

Outreach: A local response to new imperatives for Australian universities

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Introduction

Since 2005 the Australian government has required publicly funded universities to operate and report regularly on an outreach program with the aim of attracting to higher education people from one or more of the population sub-groups (equity groups) that are formally recognised as under-represented among students in the system.

Prior to this directive many Australian universities were already engaged in activities to recruit students, including from under-represented groups¹. However, formalisation of outreach requirements has entailed some additional consideration about where to focus effort, such as whether to target specific groups, and has required greater attention to planning and monitoring outreach activities and their outcomes.

This chapter describes one way in which Monash University, Australia's largest university in student enrolments, responded to the outreach directive. Monash is a broad-based university with ten faculties (i.e. academic divisions) and more than 55,000 students across six campuses in Australia - one in metropolitan Melbourne, two in suburban areas, two in outer suburban areas and one in regional Victoria. Monash is also global in scope: there is a Monash campus in Malaysia and another in South Africa. Students from over 100 countries other than Australia make up nearly a third of Australian enrolments, while nearly 5000 Monash students are enrolled in overseas programs, mainly in the Asia Pacific region.

Monash had previously operated a number of programs and activities that aimed to recruit students, most of which continue today. Some are university-wide (e.g. 'Open Days') while others operate on particular campuses of the university, or within specific faculties or departments.

As demand for places at Monash University is generally high, with some variations by campus, faculty and course of study, recruitment programs have tended to focus more on the student mix than on increasing student numbers, i.e. on enrolling students with particular characteristics or from particular backgrounds (e.g. students with demonstrated academic excellence, students from disadvantaged backgrounds).

Following the new outreach directive, Monash University's Equity and Diversity Centre commissioned and conducted a project, *Researching Outreach*, to inform the university's planning and monitoring of its outreach activities. This chapter describes the context for the project and its main findings.

Context: Equity in Higher Education

Since 1990, six population sub-groups have been recognized as under-represented in higher education in Australia:

¹ For instance, Monash University and the University of Melbourne were both operating initiatives to recruit students from rural and remote areas and Australian Indigenous students.

- Aboriginal and Torres Strait Islander people
- People from a non-English speaking background
- People with disabilities
- People from rural and isolated areas
- Women in non-traditional areas of study
- People from socio-economically disadvantaged backgrounds.

Publicly funded universities must provide the Australian government with regular reports on their plans to recruit and assist people from these ‘equity groups’ and must collect statistical data on participation and progress. Indicators of access, participation, success and retention are used to measure the equity performance of individual institutions and the higher education system as a whole. They show that since the mid 1990s, progress has been made for some groups such as students from non-English-speaking-backgrounds, but despite more than a decade of concerted equity activity, low SES groups, Indigenous Australians and people from rural and isolated areas remain significantly under-represented relative to their share of the population.

Equity research has highlighted a number of reasons for slow progress, including that many students are members of more than one equity group and experience multiple or compound disadvantage. Overlap is most commonly found between the Indigenous, regional and low socio-economic status groups. Low socio-economic status is the most pervasive element of disadvantage and when combined with other forms of disadvantage presents formidable barriers to participation for these groups (Clark et al. 1999, p 42).

The barriers to participation in higher education that people in many of these groups experience have also been exacerbated by government policy changes which have seen a reduction in public funding for higher education and the transfer of some education costs to students, resulting in substantial increases in the education tax students are required to pay for publicly funded places and the imposition of other fees and charges. Income support provided by the Australian government for full-time enrolled students provides funding at a level below the recognised poverty line and taxation of equity scholarships and bursaries further disadvantages students from low income backgrounds. Consequently, research has found that many students are spending longer hours in full time paid employment² - a phenomenon that can create difficulties for students in finding adequate study time and for university staff in timetabling classes and assessments.

Equity at Monash University

Measured against indicators of access, participation, success and retention Monash University’s equity performance has been patchy. Students from non-English-speaking-backgrounds are recruited and retained at rates higher than the national average, while the proportion of students from low socio-economic, rural and isolated and Australian Indigenous backgrounds remains below the national average.

Particular challenges for the university are achieving improvements in the access of low income students and variations in the equity profile of students at its various campuses. For example, the majority of students enrolled in Monash’s two large suburban campuses are drawn from the top 25 percent of income-earning households, while large numbers of students from low income

² Approximately three quarters of full time students in Australian universities spend nearly 15 hours per week in paid employment (AVCC 2000)

backgrounds are enrolled at the regional campus, which is located in an area suffering from high unemployment and the effects of a long term drought.

The University seeks to overcome these equity challenges by providing scholarships and bursaries, building articulation pathways with institutions in the vocational education sector³ and flexible timetabling of classes to accommodate students' employment commitments. An *Access Monash* outreach program has been developed in the catchment areas of two campuses to work with schools which have low transfer rates to higher education. In all these endeavours, the university's Equity and Diversity Centre provides a consultancy service to assist the institution and its individual faculties and administrative divisions to embed equity into all their operations.

Findings of the Outreach Project

The outreach project commissioned by Monash University's Equity and Diversity Centre comprised a survey of the literature on outreach programs and the collection and analysis of data from multiple sources tracking student progression to higher education from schools within the Monash catchment area. The literature review sought information about planning, implementing and monitoring outreach programs and good ideas from other institutions, particularly for reaching disadvantaged students. The statistical work sought to find and test a method for selecting specific schools for targeted outreach activity.

Program targets

In general, university outreach programs either aim to build relationships with the wider community or to recruit students. While their objectives differ, the two program types tend to overlap in practice as activities to build community relationships, such as the dissemination of information about university activities and university engagement in community activities, can also promote participation; and vice versa.

Given limited resources, universities seeking to recruit disadvantaged students often choose to focus their outreach programs in one or two specific areas. Their choices are influenced by factors that include perceptions of greatest need; estimations of likely success; the views of governments and communities; the desire to differentiate themselves from other institutions; and the internal structures and politics of the institutions themselves.

Most outreach programs target secondary school students, particularly those in upper grades where students make choices about post-school options. A smaller number focus on younger students or work with students over a number of years⁴. There are also programs that target other groups including 'adult learners', mature age people, students in other post-secondary education institutions, (such as the further education sector in the U.K., community colleges in the U.S.A. and Canada and the vocational education sector in Australia); disadvantaged young people not in education; and ex-offenders.

Programs that target secondary school students may focus on a particular sub-group, for instance, students from low socio-economic groups; students from minority population groups (e.g.

³ Such as Technical and Further Education (TAFE) Colleges

⁴ For instance: at Portsmouth University in the U.K. the 'Up for it' program is a 'membership scheme' for 11 to 16 year olds that aims to increase awareness of a variety of course and career opportunities
<http://www.upforitclub.org.uk/upforit/>

Indigenous); students identified by their teachers as ‘gifted and talented’ in a particular field; or students with academic ability who are unlikely to continue to higher education.

In most cases, outreach programs aim to increase enrolment by targeted students within the university, rather than in a specific course or field. However, a small number of programs seek to encourage and support students to enter a specific field of study such as Medicine, or a branch of Science.

Program elements

University outreach programs contain many different elements, with variations reflecting the knowledge, expertise and creativity of those who plan and develop them. Within this variation, some elements are reasonably common, including:

- School visits – university staff visit schools to provide information about courses and careers
- ‘Taster days’ – program participants are able to ‘sample’ university life for a short period
- Preparatory/access courses – programs that provide bridging pathways into higher education; or that assist students to reach the academic level where they can apply for enrolment
- Academic enrichment activities – universities provide resources and activities to increase the knowledge and interest of program participants – especially in particular fields
- Open days and visits to regional areas – events at which universities distribute information and provide guidance to people interested in enrolling.

Among slightly less common elements are: activities involving participants’ families; partnership schemes – e.g. with post-secondary educational institutions or community organizations; student shadowing – where a program participant follows an existing student over the course of a day or longer; student mentoring – where existing university students are paired with a program participant to provide support and guidance; and the provision of financial resources to enable the participant to complete study that will enable them to enter higher education.

Particularly unusual elements are intensive use of the internet and preparatory courses combined with access to ‘ring-fenced’ places, or ‘bonus’ entry points.

Less common elements are not necessarily less effective. They may be new ideas that are yet to be adopted more widely. Conversely the most common elements are not necessarily the most effective – their frequency may merely reflect historical practice.

Among the identified elements the low level use of the internet as a means of reaching young people is particularly surprising. Given that many programs focus on young people – and that young people tend to be high level users of the internet – it might be expected that more universities would use the web as a substantial component of their outreach activities. While some information is available on websites, with only a few exceptions their use is generally basic and uninspiring.

Evaluation methods

Caution about the methods used to evaluate outreach programs – and the results achieved – is a recurring theme in the literature, despite strong support for a view that outreach programs have a positive impact. A Californian review of outreach programs (PACE 1997) notes specific deficiencies in evaluations including that long-term outcomes are rarely measured; and that most evaluations are not explicit about how the various program components and performance indicators fit together. They also fail to compare program components. This review notes the need for accurate information on the students who participate in outreach programs and the benefits they accrue. It also indicates that program goals and intended outcomes must be

defined, distinguishing between short term, intermediate and long term outcomes. It further suggests that:

1. Programs should develop clear and measurable performance indicators.
2. Program interventions must be clearly described and implemented.
3. Evaluations must be carefully designed to attribute results to interventions.
4. Evaluations should connect outcomes and cost.

The review promotes ‘a multi-level, multi-method approach’—rather than a single method approach—because different types of studies can answer different questions.

The literature indicates that most evaluations tend to be less complex than the PACE review recommends. Two evaluation methods are mainly in use:

- Student exit surveys e.g. from access/bridging courses or other program elements
- Indicators of the number or proportion of participants in a program who subsequently enrol in a university course, complete academic requirements or meet other objectives.

What makes a successful outreach program?

The literature identifies a range of factors that contribute to the success of programs. Most common are: local factors such as how programs are organized and the individuals involved; the selection of appropriate program elements to achieve objectives; responding to the characteristics of the target group; and taking a longer-term approach.

For instance an evaluation of an Australian program that focused on ‘disconnected youth’ notes that ‘the key to engagement’ is offering opportunities for the young people to return to education ‘in ways and settings in which they can cope’ (DEST 2004). An evaluation of a joint project between two universities to develop an outreach model for country students with disabilities (Young and Ryan 1998) recommends the use of the internet to reach young people, especially in rural and isolated areas; and the use of existing students to act as sources of information and as workshop leaders. A study of an access program at the University of South Australia (USANET) points to the need for a long-term approach:

...for outreach to be successful, a long term relationship between the university and schools needs to be developed. This cannot be achieved during the second half of Year 12 alone. Cultural barriers exist in some disadvantaged schools that prevent students from having equitable access to university entrance. ... to further reduce the impact of cultural barriers, longer term contact is essential, through a series of outreach actions over the course of a secondary student's career, commencing in Year 8 and continuing to Year 12 (Ramsay, Tranter, Charlton and Sumner 1998).

For outreach programs targeting school students, PACE (1997) identifies five ‘essential principles’:

- The importance of academic and social support in providing bridges to connect the students' different worlds of family, community, and university
- Strategically timed interventions. For instance ‘interventions in elementary school can be successful in helping disadvantaged students keep up with their age-mates’ and ‘the later high school years can be better used to help many more students become well-prepared for college’

- Comprehensive interventions can be more effective than single-component strategies. Multi-faceted interventions help disadvantaged students overcome the many barriers to full educational participation
- Interventions are more effective when sustained over time. Supports should continue from before entry to higher education through to completion of the study
- Outreach programs are more effective when they are well-integrated into schools, rather than operating at the margins.

Selecting secondary schools

Monash University's catchment area includes a number of schools with high proportions of students from low socio-economic status (SES) backgrounds. Given the limited resources available to support outreach activities, the project investigated a method for the university to use in selecting specific secondary schools from among this group for targeted outreach activity.

The statistical analysis looked firstly at the relationship between school characteristics and university enrolment rates. It then examined the relationship between school characteristics and applications for university enrolments. Work addressed the question: would it be feasible to select schools with low student transfer rates to university, given their level of academic achievement?

Context: the transition to University

In the state of Victoria, most students apply for a university place through a centralised application system (VTAC) on the basis of their academic results in the final year of schooling (Year 12). A few apply on the basis of incomplete Year 12 studies or other criteria. Admission to some courses is based on interview, portfolio presentation, scores in selected subjects or a combination of these. A small number of students apply through an alternative vocational pathway - the majority proceeding directly to further vocational studies, such as apprenticeships.

Just over a third (35 percent) of domestic students from a given grade cohort enrol in university, including students who are offered and accept a place, but defer their enrolment for 12 months.

It is important to remember that the transition from school to tertiary education occurs in a broader context of school completion. Nearly a quarter (23%) of students in school Year 8 in 2000 did not enrol in Year 12 in 2004.

School characteristics and university enrolment rates

The relationships between school characteristics and university enrolment rates are combinations of effects. The variables considered for the statistical analysis were: academic achievement rates; apparent retention of students; the socio-economic status of students; school sector (government, catholic or independent school); non-English speaking background students; gender; Indigenous students ; and students from rural areas.

Table 1 shows the results of fitting a regression equation predicting the percent of students enrolling at university through the centralized application system by some of these variables for 474 Victorian secondary schools. This simple regression equation explains much of the variation between schools in the percent of their students enrolling in university and is statistically significant (R-square of 0.84). The regression coefficient provides a direct interpretation of the size of the effect of each variable on university enrolment rates. For instance, it shows that an increase of one percent in the percentage of Australian born students increase the schools university enrolment rate by 0.18 percent.

The results point to a selection process that is strongly influenced by academic achievement, but influenced at the margins by social characteristics. The intrusion of extraneous variables such as family background means that the process does not necessarily reward the most able students.

Looking in turn at each variable:

- *Academic achievement:* The level of academic achievement at a school is the major driver of university enrolment.
- *Apparent retention:* Higher retention rates at a school are associated with higher university enrolment rates. An increase of one percentage point in retention is associated with an increase of nearly a tenth of a percentage point in university enrolment rates.
- *Socio-economic status:* Schools with a higher socio-economic student profile have higher university entry rates than schools with a lower socio-economic student profiles. While the relationship is more than modest, it is substantially less strong than most of the achievement variables considered collectively and similar in strength to some of the other social background variables.
- *Non-English-speaking background:* Holding all other measured school characteristics constant, the higher the percentage of students from English-speaking backgrounds in a school, the lower the rate of entry to university for that school.
- *Gender profile:* The percentage of females in a school has no effect on university entry.
- *Indigenous profile:* The percentage of students who are Indigenous has no effect on a school's university enrolment rate controlling for other effects. This is probably due to the relatively small percent of Indigenous students in Victorian schools and the effect of other variables.
- *Remoteness:* Holding other school characteristics constant, schools in Moderately accessible and Accessible areas (labelled Remote in the table) have a higher rate of university entry than students from remote areas.

Table 1 Percent enrolling at university by selected variables

Variable	Regression coefficient	T statistic	p	Standardised coefficient
Median Year 12 (VCE*) study score	1.74	4.20	0.00	0.28
% VCE study scores 40 or over	0.55	4.76	0.00	0.19
% VCE studies completed satisfactorily	0.23	2.17	0.03	0.05
Mean ENTER** score	0.73	7.90	0.00	0.45
% retention between Years 11 and 12	0.09	2.17	0.03	0.05
SEIFA*** index of advantage/disadvantage	-0.03	-3.68	0.00	-0.10
% English speakers	-0.23	-4.20	0.00	-0.18
% Australian born	0.18	2.84	0.00	0.12
% female	0.01	0.83	0.41	0.02
% Indigenous	0.26	0.86	0.39	0.02
Remote school	2.54	1.98	0.05	0.04

Notes: R-square=0.84, F-ratio=188.78 (13,473), p=0.00. OLS regression. Based on 487 schools.

* Victorian Certificate of Education

** A university entry score calculated from Year 12 results

*** The Australian Bureau of Statistics (ABS) publishes Socio-Economic Indicators for Areas (SEIFA). The indicators are based on census data and indicate the relative socio-economic advantage or disadvantage of an area.

School characteristics and university application rates

The project also analysed data illuminating the relationship between school characteristics and university application rates, exploring the influence of the same set of variables. Results included:

Academic achievement: The achievement variables generally show the expected relationship—higher levels of achievement are associated with higher application rates. However, the mean score for each student based on their overall results was not related to application rates. Stronger predictors of application were the median score for each Year 12 subject and the percent of subjects satisfactorily completed. Students experience their performance within subjects and it may be this experience that influences their application rates.

Apparent retention: The apparent retention between Years 11 and 12 for a school is positively related to application rates—a school with a ten percent higher retention rate than another school has an application rate that is 1.5 percent higher, all else equal. The size of the relationship is moderate.

Socioeconomic status: Schools with higher socioeconomic profiles have higher university application rates, all else equal. The relationship is not particularly strong, but it is statistically significant even after allowing for differences in academic achievement.

Other variables: None of the other variables has a statistically significant relationship with university application rates holding the influences of other variables constant. There is some indication that remote schools have slightly higher university application rates than other schools, but the relationship does not reach statistical significance.

Conclusions

In the short-term, the effectiveness of outreach activities that aim to encourage students from lower socio-economic backgrounds to enrol in higher education may be increased if these activities target schools that have an existing reasonable level of academic achievement at the senior secondary level. That is, if they target schools that achieve average or better results, while also having a substantial proportion of students from low socio-economic backgrounds. These schools can be identified by using a combination of data sources and the statistical techniques used for this project.

In the longer term, outreach activities might target schools with lower levels of achievement and aim to assist them to improve results by supporting students over a number of years. There are a number of programs operating in other universities in Australia and overseas that serve this purpose which provide examples of good practice potentially adaptable for use by Monash University.

When developing outreach programs that target secondary schools it is important for the university to build relationships with individuals and organizations (such as schools) over time and maintain a focus on long-term rather than short-term outcomes. The following issues also need to be considered:

- (i) Even if the process of student selection for university from Year 12 is based purely on academic merit, it is the result of educational and social processes acting on students over 16 or 17 years. More than three in every ten students do not complete Year 12 and the academic results of those who do may be influenced by family background and other characteristics.
- (ii) A school's apparent retention of students between Years 11 and 12 is related to university entrance rates – the higher the retention rate, the higher the university enrolment rate. Schools possibly lose lower achieving students before Year 12. The retention rate of a school reflects something about that school such as the characteristics of its student population, location, or engagement of students.

(iii) Most of the difference in university enrolment rates between schools with different socio-economic profiles seems to be between the highest quartile and the rest. There is no real difference between the second and third quartiles and the bottom quartile is only slightly lower. The rate for the top quartile is about 17 percentage points higher than the middle two quartiles.

Finally it is important to have in place mechanisms, such as a student information system, for collective and individual evaluation of outreach programs. In addition to establishing program interventions which can be clearly described, measurable performance indicators are also essential. Evaluation of outreach programs need to connect outcomes with costs and should be set up to attribute results to interventions. Ideally monitoring and evaluation should be “built in” to outreach programs planning processes.

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