard and Martinez (2002) conducted research in the United Kingdom to identify college teachers' views about course performance. They chose a number of courses which they classified as either "high performing" or "low performing". High performing courses were those that showed high retention and achievement rates of students across two years and low performing

courses were those that showed low retention and low achievement rates for students. To qualify as a high performing course, the course had to also show a growth pattern in numbers of enrolments, and for low performing courses a pattern of decline in enrolments. They conducted a series of face-to-face interviews with the teachers from both programme types and their overall findings were:

- teachers interviewed held strong views on factors affecting retention and achievement
- teachers of courses with the highest retention and achievement were often unsure about their own achievements
- teachers of courses with low retention and achievement said their students left because of economic or social circumstances despite the fact that similar student cohorts could be found in the same college on courses with high retention and achievement.

The research identified some key teacher characteristics or "attitudes" that were apparent in high performing and others apparent in low performing courses. They found that teachers of courses with high retention and achievement:

- work in autonomous, self-monitoring teams
- have complementary skills and commitment to all students
- respond positively to staff development and management processes
- recruit students with integrity
- have a relatively negative view of 16–19 year old students' abilities but make every effort to motivate and inspire them
- identify at-risk students early and address literacy and numeracy needs
- believe in preparing student-centred schemes of work
- have high quality induction programmes
- ensure assessment is rigorous and that students have a clear understanding assessment procedure and criteria and enable students to experience early success
- value students as individuals
- particularly value student feedback and observation of classes (Maynard & Martinez, 2002, p. 5).

They found that teachers of courses with low retention and achievement:

- tend to be complacent about their role
- belong to a team where morale is low – elements of staleness and negativity
- see work-related problems as beyond their control
- recruit without integrity and expect a high drop-out rate
- tend to stereotype students by class, gender, race and ability
- suggest they do not have time to identify or support at risk students
- convey negative attitudes to students
- tend not to review the curriculum
- do not regard assessment and feedback as a priority but tend to blame students for their lack of ability and failure to produce assignments on time;

- are particularly negative about college quality systems
- blame management pressure and lack of time for their inability to plan (Maynard & Martinez, 2002, p. 6).

This work suggests that the general direction of work to improve retention and success must begin with development of staff capability to address programme weaknesses as opposed to "fixing" students or assuming there is no action to be taken because of the immutable nature of students' characteristics. To this end, I developed a framework, in the context of bridging education (Anderson, 2007), that was designed to assist programme leaders and lecturers to analyse their programmes and design plans for ongoing improvement. The "student cycle" framework identifies key points of engagement for students as they connect with the institute and asks for evidence-based analysis of the success or otherwise of each element and how then to improve. The cycle identifies nine elements: recruitment, first contact, orientation, diagnostics/placements, teaching and learning, assessment, pastoral care, and destinations. This process was applied in two studies: the first with 18 programmes and the second across 13 programmes.

A series of professional development workshops were designed to support the programmes identified. Three two-hour workshops and a final one-hour workshop were conducted over a six-week period. The workshops were developed using the "student cycle" described above. At the conclusion of the workshops, each of the programmes was supported in developing an action plan to increase retention using these models. In the first study of 18 target programmes with pass rates below 70 percent, the improvement of the group of programmes was much greater than the whole portfolio. Fourteen showed improvement of 4 percent or more, one programme remained the same and two declined. In the second study of 13 programmes, 10 improved by 4 percent or more, two remained the same and one declined.

While identifying the specific elements of this model that make a difference is confounded by the multiple elements of the model, an analysis of the action plans provided some clues. All programmes that improved clearly identified at least one element that was implicated in loss of students. This was most commonly poorly designed assessment, poorly designed entry criteria or unresolved lecturer performance issues. These outcomes support the view that retention and success is primarily a programme issue that can be responsive to improvement and not primarily an issue of student characteristics that is inevitably unresponsive to improvement. Therefore, a closer consideration of the programme elements that are considered by students to be priorities and analysis of whether these priorities are being met would be a productive next step.

Findings

Student priorities

Zepke et al. (2009a) noted that there was evidence to suggest that there are institution-level differences in the configuration of student priorities across the scales analysed in the student survey that this current case study is part of. In this case, there was significant commonality in the priorities identified by students for first-year students but a shift in this configuration in the year two and year three students. Those elements related to direct teaching—feedback, level of lecturer expertise and lecturer enthusiasm—were rated highly by students in their first year. While there was an effect from the Likert-type scale that produced modest differentiation, it was apparent that the priorities had shifted for students in the second and third year, to a greater focus on student learning independence: valuing prior learning and being challenged, for example. It is noted that the second- and third-year students were degree students as opposed to the certificate, diploma and first-year degree students in the first year group.

Student engagement and student persistence

Having established that a focus on quality of delivery is productive, it is proposed that there may be a relationship between student engagement, conceptualised as a congruence of priorities between students and lecturers or institute, and student persistence expressed as pass rates for courses.

The analyses summarised below offer support for this proposal. Where congruence of student learning priorities is highly correlated then the pass rates are high, and the converse is also true. It is noted that there are not enough data points here to create anything more than a positive affirmation of data direction and a more comprehensive study designed to address this question is a necessary next step, possibly taken at the level of individual data rather than the course level offered here.

Table 1 **Summary of analyses**

Programme	Congruence between student priorities and lecturer delivery on priorities	Pass Rates
A	.637**	96%
B1 B2 B3	.723**	83%
C	.431*	62%
D	.328	54%
E1 E2	.141	51%
F1 F2 F3	.571*	79%

*/** .05/.01 confidence levels

Note: Year levels merged to create appropriate *N*.

Conclusions and recommendations

It has been valuable in this student engagement case study to build, in a linear way, on previous studies. The focus on programme quality and emerging thinking about what priority students give to aspects of their study has provided information on ways to enhance student engagement and persistence.

The survey outcomes, the precursor studies and strategic responses within this case study provide the basis for a set of recommendations that may support improved student engagement and persistence in tertiary institutes.

Information

There are two sets of information that are essential at the outset of any strategy to improve student engagement and persistence. The first is clear, accessible and productive information about the rates of engagement and persistence of students at the course level. The pass rates appear to be the most robust in that this measure acknowledges all the students who began a course and offers a measure of all their outcomes. Secondly, this study has identified significant differences between what support measures students' value and their perceptions of how well this support is delivered; plus there seems to be a programme factor. This suggests it would be productive to survey students to ensure that lecturers and institutes are aware of student priorities.

Staff development

Given the Maynard and Martinez (2002) findings regarding the relationship between lecturer attitude and effective programme improvement, it is vital that a framework is provided that engages programme leaders and lecturers in an evidence-based process for analysing programme quality and developing and implementing improvement plans.

The student cycle

This institution has used the "student cycle" as a framework for identifying those aspects of the student experience that are successful or not. Each element of the cycle (recruitment, first contact, orientation, diagnostics/placements, teaching and learning, assessment, pastoral care, destinations) is considered with regard to evidence of effectiveness and plans are built against the evidence. For example, one programme found the spread of assessments was related to a marked student drop out at week three where a high-stakes assessment was delivered too early in the course. Redesigning the assessment spread resulted in improved retention. The results of the student survey contributed significantly to the evidence base for the analysis of programme effectiveness.

Collaborative workshops

Applying the student cycle approach to analysing programme effectiveness and developing improvement plans has been carried out productively and effectively in collaborative workshops where shared experience contributes to the quality and creativity of the outcomes. Contributors to the workshops included programme leaders, lecturers and staff developers.

Continuous improvement

Institute processes to require and support an annual cycle of analysing programme effectiveness, developing plans, implementing plans, evaluating effectiveness and starting again to consider evidence of effectiveness provide a framework for ensuring continuous improvement.

Acknowledgement

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