Track and Connect: Enhancing student retention and success at the University of Sydney. A Practice Report

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Abstract

In 2012, staff in Student Support Services at The University of Sydney piloted an early intervention program to increase first year student engagement and retention. Founded in best-practice, evidence-based research, the Track and Connect program was developed in response to a study into first year undergraduate student attrition by the University's Planning and Information Office, in consultation with Counselling and Psychological Services. Track and Connect provides tailored advice and support to students identified as at risk of withdrawal from a key first-year subject by demographic markers and on-time data. Trained senior peers contact these students and provide information, encouragement and service referrals at key decision points throughout the semester. This report outlines the program's development, implementation and early outcomes, and identifies areas for refinement and expansion.

Background

In 2011, Student Support Services (SSS) and the Planning and Information Office (PIO) at the University of Sydney conducted an Early Attrition Analysis (EAA) to identify demographic risk factors that may contribute to early attrition in the first year undergraduate student population (University of Sydney, 2011). The EAA found that over 550 undergraduate first year students leave tertiary study prior to the HECS census date, generally the fourth week of semester. This previously uncounted early attrition showed students entering via alternative pathways, students who are first-in-family to attend university, rural and/or remote students, students with a disability and students from low socio-economic backgrounds were most susceptible to withdrawing from their studies within the first year at the institution. In consultation with Counselling and Psychological Services (CAPS) and informed by the best practice research published by Professor Sally Kift, recipient of a Senior Australian Learning and Teaching Council Fellowship, and Professor Vincent Tinto (Kift 2009; Tinto 2012), SSS staff responded to this data in 2012 with the development and piloting of an early identification and intervention strategy for at-risk first year undergraduate students, called Track and Connect.

Track and Connect focuses on the transition period for incoming first year students, following Tinto's (2009, p. 3) observation that many students who achieve entry to university are unprepared for the academic demands of tertiary study. As Devlin (2010, p. 1) argues, focussing on access for students from a diverse range of backgrounds is not enough. There needs to be a corresponding focus on building confidence, skills and resilience to encourage student retention and achievement after admission to higher education. Track and Connect is a proactive and preventative rather than a reactive approach, in line with local examples of best practice (Nelson 2014, p. 10). It identifies students at risk of discontinuation early in semester and links them to available resources, personal support and academic assistance through individualised, appropriate and timely advice. The program aims to send the message that it is good to ask for help sooner rather than later and that there are skills that can be developed to ensure students thrive in their studies rather than just survive.

The dissemination of the program's promising results in 2013 to the First Year Working Group and The Senior Executive Group (Education) spurred the formation of the Retention Working Group that endorsed the University-wide implementation of Track and Connect in 2014. Acknowledgment of the program's early success also led to the creation of the Student Transition and Retention (STAR) Team in 2013, and propelled the expansion of Track and Connect from 2 subjects in 2 faculties with a pool of 882 students in 2012; to 7 units of study across 4 faculties with 4,775 students in 2013; to 24 units, including first year postgraduate and intensive mode-of-study subjects across 9 faculties for a total of almost 8,000 students in Semester 1 2014. The program was awarded the University of Sydney's prestigious Vice-Chancellor's Award for Support of the Student Experience in 2014.

Program methodology

An environment scan of existing intervention strategies at other domestic and international institutions included the

Early Alert Program at the University of New England; the Student Success Program at the Queensland University of Technology; the JumpSTART Program at Curtin University, and the First-Year Experience Program at Auckland University of Technology (Nelson & Creagh, 2013). JumpSTART was identified as the most readily adaptable to Sydney's institutional needs due to its demonstration of the effectiveness of individually contacting students who are not maintaining satisfactory progress at key points throughout semester. The development of the Track and Connect program from this inception included the initial application of an academic buoyancy tool, the Motivation and Engagement Scale, developed by Professor Andrew Martin (Martin, 2012); contact at key decision-making points of the semester (e.g. before the HECS census date) as a "call to action" for students; faculty identification of units of study known to be historical "stumbling blocks" to student progression for program participation; and the use of demographic factors identified in the EAA to initially profile students enrolled in these units for indicating risk.

Track and Connect aims to transform the student experience by bridging the gap between student and staff expectations and helping students source support to navigate academic concepts, institutional terminology and policies from the beginning of their university career. Recent research on learning analytics and optimum student progress in the first year of tertiary study identifies the first 2-6 weeks as the crucial timeframe in which students engage and connect, or conversely, disconnect with their tertiary institution (Brown & Evagelistis, 2011). Track and Connect uses demographic information and additional risk factors identified by faculty, such as lack of assumed prior knowledge (e.g. Advanced Mathematics for maths- based disciplines), to initially identify students who may be at higher risk of withdrawal. Throughout the semester, faculties provide on-time data including assessment results, tutorial attendance and Learning Management System (LMS) access. This academic and engagement data is combined with the demographic variables to generate priority student lists for contact at the three key decision-making points throughout semester: the HECS census date when students can withdraw without academic or financial penalty; the Discontinue Not Fail (DC) date (generally week 7); and in the lead up to exams and final assessments in the final weeks of semester. In addition, all students enrolled in participating units are emailed at each call period with information about key dates, links to University support services and tailored, faculty-based assistance.

Self-directed help-seeking behaviour and resourcefulness are central to student engagement, success and wellbeing (Lizzio 2006; Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). The timing of Track & Connect call outs is intended to enable students to proactively influence their outcome within a unit of study, whether through accessing academic assistance, support services, or faculty advice relating to their likelihood of success and options for withdrawal and re-enrolment once the student feels better prepared. The program also emphasises student-to-student contact, enabling the provision of advice and referrals between peers with the aim of minimising student anxiety about institutional contact. It focuses specifically on responding to particular areas of student concern or need with referrals to appropriate services and resources so that contacted students retain agency in addressing any issues.

While all communications are generated centrally through SSS, faculties are consulted for their input in the text of emails and call scripts. De-identified responses recorded by the callers are provided in summary to faculties so they have immediate feedback after each call period. This immediate advice allows unit coordinators the opportunity to proactively respond to any trends or issues raised by students, to provide additional academic assistance and see the impact of the program in relation to their students' progression statistics. The preventative benefits of the program model were noted by a key staff member in the Faculty of Science, who said: *The direct connection to our "at risk" students in Week 4 was extremely powerful [and] very valuable; we were able to sort out what were fairly small issues before they escalated into big ones.*

Literature on retention, attrition and the first year experience in higher education shows that the early actions performed by an institution can enhance or constrain students' persistence and engagement within the university environment (Thomas, 2012; Tinto, 2009). Key factors which enhance persistence include institutional commitment and expectations, support, feedback, and student involvement with the learning environment (Tinto, 2012). Track and Connect encompasses these factors through the devotion of university resources to a dedicated retention program; the use of on-time, data-based indicators for early intervention; proactive referrals to available support services and resources; and prompt provision of feedback to academic staff facilitating two-way communication flow. A growing body of literature on learning analytics in higher education demonstrates the role data on student learning experiences can play in informing pedagogy (Clarke & Nelson,

2013). The structure of the program is also supported by Kift's transition pedagogy for first year learning, because it: aids transition to the university learning environment; recognises student diversity; scaffolds learning support and success; engages students by showing they are important as individuals to the university; allows for immediate feedback to students and staff; and is evidence-based with constant monitoring and evaluation to ensure the program's success (Kift, 2008). The personalised methodology, pro-active support and collaborative approach across the University has led to consistent and cohesive implementation across a range of disciplines, while taking into account the uniqueness of each unit of study.

Early results

Following a small, opt-in pilot program across 2 units of study in Semester 2, 2012, Track and Connect was re-developed in 2013 to an opt-out support program—a refinement that garnered endorsement from participating faculties. Evaluation of Track and Connect in Semester 1, 2013 indicated a noticeable impact on student retention across 4 participating units of study in the Engineering & IT, Science and Business Faculties (across a comparable time period to the pilot). Overall attrition lowered from 19% (N=3,147) in 2012 to 7% (N=2,727) in 2013; in particular, withdrawal prior to the HECS census date dropped from 15% in 2012 to 3.5% in 2013, suggesting that at-risk students were being engaged and supported through the program and were persisting at university. There was also an improvement in student success year on year, with a higher percentage of students receiving passing grades: 73% in 2013 compared to 67% in 2012.

An indicative snapshot from one cohort (n=498) in a large compulsory first year undergraduate unit in 2013 demonstrates the correlation between contact with students and student success trajectories.

indicates that the program has produced an increase in pass grades compared to Semester 1, 2013 (n=601) which is proportional to the decrease in fail grades and drop outs, as shown in Table 1.
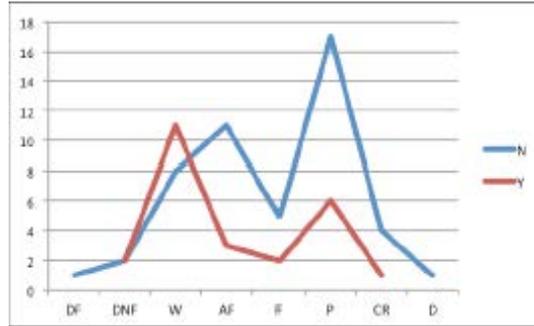

Figure 1: **Comparative distributions of contacted (Y) vs. not contacted (N) students**

AF Absent Fail   DNF Discontinue Not Fail
CR Credit   F Fail
D Distinction   P Pass
DF Discontinue Fail   W Withdrawal

Figure 1 indicates that the identified at-risk students who were successfully contacted were more likely to either withdraw from the unit prior to the HECS census date or to pass the unit than those who were not. Withdrawal prior to the HECS Census date may indicate reconsideration of subject choice, which enables students to avoid potential financial and academic burdens. The contact group also appears to have a lower rate of Absent Fails (12% rather than 22%), and Fails (8% as opposed to 10%). Absent Fails proceed from failure to meet assessment and attendance requirements and can indicate students are not engaging with their studies.

A more recent snapshot of a cohort participating in Track & Connect for the first time in Semester 1, 2014 (n=595)

Track and Connect has run over four full semesters, and is well under way in its fifth; and as the program has developed and expanded each participating faculty has been able to individualise the program to meet their own objectives and desired outcomes. Due to the flexibility of the program in both application and evaluation, it is possible to draw early measures of success through a range of qualitative and quantitative data. However, the overarching qualitative measure has been the feedback from students regarding the value of the personalised peer-to-peer support and the referrals to key support services delivered through the program. During the first call period of the current cycle students reported variously that they were glad to be a part of the program in light of a *real lack of interaction so far* in

Table 1: *Distribution of Grades from 2013 – 2014*				
Rate	**2013**	**2014**	**Difference**	**Movement**
Drop-out	19.1	12.6	-6.5	Decrease
Fail	3.8	2.5	-1.3	Decrease
Pass	76.8	84.7	7.8	Increase

their university experience; and that they appreciated knowing there was a *point of contact* for support and referral. Students across the ten cohorts contacted received referrals to Disability Services, Career Hub, Financial Support, CAPS and internal faculty resources in accordance with their stated circumstances and needs. A trained student staff member making calls to identified students said that: *Track and Connect goes a long way in normalising accessing support, whether for financial aid, study skills, or encouraging contact with their tutors and lecturers.*

Refinement and expansion

Demographics

Initial indications from reports for Semester 1, 2014 suggest that the expansion of the program into new disciplines with discipline-specific modes of teaching and learning introduces new factors for the STAR Team to consider. The program's initial success took place in the Engineering, Business and Science faculties and it has since expanded into several Humanities subjects. Looking forward, consideration is required regarding whether differences in pedagogical methods across disciplines will require program refinements, including: what assumed knowledge or academic competencies are necessary for these units; what kinds of diagnostic assessments or

engagement data are representative of student comprehension, engagement and progress; and whether other demographic factors such as language proficiency may be particularly relevant. With first year postgraduate units also recently included in the program, there may be a need to gather data indicating factors that may influence attrition specific to this cohort, such as work or carer responsibilities, and the period of time since completion of an undergraduate degree.

The team anticipate several longitudinal studies to determine why the program seems to be effective in influencing students. Over time, STAR would like to investigate the relative efficacy of individual demographic factors in determining success in student retention through the analysis of differences between retention rates in Track and Connect and non-Track and Connect units of study. In conjunction with the evaluation of existing demographic indicators of risk, there is room to consider factors other than those highlighted in the EAA, such as language proficiency and study load, as well as the relative relevance of particular factors at different stages in the semester. Initial analysis shows that often the students flagged and contacted early in the semester do not reappear on later priority lists. The team would like to drill down into contact data to determine whether those contacted across the semester support demographic indicators or whether the

majority of first year students, irrespective of economic status and educational experiences, are likely to struggle during their transition to University.

The STAR Team has recently developed a short survey for students participating in Track and Connect to gather qualitative data on student impressions of the program. In the long term we would also like to gather data on the ongoing impact of Track and Connect participation on students' academic careers. This could take the form of a survey given to Track and Connect students from the initial semesters of the program still enrolled in senior years, to gauge their perception of the influence the program had on their longer term engagement and resilience, with an academic follow-up using Weighted Average Marks, overall progression and success.

Teaching and Learning

The usefulness of formative assessment as a diagnostic tool not only for retention initiatives like Track and Connect that blend proactive and reactive approaches, but also for engagement more generally, has been widely demonstrated (Black & Wiliam 1998; Nicol & Macfarlane 2006). Given that the effectiveness of retention programs is enhanced by linking them to classroom learning and assessment structures (Tinto 2006), the STAR team needs to consider how best to support the inclusion of formative assessment in different disciplines. Diagnostic assessment may itself rely on assumed knowledge, so the absence of prerequisites for any units at The University of Sydney has implications for the program in negotiating a fit between students and courses. Strategies to aid students to find the course that is right for them during the period of enrolment and the crucial early weeks

which follow—such as an explicit articulation of assumed knowledge in specific courses—may be an area for enhanced collaboration between the STAR Team and participating faculties. Conversely, early identification of a skills or expectation gap may lead to the development of preliminary bridging courses prior to semester commencement. Student reports of significant difficulty with the workload in key "stumbling block" units may precipitate an opportunity to support them in making more appropriate course selection, rather than dropping out altogether. Furthermore, preliminary analysis suggests that the feedback provided to participating faculties by Track and Connect may be having an unforseen impact on course delivery, enabling coordinators to address components of the learning experience consistently reported by students as particularly challenging. Long-term investigation into this effect would enable further enhancement and refinement of the program.

Conclusion

The Track and Connect program is currently in its fifth cycle, with promising early results and an increasing level of faculty participation. The STAR Team are engaged in ongoing refinement and expansion of the program's methodology, delivery and reporting. We anticipate that a longitudinal analysis of the program's impact over coming cycles will enable us to investigate further several key variables in the program's efficacy, and to contribute to a growing body of research on student retention and transition in Australia and internationally.

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