

Paper title – Flag and Follow: A whole of institution approach to early identification and intervention for students potentially at risk

Claire Brown, Institute for Diversity, Educational Access & Success, Victoria University
Yolanda Evagelistis, Faculty of Health, Engineering and Science

Retention and FYE literature identify a number of critical indicators that flag students who may be potentially at risk of dropping out. Information on some of these demographic indicators is collected at point of entry to the University via the enrolment form. VU staff undertook a retrospective study of 2010 enrolment data to determine how many and what combination of indicators best identified students who were potentially at risk. These indicators are being trialled to “flag” students at potential risk before classes commence. Students are “followed” and, using a team approach, early interventions are developed to support and scaffold student learning. Retention of these students is a shared responsibility for academic and professional staff alike, and a major priority for a whole-of-university approach. The aim is to develop a university-wide, inter-departmental, collaborative model that has an evidence-based, data-driven approach to informing and implementing student engagement and retention initiatives.

Research Background and Context

VU currently has a net attrition rate of around 20% in Higher Education (HE) and Vocational Education (VE), and 25% in Further Education (FE). With Federal and Council of Australian Governments (COAG) demands that universities increase the numbers of students coming from diverse and under-represented populations such as low SES, early identification and intervention strategies need to have a focus that is appropriately researched, evaluated and resourced with effective practices shared by the whole university community to ensure these students not only enter university, but successfully complete. Faculties, Schools and courses at VU have each been tackling ways of improving their specific rates with varying degrees of success and even more varying degrees of collaboration and sustainability.

A recent study in 2010 by Tony Adams, Melissa Banks, et al., assessed the cost of attrition across 12 Australian case study universities and looked at retention initiatives being implemented. They found that “every 1% drop in attrition would save Australia’s public universities almost one billion dollars, or up to \$2.6 million per university” (Adams, Banks, Davis, & Dickson, 2010, p. 18). They reported one case study where the institution had “adopted an approach whereby students who are identified as being at risk are monitored for progression and performance....Results to date show that those who were assisted stayed the course better than those who were not and in some instances had higher performance rates” (Adams, et al., 2010, p. 16).

Retention, Attrition and First Year Experience (FYE) literature shows that student retention can be improved significantly if students in their first year of tertiary study develop a sense of engagement and connection to the institution within the first six weeks of semester. Levitz and Noel noted that

The freshman's most critical transition period occurs during the first two to six weeks (1989, p.66)
(cited in Woosley, 2003).

Similarly, Pascarella and Terenzini emphasised the importance of the first few weeks. They suggested that "the initial encounters with the institution and its people can have profound effects on subsequent levels of involvement and aspirations for intellectual achievement" (1992, p.4), (cited in Woosley, 2003). Upcraft and Gardner suggested that a particularly important factor for freshman students is "establishing close friends, especially during the first month of enrolment" (cited in Woosley, 2003).

Thus, researchers and practitioners have emphasised the importance of a student's initial experiences on campus and suggest that these experiences play a critical role in a student's future success. In response to FYHE research, many universities have developed comprehensive transition programs seeking to engage students in the first six weeks of their first year in particular.

Researchers emphasise establishing early identification schemes for students at risk of failing and systematic monitoring of the adjustment of first year students (McInnis James & McNaughton, 1995); (Rickinson & Rutherford, 1996). They suggest that criteria need to be set in order to identify various groups of at risk students in parallel with intervention or support programs addressing their specific needs.

They suggest there are first year students who do not understand the difference between school and university, or who are so lacking in fundamental skills that they are not ready to take responsibility for their learning. Admitting these students without providing adequate support services and then criticising them for failing to match up to implicit expectations would clearly be a case of blaming the victim. Early detection schemes for students at risk of failing are an essential first step in dealing with this problem. These mechanisms are now more common, but there are still courses which do not provide an adequate opportunity for students to make an early assessment of their progress or of specific strengths and weaknesses (McInnis, James, & McNaught, 1995, p. 8).

Flag and Follow Pilot Study @ VU

The Flag and Follow project is based on the work of Tinto and others as summarised by Alan Seidman (Seidman, 1996).

Simply stated, the theory posits that individual pre-entry college attributes (family background, skill and ability, prior schooling) form individual goals and commitments. The individual's goals and commitments interact over time with institutional experiences (the formal and informal academic and social systems of an institution.) The extent to which the individual becomes academically and socially integrated into the formal and informal academics and social systems of an institution determines the individual's departure decision (Tinto, 1993).

So important is the early identification of students potentially at risk that Alan Seidman (1996) has defined "retention" in the light of this concept. Seidman's "formula" is well known for encapsulating the various elements of the retention equation:

Retention (R) equals Early (E) Identification (Id) + Early (E) Identification (Id) & Intensive (In), Intervention (Iv) (Seidman, 1996).

Seidman identifies a combination of resources that most universities can already access.

Colleges have the data now to identify the characteristics of students who were unsuccessful in past semesters and years. Using this [sic] data, a profile of unsuccessful students can be developed. As students apply and are accepted, profile data can be used to identify "at risk" students and

intervention strategies could be developed and implemented at the first available time, even prior to actual enrolment and continued throughout the semester of student's [sic] college career.

Flagging the students potentially at risk

VU has developed a methodology for a “Flag and Follow” pilot study, which draws on Seidman’s proposition that institutions can make better use of existing institutional data to predict those students who may be most at risk of not completing even before they commence their studies. Having predicted who may be at risk early, the institution can then ensure appropriate interventions are available for these students if and when they are required.

The purpose of the pilot study is to:

1. Identify effective ways of identifying students as early as possible who are potentially at risk of attrition and following them up with timely, personalised interventions that improve student retention and success. Retention of these students will be a shared responsibility for academic and student support staff alike, and a major priority for a whole of university approach. This project involves a comparison of information derived from enrolment data, formative testing and student performance across key indicators that will be monitored for students deemed to be potentially at risk by relevant academic and professional staff. Using a grounded theory approach, details about the most effective types of interventions will be developed in response to findings emerging from this pilot study.
2. Develop a whole of institution, inter-departmental, collaborative model that has an evidence-based, data-driven approach to informing and implementing student engagement and retention initiatives. The model is being developed by the Institute for Diversity, Educational Access and Success (IDEAS) and includes staff from faculties, learning and teaching, academic, student support and institutional services areas.

Early identification using enrolment data

Retention, Attrition and First Year Experience literature identify a number of critical indicators that describe students who may be potentially at risk of dropping out. Information on some of these demographic indicators is collected at point of entry to the University via the enrolment form. Institutional services staff undertook a retrospective study of 2009 enrolment data to test a number of the indicators and determine how many and what combination of indicators were common among students who discontinued their studies in 2010 at VU. The most common indicators were found to vary from Faculty to Faculty and indeed, program to program, but some indicators were found to be more predictive than others.

In an unpublished paper entitled, *Factors Empirically Associated with Students “At- Risk” for Attrition*, Joe Cuseo identifies the demographic and academic characteristics of students most at risk in the USA (Cuseo, 2011b). Demographic characteristics include:

- First-generation student
- Low-income student
- Unmet financial need
- Financially independent from parents
- Dependent children
- Single parent
- Hispanic or African-American ethnic/racial background (particularly males)

Several of these indicators, as well as previous academic information, appear as fields on the VU enrolment form. Other indicators we would like to include, such as first in family, or course of first choice, are yet to be captured by institutional data collection strategies. Students potentially at risk of failing were identified based on any of the following:

- Having a number of flags highlighted from selected enrolment data fields
- Failure to attend classes in the first six weeks – tutorials or laboratory sessions
- Poor proficiency in the first assessment task administered around week 5 as per the Student Assessment and Progress Policy and/or poor results from the Post Entry Language, Literacy and Numeracy Assessment conducted as part of a VU Language, Literacy and Numeracy (LLN) pilot study
- Poor written and/or spoken English as referred by relevant staff
- Poor numeracy skills for courses requiring mathematical knowledge and skills
- Students who engage in cheating, plagiarism, or academic misconduct
- Students who self-refer to any of the intervention initiatives established at VU

Using the findings from the initial 2009 enrolment data analysis, a pilot study of approximately 100 students in each of the three HE courses was set up in first semester 2011. Prior to the start of semester, enrolment forms for the students in the study were analysed and students with the respective indicators were flagged from their enrolment form data and identified as students who were potentially at risk. Prior to week 1, students potentially at risk were ‘flagged’ confidentially to the retention officers and the research associate. The research associate maintains a database and recording system to “flag and follow” these students during their first year of study.

A team intervention approach to “follow” students potentially at risk

Joe Cuseo states that

Although early-alert systems still lack a strong base of outcomes-based evidence, the early-process does implement a number of theoretically sound principles of program delivery...

- a) Proactive delivery: early-alert programs deliver *early feedback* and take *preventative* action to short-circuit student difficulties in an *anticipatory* fashion—*before* they require reactive (after-the-fact) intervention or eventuate in student attrition.
- b) Intrusive delivery: early-alert programs *initiate* supportive action by *reaching out* to students and bring support *to* them—as opposed to “passive programming” that waits for students to seek out support on their own.... Early alert represents a process of intrusive, course-integrated student support that has the potential to reach a larger number of students than passive, stand-alone support programming.
- c) Targeted delivery
- d) Personalized delivery (Cuseo, 2011a)

The Flag and Follow project is building a student-centred, collaborative team approach to providing early intervention strategies using proactive, intrusive, targeted, personalised delivery for students at risk. It is being tested in a university-wide team approach that involves academic staff, academic advisors, faculty retention officers, student support staff and researchers. The efficacy of the interventions is being analysed by staff in the Governance, Policy and Planning Services and the Teaching and Learning area. Additional staff from other areas of the University, such as the Student Engagement portfolio will also contribute to the data analysis and team approach to retention in second semester.

Retention officers are following the students’ progress, particularly during the first six weeks of semester, to ensure student at risk are referred promptly to academic or any other support they require. Referrals are reported to the research associate who records the details of the

alert and any interventions recommended. Retention officers continue to follow up with intrusive contact as appropriate for each flagged student and any further intervention or development is documented by the research associate.

Project Evaluation

To improve the reliability and validity of the way data is collected and coded, a research associate has been employed to coordinate, enter and analyse the data. The pilot study and related interventions will be evaluated by comparing pilot group outcomes to the outcomes of a matched control group. This control group will be selected to match the demographic characteristics of the students included in the pilot sample. These two groups will be compared on:

- a) end of first semester outcomes; semester 1 results, student progress rate, semester 2 re-enrolment; and
- b) end of first year outcomes, end of year results, student progress rate, second year re-enrolment.

Control group data will provide comparative analysis and allow the comparison of student outcomes. Student Progress Rate (units passed/units attempted) and retention rates will be the key data sources for evaluation. Aspects of the project to be evaluated are the efficacy of:

- using enrolment data to identify students “potentially at risk” before they commence their academic program
- the reliability and validity of using single or combinations of identified demographic and academic indicators to predict students potentially at risk and monitor students’ progress, especially through the first year of study
- tracking students’ academic progress from week 1 in combination with predictive demographic and social data collated from enrolment forms to ensure effective intervention strategies are implemented as soon as a student is flagged as being potentially at risk
- targeted LLN interventions to supplement a suite of academic intervention programs
- an interdisciplinary, student-centred, collaborative team intervention model

Session Outline

1. Introduction to the session (2 minutes)
2. First Activity: Hooks and blocks – analysing case studies and own practice – Pairs (5 minutes)
3. Flagging and Intervening – Presenter Discussion (5 minutes)
4. Group Discussions – Linking to own practice and possibilities: What are the ‘dumb rules’ that get in the way of retaining students? (10 minutes)
5. Conclusion and questions – (5 minutes)

References

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