

Building pathways to academic success. A Practice Report

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Abstract

Students attending university for the first time come with a range of expectations, experiences and skills. For many these prior experiences are less than optimal for achieving academic success. This paper evaluates the academic outcomes across three cohorts of a five day enabling program offered to commencing students in the week prior to their formal university orientation program. The demographics of this sample (n=965) are such that over 50% come from low socio-economic backgrounds, about 50% are first in family to attend university, 50% are mature age students and over 50% have university entrance scores in the lower ranges of academic ability. Those who entered university with an OP¹ score of 15 or less and completed the program were less likely to fail and achieved higher GPAs at the end of their first semester of studies than those who did not complete the enabling program.

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¹ Overall Position, the tertiary entrance score used in Queensland, Australia. Scores can range from 1 (highest) to 25 (lowest), distributed according to the bell curve.

Introduction

Transitioning to university life has long been a poorly supported and problematic process (James, Krause & Jennings, 2010). Many students take an extended period to adjust to their new life as a university student, while a significant percentage drop out at some point of their first year, making the first year a high risk period when it comes to student retention. In recognition of these widely identified risks, The University of Southern Queensland's (USQ) Springfield campus actively supports the initial transitioning of students through its *Building Pathways to Academic Success* initiative which is an intensive week long program that is offered either before or alongside the official Orientation program. This practice report presents findings from longitudinal data gathered from 2007-2009, where the outcome measure is the level of academic success achieved at the end of students' first semester of study. Results indicate the program has a notable impact upon the learning outcomes of those students who participated. Given the global focus on widening participation and retention, we argue in this practice report that the *Building Pathways Program* provides a model that may well be transferable to other contexts across the higher education sector.

Widening Participation

In the Australian higher education context, widening participation has become a key government objective in recent years. The targets are ambitious and are based on the initial recommendations of the *Review of Australian Higher Education Final Report* (Bradley, Noonan, Nugent & Scales, 2008), or what has since become known as the Bradley Review. In response to the

recommendations in that report, the government quickly produced its own document, entitled *Transforming Australia's Higher Education System* (Australian Government, 2009), which set the following participation targets: "that by, 2025, 40 per cent of 25 to 34 year olds attain a qualification at bachelor level or above; and, by 2020, 20 per cent of higher education enrolments at undergraduate level should be people from low SES backgrounds" (p. 57).

While the Government has set participation targets, historically there have been a number of constraints that have limited widespread participation in university studies. Lack of appropriate support networks from families, schools, peers and the community has been found to constrain access (Harvey-Beavis & Robinson, 2000) for students who come from low socio-economic status (LSES) backgrounds. This outcome has been linked to limited family experience with, and/or understanding of higher education (Andrews, 1999; Young, 2004). For some students, engagement with the university experience resembles travelling to another country. The culture of the institution is foreign and at times alienating and uninviting (Krause, 2006). Often people from LSES backgrounds fear they lack the social and cultural capital required to "talk the talk" and "walk the walk" at university (Forsyth & Furlong, 2003, p. 220). This includes the social networks which provide avenues for participating in casual out-of-class conversations and the appropriate literacy skills necessary to navigate their way through the complex university terrain (Gallego & Hollingsworth, 2000). Thomas (2002) has warned that "if a student feels that they do not fit in, that their social and cultural practices are inappropriate and that their tacit

knowledge is undervalued, they may be more inclined to withdraw early” (p. 431).

The first year experience: Identifying risk factors

Not only are the demographic contextual elements a strong influence on university success, it is increasingly clear that the first year experience at university plays a key role in successful participation. In the latest *First Year Experience in Australian Universities* report (James et al., 2010), new dynamics were identified in the student-university relationship that have important implications for the quality of educational outcomes. Students are spending fewer days and less time on campus, fewer are involved in extra-curricular activities around campus, fewer say they have made close friends, and more indicate that they keep to themselves at university. In addition, more students work either full-time or part-time, and staff-student interactions appear to be decreasing with fewer students now believing that one of their teachers knows their name. At the same time, a dramatic rise in the use of ICTs means that the on-campus, face-to-face experience apparently takes on less significance. The specific risks identified in the report include pressure from financial commitments, perceived lack of parental understanding and social support, lack of preparation for university study, and excessive hours of paid work. Moreover, students at risk are less likely to study with other students. As James et al. argue, “the first year [is] a critical time for retention and for establishing sound patterns of study and academic engagement” (p. 4).

Morisano, Hirsh, Peterson, Phil and Shore (2010) suggest that the university environment itself can undermine academic performance. For example,

Yorke and Longden (2008) identify poor choice of program, lack of personal commitment to study, teaching quality, lack of contact with academic staff, inadequate academic progress and lack of finance as contributory factors to poor performance and poor retention.

Building academic pathways to success

Kift and Nelson (2005) argue that, “the potential for enthusiastic engagement in the curricula should be harnessed in the critical first days of the first weeks of the first year, thereby promoting a sense of belonging, so often missing for the contemporary learner” (p. 229). To that end, early interventions should respond at both the social and academic level so that students will feel part of a learning community from very early on. Success is likely to be enhanced if this community consists of everybody at the university, including student peers, Faculty staff and support services staff. The expectation is that such an intervention should provide students with the necessary support structures and networks during the high risk first semester and first year.

Enabling courses are programs that are established to support student engagement with higher education by providing transition opportunities. These opportunities are intended to induct students into academic discourse and demystify tertiary study (Kift & Nelson, 2005; Lowe & Cook, 2003; Yorke & Thomas, 2003). Traditionally, these enabling courses were designed to assist academic preparedness, but more recently, the courses also focus upon social components that encourage social connection to others or the university (Kift & Nelson, 2005; Tinto, 1993; Yorke, 2004).

Background factors:

USQ's Springfield campus commenced operation in February 2006. It was evident from orientation that the majority of the learners were truly non-traditional (Ballantyne, Madden & Todd, 2009). Demographic factors indicated that 57% of students on the Springfield campus come from a LSES background, roughly 50% are mature age students and roughly the same percentage are first in family to attend university. Each of these factors alone is considered to be a risk factor. A fourth and more direct risk factor was the entrance criteria score of the students: over 50% of students beginning their studies on the Springfield Campus entered university with OP scores reflecting lower levels of academic ability (OP >12; TER² >75).

Building academic pathways

During the first semester of 2006, the Learning and Teaching Support Unit (LTSU) on Springfield campus provided additional academic support and conducted a suite of weekly lectures and workshops that ran until the exam period at the end of the first semester. Student feedback at the end of semester confirmed that everyone had found the academic support extremely valuable, and they perceived it had helped them secure improved academic performance. Many added that they would have appreciated accessing this support before they commenced their undergraduate studies, rather than during the first semester itself. As the second semester started in July 2006, a team of six from the Springfield

Faculties, LTSU and Student Services worked on developing a program that would be scheduled the week before Orientation as students had requested. Because most students also worked part-time it was decided that the program could only be part-time and that it should run from Monday to Friday 9.00am-12.30pm. Each day there would be two ninety-minute workshops and in order to also embed a social aspect into the program, lunch would be provided on the first and last days. Based upon the first year experience literature (Kift & Nelson, 2005; Lowe & Cook, 2003; Yorke & Thomas, 2003), the aims of the program were threefold:

- to prepare Springfield's new on-campus students for their undergraduate studies;
- to support Springfield's new on-campus students with a smooth transition to undergraduate study; and
- to assist Springfield's new on-campus students to implement a suite of good study habits that would increase the likelihood of them experiencing academic success in their first semester and beyond.

The focus of this practice report is on the third aim.

² Tertiary Entrance Rank, an index equivalent to OP for students who cannot obtain an OP (e.g. because they have not completed secondary education in Queensland).

Table 1 *Aims and structure of 5-day Building Pathways to Academic Success Program*

Day	Broad Aim	Workshop	Rationale
1	Say hello – welcome – you belong here	1 The Culture of University 2 Managing University Studies	It is vital that students feel they belong.
2	Investigate university input processes	3 Lectures and Tutorials 4 Reading Strategies	It is vital that students know how education is delivered at university.
3	Clarify student output processes at university	5 A Mock Lecture & Tutorial 6 Academic Essay Writing	It is vital students get an early feel for a lecture and tutorial, and a big picture overview of university essay writing.
4	Introduce autonomous critical thinking	7 Critical Thinking 8 Unpacking Assignments	Critical thinking is a vital ingredient of academic and assignment success.
5	Highlight need for teamwork skills and ongoing reflection	9 Presentations and Group Work 10 Balancing it All	Team work is important, as is balancing university with “life.”

Throughout the second half of 2006, the ten workshops were prepared by LTSU and Faculty staff. There was a distinct rationale behind each day so the intention was that students would end Day One feeling that they belonged at university; end Day Two aware of how information and knowledge was made available at university; end Day Three having experienced a mock lecture and having understood how students at university are often asked to demonstrate they have understood a course through a written essay; end Day Four by better understanding the role and importance of critical thinking and the need to be an autonomous learner; and end Day Five understanding how students have to work

in teams and reflect on their learning processes. The resultant set of workshops is presented in Table 1.

Cohorts

The *Building Pathways to Academic Success Program (Pathways Program)* was run in the week prior to Orientation. The data reported here are aggregated across three cohorts from 2007 to 2009. In the first offering of the program in 2007, 67 commencing students participated in the program and 212 commencing students did not; the same numbers for 2008 were 50 and 245; and for 2009 they were 60 and 331. Thus across the three years, 177

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commencing students participated in the Pathways program and 788 did not. GPAs at the end of the first semester of study were collected for all 965 students.

Academic outcomes

The academic outcomes in terms of performance at the end of students' first semester of study are presented in Table 2. The first thing to note is that there is a clear relationship between OP entrance scores and GPA. Reading Table 2 from the top to bottom and from left to right it is clear that the better the entrance scores

(low OP) the better the GPAs. The data in Table 2 were statistically analysed to answer three questions. Most importantly: *Did the program lead to reduced failure rates?* Then of lesser importance: *Did the program have any beneficial effects for those who had passing grades?* And thirdly: *Were any beneficial effects apparent at each OP band?* All analyses were done using the Chi-squared test for independence where frequencies for those who participated in the program were compared to those who did not participate in the program at each entrance level to examine the possibility that any differences between groups were

Table 2 Percentage of students in an OP cohort who obtained various GPAs as a function of participation in the Pathways Program

OP Score	Program Participation	N	GPA (First Semester)				
			<4	4+	5+	6+	7
16+	Non-Participant	238	54.6	27.3	13.4	4.2	0.4
	Participant	46	43.5	32.6	17.4	6.5	0.0
13-15	Non-Participant	219	54.8	18.3	17.8	8.7	0.5
	Participant	49	10.2	34.7	38.8	12.2	4.1
10-12	Non-Participant	160	23.1	29.4	29.4	16.3	1.9
	Participant	30	13.3	16.7	40.0	13.3	16.7
7-9	Non-Participant	112	26.8	13.4	29.5	29.5	0.9
	Participant	37	10.8	5.4	45.9	29.7	8.1
1-6	Non-Participant	59	33.9	10.2	15.3	27.1	13.6
	Participant	15	0.0	0.0	46.7	26.7	26.7
Overall	Non-Participant	788	42.8	22.0	20.3	13.2	1.8
	Participant	177	18.6	22.0	35.6	15.8	7.9

due to the program rather than by chance. The first analysis centred on whether or not the *Pathways Program* made any difference to whether or not students would receive a failing GPA. A Chi-square analysis of the <4 column in Table 1 indicated that in fact the program did result in a significant reduction in failing grades, $X^2 (df, 4) = 17.44, p < .01, \phi = 0.22$. The next analysis explored whether the program had a wider influence on the GPA distribution than just failing grades. In just looking at the passing grades in the Overall rows of Table 2, that is, 4+, 5+ and combined 6+ and 7 (these two groups were combined because of low numbers in some cells), people who participated in the program had significantly higher GPAs than those who did not participate, $x^2 (df, 2) = 6.12, p < .05, \phi = 0.10$. In looking at the full range of grades in the Overall rows of Table 2, GPA levels of <4, 4+, 5+ and combined 6+ and 7, overall participants who participated in the program received better grades than those who did not, $X^2 (df, 3) = 17.44, p < .01, \phi = 0.13$, this strong effect again reflecting the strong benefit of participation on reducing failing GPAs.

In comparing the grade distribution for each of the OP bands, participation in the *Pathways Program* had a significantly enhancing effect for OPs 13-15, $X^2 (df, 3) = 32.27, p < .001, \phi = 0.35$ and OP 1-9, $X^2 (df, 3) = 17.46, p < .001, \phi = 0.28$, but not for OP 16+, $X^2 (df, 3) = 1.99, ns$, nor OP10-12, $X^2 (df, 3) = 4.55, ns$, with this last effect being influenced primarily by the 2009 cohort. In 2007 and 2008, these participants also showed a significant benefit for participation.

In sum, the statistical analyses point to the program having a very strong effect upon improving pass rates. The program also has a weaker, although still statistically

significant, beneficial effect on passing GPAs. These results thus indicate significant academic improvements for most students. The program seems to be less effective with those who achieved the worst entry levels.

Discussion

There are a number of factors indicating that academic effects of the *Building Pathways to Academic Success Program* can be relied upon. Firstly, the outcomes are based upon a large number of participants who are representative of the campus community. Secondly, and more importantly, the data are based upon three replications from 2007 to 2009. While the data for individual years are not reported, the essential findings of the study are by and large replicated for each cohort and any exception has been noted. Thus, we are confident in the outcomes of the study.

The most robust finding is the reduction in failure rates for those participating in the program, even if we allow for the possibility that their participation may already indicate a stronger motivation to learn from the beginning, and therefore a higher likelihood of success. The conduct of the *Building Pathways to Academic Success Program* appears to produce highly successful outcomes for those with mid range OP scores (10-15). These results replicate over the 3 years of the longitudinal study. For those students who did participate in the enabling program the probability of failing their first semester of study decreased from 39% to 12%. Given the student profile of local enrolments, this intervention quite specifically targeted students' needs and produced an improved pass rate for first year students.

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For students with upper range OP scores (1-9) who attended the *Pathways Program*, the probability of failing their first semester dropped from 30% to 5.4%. As achieving early success with university study encourages academically able students to persist (Yorke, 2004), this program has the subsequent benefit of improved university retention much beyond what would previously have been considered possible.

The second aspect of the data is that the program also produced academic benefits by way of increased GPA for those students who achieved passing GPAs at the end of their first year of studies. Thus for most students, participating in the program produced both benefits of increased chances of passing and increased overall GPAs.

While most participants benefited from the program, the one disappointing outcome of the research is that those with the lowest entry academic credentials (OP 16+) did not appear to benefit academically from participation in the program. This suggests that a more targeted, and probably more protracted, intervention is needed with this particular group.

The USQ Springfield student cohort is characterised by high percentages of low SES students, and first in family to attend university students. The *Building Pathways to Academic Success Program* is designed to address these concerns in a proactive, rather than reactive manner. The timing of the program aims to address the risks before they become realised as acknowledged in *The Future of Higher Education: Beyond the Campus* report (2010). Tinto (2007) argues that activities such as those conducted in the program should be integrated with the mainstream

of institutional academic life. *Building Pathways to Academic Success Program* is a first opportunity to connect with the tertiary experience through developing relationships with peers and academic staff, in a model that supports the early academic needs of tertiary students. Kift and Nelson (2005) advocate activity that engages students in the critical first days with academia, which they have called "transition pedagogy" and this enabling program was designed to provide this transition pedagogy for local needs.

The outcomes of the current study were limited to GPAs at the end of the first semester of study. Two obvious questions follow from this research. Firstly, is the initial student success maintained across the lifetime of the students' time at university? Secondly, is initial success related to retention rates? Data to evaluate these questions is currently being collected. Further research will be conducted to track graduates of the longitudinal study in order to determine if the program sustained its positive results across four years of study.

The current paper only addresses the academic benefits of the program. The development of the *Building Pathways to Academic Success Program* gave consideration to the importance of social preparedness and the continuing effects of this social inclusion in the design of the program. As anxiety reduction and student connectedness are both prevalent themes in much of the literature, future exploration of the psycho-social benefits of the program are warranted.

The success of the program suggests other possibilities. Rather than being seen as an add-on, it could be incorporated into the official campus Orientation. In addition, at

risk students, for example commencing international students or second year students at risk of failing, could be invited to join the program. These extensions of the program are currently being trialled. A comparative study across the new interest groups would provide additional credibility to the *Building Pathways to Academic Success Program*.

Conclusion

This program may provide the opportunity for academic success for traditional and non-traditional students alike, and it may also provide direction that many tertiary institutions will be looking for in order to meet the national productivity targets established in 2009 after the release of the Bradley Review (Bradley et al., 2008). Currently, there is a global focus upon widening participation and retention in higher education, and it is proposed that the *Building Pathways to Academic Success Program* can provide a useful model that may be transferable to other contexts across the higher education sector.

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