

The parable of the search for low SES students: how ANU could turn high SES applicants (water) into low SES students (wine)

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Abstract:

On 9th March 2009 the Deputy Prime Minister and Minister for Education, Employment and Workplace Relations, the Hon. Julia Gillard MP, announced the “need for enhanced equity in tertiary education, with a focus on improving the accessibility of tertiary education for all Australians”. To this end the Government announced that it “has set a target that by 2020, 20% of higher education enrolments at undergraduate level should be from low socio-economic backgrounds”.

The Australian National University (ANU) is committed to supporting this notion and to exploring ways in which it can play its part as Australia’s national university. However, ANU is continually ranked as having one of the lowest participation rates of students with a low socio-economic status (SES) background in the nation.

A major issue for ANU is that the home residence for 70% of the student population is the Australian Capital Territory (ACT) which, according to the postcode measure of SES, is defined as mostly high SES. For areas surrounding the ACT, the story is similar. Students enrolling at ANU from regional areas such as the Riverina and South Coast generally reside in the larger population areas such as Wagga Wagga and Bega which are regarded as medium SES. The number of low SES students in our immediate catchment is relatively small due to the lack of population in those areas.

So under this definitional constraint, how could ANU turn high SES applicants (water) into low SES students (wine)? This paper explores some of the options available.

Introduction

On 9th March 2009 the Deputy Prime Minister and Minister for Education, Employment and Workplace Relations, the Hon. Julia Gillard MP, announced the “need for enhanced equity in tertiary education, with a focus on improving the accessibility of tertiary education for all Australians”. To this end the Government announced that it “has set a target that by 2020, 20% of higher education enrolments at undergraduate level should be from low socio-economic backgrounds”.

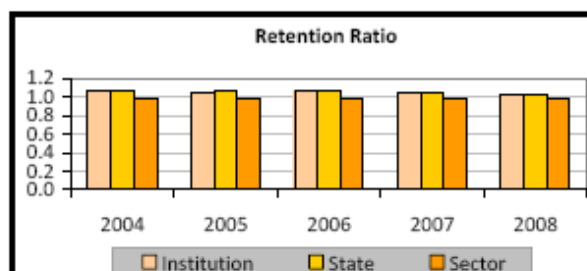
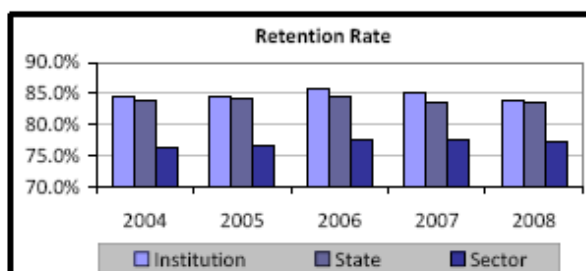
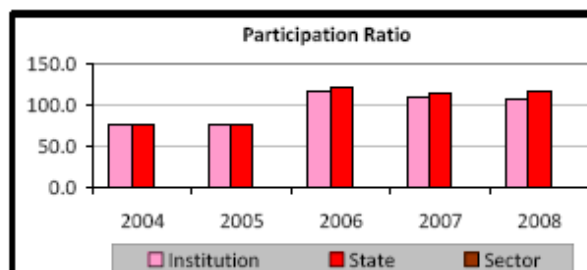
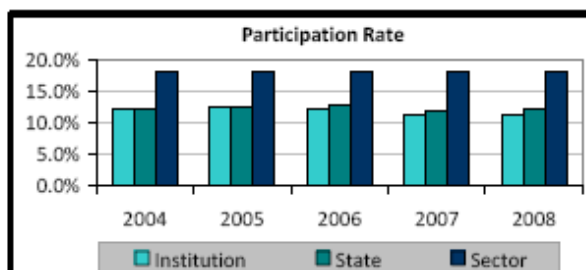
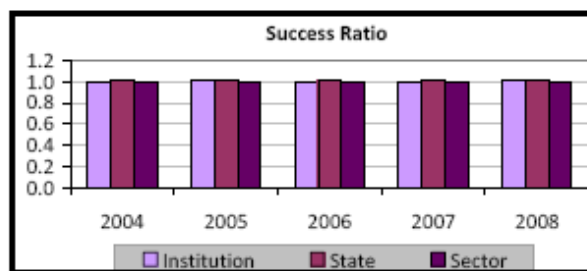
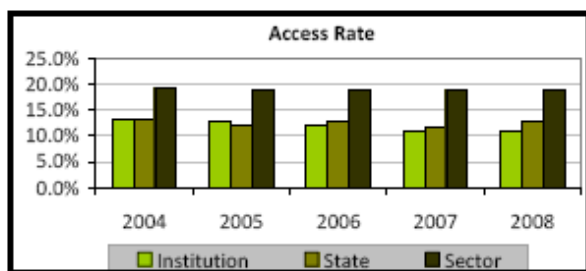
Minister Gillard also noted that, “Importantly, every higher education institution must play its part. Our elite institutions have by far the lowest proportion of low socio-economic status enrolments. While uniformity will never be possible or desirable, every institution should be able to improve its social inclusiveness. To quote Professor Bradley: ‘Social inclusion must be a core responsibility of all institutions that accept public funding, irrespective of history and circumstances’.

The Australian National University (ANU) is committed to supporting this notion and to exploring ways in which it can play its part as Australia’s national university. Using the current measure of

low socio-economic status (SES)¹, however, ANU performs poorly compared to many other Australian universities.

Table 1 – IAF Equity Performance Indicators – Low SES (all ages)

		2004	2005	2006	2007	2008
Access Rate	The Australian National University	4.07%	3.99%	4.11%	3.78%	4.53%
	State – Australian Capital Territory	4.08%	3.79%	4.72%	4.12%	4.85%
	Sector	15.44%	15.46%	15.69%	15.92%	16.05%
Participation Rate	The Australian National University	3.69%	3.65%	3.76%	3.81%	4.01%
	State – Australian Capital Territory	3.87%	3.88%	4.17%	4.01%	4.24%
	Sector	14.80%	14.68%	14.78%	15.02%	15.09%
Retention Rate	The Australian National University	81.10%	84.23%	85.63%	87.61%	83.62%
	State – Australian Capital Territory	80.70%	84.62%	84.92%	84.84%	83.05%
	Sector	76.62%	76.70%	78.10%	78.06%	77.25%
Success Rate	The Australian National University	90.76%	93.26%	93.66%	93.58%	92.01%
	State – Australian Capital Territory	91.03%	91.86%	92.53%	91.49%	88.92%
	Sector	85.83%	86.08%	85.98%	85.47%	85.68%



Data source: DEEWR 2009 Institutional Performance Report – the Australian National University

Table 1 shows that from 2002 to 2008 ANU had a percentage of low SES students accessing the University between the lowest percentage in 2007 of 3.78% and the highest percentage in 2008 of 4.53%. This compares with the national average of 16.05% in 2008.

¹ Refer to Attachment 1 for definition and methodology for determining low SES

Participation rates are correspondingly low (4.01% in 2008, going as low as 3.65% in 2005 against a national rate of 15.09% in 2008). However when looking at retention and success rates, ANU consistently performs above the national averages. This would suggest that low SES students, once admitted to ANU, have a better than average chance of being retained in their course and for successfully completing that course.

Inadequacy of postcodes

The common measure of low SES is determined from a student's home postcode. The status of each postcode is then simply the average of the socio-economic status of the residents within that postcode. Therefore within any postcode there is a possibility that there could be a mix of levels of socio-economic status. Thus individuals living within that postcode district may represent the 'average' or they may be different to that. Currently there is no real way of knowing for the individual what their particular status may be.

This is significant for a locality such as the Australian Capital Territory (ACT) where almost all postcodes are defined as high SES (several are defined as medium SES but none are defined as low SES). However according to the ACT Council of Social Sciences Report (Cassells, 2007) there are significant pockets in each locality within the ACT that hides low socio-economic status residents. On average the report claims that about 13.6% of ACT households could be defined in the lowest Australian equivalised quintile of income in 2007. In North Canberra this proportion was as high as 21%. So despite the 'postcodes' telling us that most localities are either high or medium SES, there is quite a sustainable argument that a number of households would fall into the category of low SES based on income.

This argument extends to major regional centres outside of the ACT and which would naturally fall within the catchment of ANU. These areas would include Young, the Riverina and the South Coast of New South Wales (NSW). High schools in regional areas tend to be centred within the largest of the region's towns/cities. And in many instances these major centres are classified as medium SES again disguising the fact that many students from those areas would be from low SES households.

A further complication is that, even if the student was originally from a low SES background prior to attending ANU, once attending as a student they could easily change their home postcode to the ACT thus appearing to be from either a high or medium SES background. This is particularly the case for continuing students.

Professor Richard James, Director of the Centre for the Study of Higher Education at the University of Melbourne, has recently been reported as supporting this view. He suggests that "postcodes are useful indicators in national aggregate terms..., but as measures of performance of individual institutions they are blunt and inaccurate" (The Australian, 2009). He also suggests that the "postcode measure must be replaced, and fast."

It is anticipated that the introduction into the DEEWR Student Data Collection of parental education will provide, in conjunction with postcode, a better measure of socio-economic status than postcode alone. It will not fully resolve the issues outlined above but it will go a long way towards providing a more reasonable measure. Professor James believes that a student's parental education is indicative of the likelihood of a student completing school and for them to aspire to study at a university. He doesn't suggest that this measure is conclusive in any way but is less 'blunt' than the postcode measure.

Professor James also suggests that state based targets would provide a more sensible way to proceed “for these will create the conditions for coalition-building between universities”. This would certainly be the case for the ACT.

A further consideration may be to look at Centrelink data that the universities provide on a regular basis. This is more likely, perhaps, to provide the individual assessment of a student's socio-economic status that is needed. Roughly around 2,000 ANU students per year are deemed to qualify for Centrelink assistance as they meet their income or asset test or qualify for a pension. This represents ~22% of the domestic coursework student population, that is, well in excess of the 4-5% that DEEWR constantly refer to.

If these attributes could be added to the postcode and parental education aspects, then we would be seeing quite a different picture of our student population and one that is much more realistic. Of course this would apply equally to all universities, but it would possibly reduce the large and unfair variability that currently exists.

Barriers to access

There are a number of barriers that make it difficult for potential low SES students to access study at ANU.

The greatest opportunity for institutions to provide access to potential low SES students is to be located near or adjacent to clusters of low SES postcodes. Conversely those institutions centred in areas of high or medium SES find more difficulty in providing access to low SES students, although institutions in large metropolitan cities with campuses located in medium or high SES districts can still provide access to low SES students as long as the distances are not excessive and transport routes support that access.

Table 2 - UAC Offers by Institution and Low SES, 2008

Institution	All Offers	Enrol rate	Defer rate	Low SES Offers	LSES as % of All Offers	LSES Enrol rate	Low SES Defer rate
Institution A	2479	46%	27%	102	4.1%	35%	36%
Australian National University	2866	53%	20%	124	4.3%	44%	23%
Institution B	11311	62%	8%	626	5.5%	61%	7%
Institution C	5461	62%	8%	307	5.6%	59%	6%
Institution D	9796	61%	9%	572	5.8%	63%	7%
Institution E	2653	57%	7%	173	6.5%	62%	3%
Institution F	7349	68%	8%	540	7.3%	65%	5%
Institution G	3076	70%	14%	269	8.7%	71%	14%
Institution H	12043	66%	7%	1385	11.5%	71%	5%
Institution I	308	12%	24%	37	12.0%	5%	19%
Institution J	4181	46%	16%	543	13.0%	44%	16%
Institution K	2036	43%	16%	356	17.5%	38%	16%
Institution L	27	37%	15%	5	18.5%	40%	20%
Institution M	1405	39%	33%	280	19.9%	47%	27%
Institution N	426	24%	28%	85	20.0%	32%	22%
The University of Newcastle	9353	53%	18%	1929	20.6%	58%	17%
All UAC	74770	59%	12%	7333	9.8%	59%	12%

In contrast to the ACT universities, several universities in regions of low SES postcode clusters benefit from this measure. For example the University of Newcastle is located in the Hunter

region which has a large number of low SES postcodes surrounding the university. 'The University's main undergraduate catchments are the Hunter, Central Coast and Mid North Coast regions, which are all areas containing higher proportions of low SES, high unemployment and low levels of transition to higher education in comparison with state and national figures' (The University of Newcastle, 2008).

It is evident from Table 2 above that the University of Newcastle provides greater access to low SES students (20.6% of offers in 2008 and 21.2% of offers in 2007 to low SES applicants) well above the national averages. Offers to low SES applicants by the University of Newcastle are clustered around those areas identified above, namely the Hunter, Central Coast and mid North Coast regions. The Shortland and Ourimbah campuses are very well placed within the Hunter and Central Coast clusters. Of course in order to increase access the University of Newcastle has invested in a wide variety of schemes to encourage and support low SES students. Their enabling programs (Open Foundation and Newstep) have the largest enrolments of any scheme in the nation. TAFE articulation and bridging programs complement these enabling programs. The success in providing access to higher education in their regions is now reflected in their figures.

Similarly the University of New South Wales gains the majority of their low SES applicants from a cluster of postcodes within their immediate catchment. In 2008 almost 75% of low SES offers were made to Sydney Central, Western Sydney and Central Coast applicants. These localities are all within commuting distance of the Kensington campus.

In the case of the ACT, and in particular ANU, neither the distances nor the transport infrastructure support low SES students living at home and travelling daily to ANU's Acton campus. This, in conjunction with the limited availability of appropriate accommodation in the ACT, has a significant impact on ANU's ability to provide access for low SES students.

The barriers in ANU's broader regional catchment are as much to do with sparsely populated areas within that catchment as anything. There are no large populations of potential low SES students. The significant regional centres from which ANU draws its students such as Wagga Wagga and Bega are themselves classified as medium SES. Any other low SES locations in that Riverina and South Coast catchments provide very small numbers of school students (see Table 3).

To draw students from the larger centres where there are greater clusters of low SES students such as western Sydney, ANU starts to compete with a number of other universities such as the University of Western Sydney, the University of Sydney, the University of New South Wales, the University of Technology, Sydney and Macquarie University. Likewise in northern Victoria, town populations are small. Further south into Victoria where there may be a greater density of low SES populations, ANU again meets competition from La Trobe University and other Victorian institutions. The cost of relocation and accommodation away from home also impede low SES student mobility and diminish the attractiveness of ANU, despite our high educational standing.

Table 3 - Low SES ANU Offers by Location and School, 2008

Regional Location	School Name (if known)	Pref		
		1-3	Offers	Enrols
Murray	Albury High School	2	1	
	Billabong High School	2	1	1
	Caulfield Grammar School - Caulfield Campus	1	1	1
	Corowa High School	2		
	Finley High School	2	1	
	The Scots School-Albury	7	2	
	Unknown	2	1	
Murrumbidgee	Canberra Grammar School	1		
	Junee High School	1		
	Kincoppal - Rose Bay School of The Sacred Heart	1	1	1
	Monash University	3	1	
	The Riverina Anglican College	1		
	Tumut High School	8	3	1
	Wade High School	1		
South Eastern	Unknown	4	1	1
	Australian National University	3	1	1
	Bombala High School	4	1	1
	Canberra Grammar School	1		
	Eden Marine High School	5	1	1
	Hennessy Catholic College	1		
	Lumen Christi Catholic College	3		
	Murrumburrah High School	1		
	St Catherine's School	2	1	
	St Gregory's College	1		
Technical and Further Education - New South Wales	1	1	1	

Even with these structural barriers, ANU still performs surprisingly well in attracting interstate applicants from low SES areas.

Chart 1 – Low SES Offers through NSW/ACT Universities Admissions Centre

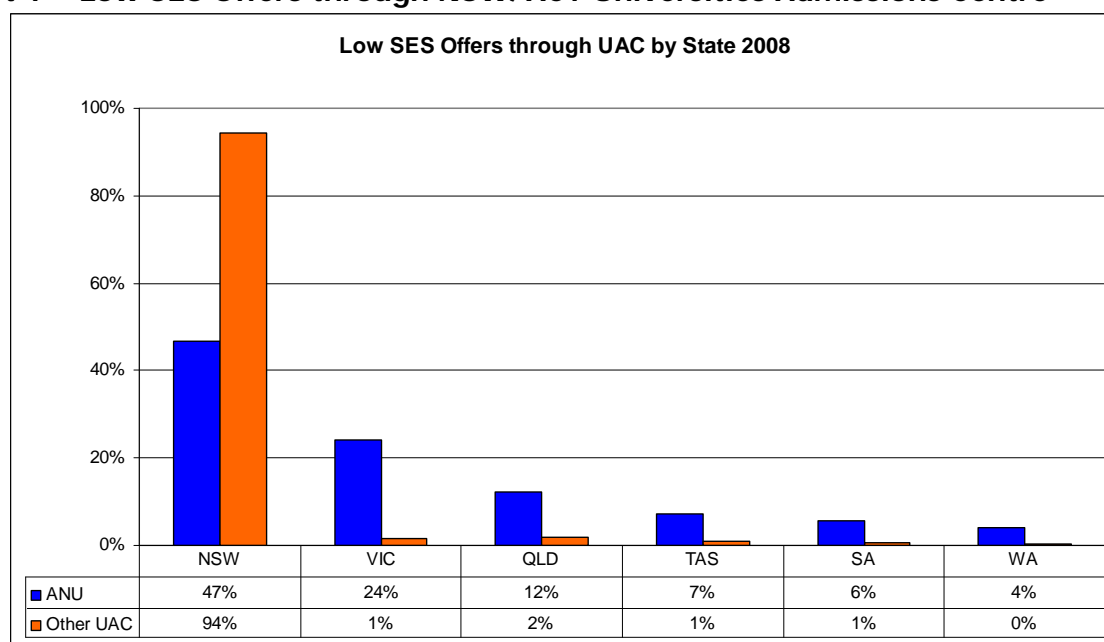


Chart 1 shows the proportion of offers made through the NSW/ACT Universities Admission Centre (UAC) to low SES applicants by state of origin. In 2008 only 47% of ANU's low SES offers were to NSW applicants; the other 53% were to applicants from other Australian states (24% from Victoria; 12% from Queensland; 7% from Tasmania; 6% from South Australia; and 4% from Western Australia). For all other institutions in UAC, 94% of low SES offers were made to NSW applicants i.e. only 6% of low SES applicants from states other than NSW received an offer from another institution.

ANU is therefore able to attract low SES students from all states within Australia at a higher rate than any other institution in UAC. However the numbers overall are generally small - of the ~2900 offers made in 2008 only 124 were made to low SES applicants i.e. 4.3%, 66 of which were from outside of NSW. This would suggest there are national opportunities that ANU could explore and harness.

Key markets

ANU continues to draw approximately 70% of its domestic undergraduate students from the ACT. The majority of these students would be designated as being from a high SES background; the remainder would be medium SES (only about 5%).

Table 4 - Proportions of Low SES ANU Enrolments, 2007

Home Area	Home Division	Total
NSW	Central West	5.43%
	Hunter	10.87%
	Illawarra	3.26%
	Mid-North Coast	7.07%
	Murray	2.17%
	Murrumbidgee	11.41%
	North Western	2.72%
	Northern	0.54%
	Richmond-Tweed	1.09%
	South Eastern	4.35%
	Sydney	9.24%
NSW Total		58.15%
Queensland		14.67%
South Australia		1.63%
Tasmania		8.15%
Victoria		15.22%
West Australia		2.17%
Grand Total		100.00%

The main non-ACT areas ANU draws its low SES students from can be seen in Table 4 above. This shows that the highest proportion of low SES enrolments comes from Victoria (15.2% of all low SES), followed by Queensland (14.7%), the Murrumbidgee/Riverina area (11.4%), the Hunter (10.9%) and Sydney (9.2%) in 2007.

From regional NSW there are a number of key markets from which ANU draws its undergraduate domestic students:

- Queanbeyan;
- Monaro centred on Cooma;
- South Coast / Eurobodalla;
- Riverina centred on Wagga Wagga ; and
- Central West NSW centred on Orange.

The main centres in these areas are generally designated medium SES.

Australian Capital Territory

As previously stated, the ACT is predominantly high SES according to the postcode measure. ANU enrolls approximately 70% of its students from the ACT. But there are a number of households within the ACT that fall within the lowest Australian equivalised quintile of income. Many of the students attending ANU from these households could arguably be defined as from a low SES background. However at this stage there is no way to quantify the extent to which this is occurring.

It could be further argued that students from these households may not achieve the same Universities Admission Index (UAI) as students from wealthier households and thus may not be in a position to compete for an ANU place. In order to understand this situation more clearly, more detailed analysis would need to be undertaken.

ANU is actively participating in discussions with all of the local education providers to firstly develop meaningful alliances that deliver educational opportunities that would not otherwise be available. ANU, with the University of Canberra (UC), is looking to develop several 4-year combined degrees in teacher education whereby the science, arts, Asian studies, commerce etc. components are undertaken at ANU and the teacher education units taken at UC.

Discussions have also been held with the ACT Department of Education and Training with a view to enhancing school participation rates making these students more university ready. Similar discussions are occurring with the Vocational Education and Training (VET) sector through the Canberra Institute of Technology (CIT) to develop useful and achievable pathways into higher education courses at ANU.

Although these programs are not solely focussing on providing greater access to higher education for disadvantaged groups, it is probably implicit that those currently least likely to have access to higher education are most probably from these disadvantaged groups.

Outside the Australian Capital Territory

In 2009 the Director of Student Equity set up the ANU Regional Program, in order to attract more low SES and rural and regional students to the ANU. The Program is being trialled in Young in first semester 2009; in second semester it is being extended to schools in Goulburn, Bega, Eden and Pambula. These regions have been identified as low or medium SES areas and from which very few students have been attracted to ANU in recent years.

Riverina and South Coast

ANU has been engaging with both the Riverina and South Coast regions over the past few years. Demand for places from these areas has increased over that time. However many of the students coming from these areas are from the major centres in those regions which, as stated previously, are predominantly defined as medium SES. Table 4 indicates that the Murrumbidgee/Riverina area provides the largest NSW population of low SES enrolments.

The competition for university places in this area would be between Charles Sturt University, the University of Canberra and ANU. Cooperation between ANU and the University of Canberra continues to be strong and endeavours in this area could be further strengthened.

In consultation with the Young community (parents and teachers), ANU students (known as ANU Community Ambassadors) work intensively with students in the middle secondary schools in the

two local high schools. Partly this is to raise awareness of and aspirations to university study as a future option, and partly to inform Young students about the many exciting and challenging study programs available at the ANU. The development of these ANU-to-school networks and sponsored visits to the Acton campus are encouraging greater interest of these communities in ANU study.

In Semester 2 2009, the Ambassador Scheme is being expanded to encompass Goulburn, Bega, Eden and Pambula. The University of Canberra is also developing an enhanced presence in these areas in much the same way as ANU.

Alongside ANU's presence at the Kioloa Research Station north of Bateman's Bay, and at the Rural Clinical School Teaching Facility in Young, ANU's brand and reputation continue to be enhanced in these regions.

Despite all of the encouragement and connectivity that these programs promote, the barriers to these potential students remain; relocation and accommodation expenses. Until there are targeted scholarship schemes, say to encourage high achieving, socially disadvantaged students to relocate to Canberra, and that provide the appropriate support that these students need, the impact of such programs will at best be peripheral.

Interstate

Chart 1 indicates that applications from interstate applicants through UAC are much stronger for ANU than for any other institution making offers through UAC. Furthermore, Table 4 shows that ANU attracts low SES students from both Victoria and Queensland.

There may be (some) potential to attract low SES students from South Australia through our partnership with the University of South Australia (Uni SA). Currently it would be difficult to compete with the three universities located in South Australia for those low SES students.

Through its alliance with Uni SA, ANU will be endeavouring generally to provide Uni SA students access to ANU courses and facilities. But there is also a greater opportunity to provide indigenous students from South Australia valuable opportunities to undertake ANU courses which they otherwise may not have had access to.

ANU already has a number of scholarship schemes to encourage and support indigenous students to undertake study in Canberra. These include: Indigenous Australian Graduate Scholarships; Forestry Department Scholarship for an Indigenous Student; Indigenous Students' Practical Legal Training Scholarship; Joseph & Lindsay Croft Scholarship; Leonard Broom Scholarships; Nugget Coombs Scholarship; Elspeth Young Memorial Grants; Judith Wright Scholarship; Malcolm Stewart Scholarship; St Vincent de Paul; Rotary: Alf Gillespie Scholarship for an Indigenous Australian; Baume Travelling Scholarship; Duguid Travelling Scholarship. For example the Judith Wright Scholarship was established in memory of the late poet and environmentalist, and was designed to assist female Indigenous students who are in the second year of undergraduate study. A number of the scholarships are designed to assist young Indigenous students to travel to conference or to help them undertake field work.

The alliance with Uni SA will provide even greater opportunities for indigenous students through allowing greater access and scholarship support.

Current equity initiatives

ANU currently operates a Countrywide Access Scheme as one of the Educational Access Schemes operated through UAC. This scheme provides potential students, who have suffered some form of disadvantage, access to ANU.

Individuals may apply for special consideration under the scheme according to the following criteria:

- Disrupted Schooling
- Financial Hardship
- Severe Family Disruption
- Adverse Study Conditions
- Suffered Abuse
- Excessive Family Responsibilities
- English Language Difficulty
- Personal Illness/Disability
- School Environment
- Geographical Isolation

Depending on the level of disadvantage, applicants are given up to five (5) bonus points. In 2008, ANU made 123 offers to applicants through the Countrywide Access Scheme, 42 of which went to school leaver applicants in the ACT². Not all of these students would necessarily be from low SES backgrounds.

Unmet demand

ANU has investigated the possibility that there may be unmet demand for university places from low SES applicants who receive a UAI above 80 (the minimum ANU cutoff in 2009) and who currently do not either apply or who don't receive an offer for a university place. Of the 20,470 UAC applicants who received a UAI of 75 or higher, only 77 failed to receive an offer of any kind in the 2009 admissions rounds. Of those 77, only seven were from a low SES background and only four had a UAI over 80. This would suggest that there would be little potential for ANU to target this category of applicant.

Further of the 22,242 students who received a UAI over 75, 979 did not apply for a university place in either NSW or the ACT. Of that 979, only 77 were from a school³ located in a low SES area. It should be noted that of those who failed to apply for a university place only 109 were from the ACT, and of those only 78 had a UAI over 80.

If we have a closer look at those 77 students who failed to apply for any course, 45 (58%) were from Northern NSW, 5 (6%) from Western NSW, 12 (16%) from Southern NSW and 15 (20%) from the Sydney region. As either Western or Southern NSW would be potential catchment areas, then possible numbers are again very small. Therefore it would seem fairly obvious that there is no large portion of the NSW school population who ANU could target through an equity scheme.

Conclusion

The Australian National University has historically had low access and participation rates for low socio-economic status students well below the national average. In contrast, retention and success rates have regularly been above the national average. This therefore suggests that, given the opportunity to enrol in ANU courses, low SES students will have a valuable and successful learning experience.

² This does not suggest that these applicants would only have received an offer having received the bonus points

³ UAC could only provide school postcode data for students who received a UAI but did not apply to a university.

A definition of low SES based on postcodes acts as a barrier to access for potential ANU students as the majority of domestic undergraduate applicants are from the ACT, a predominantly high SES postcode region.

ANU's lack of geographic proximity to low SES populations and the high cost of limited accommodation also act to restrict numbers. Even given this, ANU is still able to attract interstate applicants at a higher rate than any other institutions in NSW or the ACT.

A number of new initiatives in local catchments are working to raise awareness of tertiary study as a reasonable learning pathway for regional and rural communities. An Ambassador program that has been operating in the Young region for a couple of years has been expanded in 2010 to cover Goulburn and the South Coast region of NSW.

However these initiatives will only really work if we can resolve the relocation and accommodation expenses that non-local students experience. Currently the ANU guarantees accommodation for every non-local student including international students. ANU has over 3,700 beds on campus available to support this policy and is further looking to expand this number in the next few years. Modularised, 'container' accommodation (70 studio apartments) will come on-line in 2010.

But what is really needed is to redefine what constitutes 'low SES' in the ACT. From 2010, parental education is being collected and this will go some way to further refining the definition. Perhaps what is needed is to identify the status of individuals, say those on Centrelink benefits, as the best means to categorise low SES students.

ANU has a unique relationship to the nation as its 'National University'. Compact discussions in the next month with the Commonwealth will focus on leveraging this unique position. ANU will be looking for direction on how it can fulfil its national role. A scheme of full cost scholarships for high achievers from each state is one way that the Commonwealth could assist.

In order for ANU to increase access for low SES students a number of strategies have been considered and are in various stages of development.

These strategies can be undertaken by ANU in isolation or they could be developed in partnership either with other universities or with the Commonwealth Government. One of the major disincentives for students to participate in ANU courses is firstly the dislocation involved in moving from their home state and the associated costs of doing so. There is the additional difficulty in that, once in the ACT, there is limited accommodation and what there is, is quite costly.

In order to fulfil its role in providing access to high quality education to low SES students nationally, ANU is undertaking a number of initiatives.

Firstly it is investigating new ways to expand the number of low SES applicants from interstate to ensure ANU fulfils its compact with the nation as the 'national' university. It is implementing better measures for identifying low SES students in the ACT and providing pathways for them to ANU.

The current Countrywide Access Scheme provides a good access pathway to ANU courses and this scheme will be enhanced to ensure participation from low SES domestic undergraduate applicants is increased.

ANU will continue to develop markets in the surrounding region in which it is engaged with outreach and aspiration-raising activities, such as in the Young area, the Riverina district and the South Coast of NSW, to provide better access to ANU courses for low SES applicants and to develop a low SES scholarship scheme for targeted high schools.

It will also continue to develop alliances with other Australian universities that have a strong focus on equity pathways to higher education opportunities for disadvantaged students.

ANU is in a difficult but also unique position to contribute to the Government's target for increased low SES enrolments by building on its local role and national charter. The next few years will be critical if ANU is to succeed in increasing its low SES participation.

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Attachments

Attachment 1 – Definition of Low Socio-Economic Status

The measure of low socio-economic status of students was defined by L.M. Martin in 1994 and adopted by the Department of Education, Employment and Workplace Relations (DEEWR) as the “postcode of students’ home location falling within the lowest quartile of the population determined by the value of the (Australian Bureau of Statistics) Index of Education and Occupation”.

ABS’ Index of Education and Occupation considers a range of variables. The method used by the ABS, principal components analysis (PCA), creates a summary measure from a group of select variables. PCA assumes there is some common dimension underlying these variables, and creates a summary measure to capture this commonality. This summary measure represents a 'line of best fit' which is entirely dependent on the relationships (correlations) between the variables. Unlike some other methods, PCA requires the variables to be correlated. It is actually the correlations that Socio-Economic Indexes for Areas (SEIFA) is trying to capture, because this commonality among the variables is that which is deemed to measure relative socio-economic disadvantage.

PRINCIPAL COMPONENTS ANALYSIS

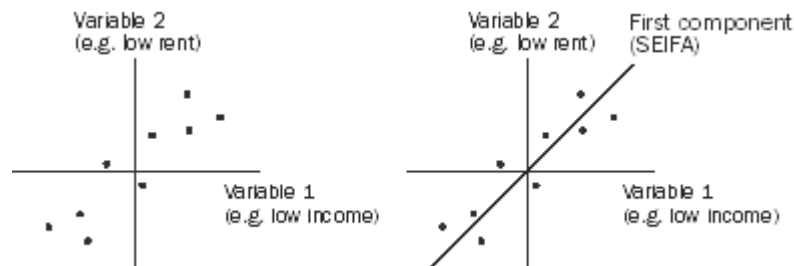
This section explains the method used to create the SEIFA indexes, called Principal Components Analysis (PCA). This brief overview is in no way intended to replace a proper technical understanding of this technique or its use, but will provide some guidance to facilitate the use of SEIFA.

OVERVIEW

The concept of relative socio-economic disadvantage is difficult to capture because it has many dimensions and because these dimensions are hard to measure. In SEIFA, PCA is used to create a summary measure of a group of characteristics. For example, the Index of Relative Socio-economic Disadvantage (IRSD) is a summary measure of a group of characteristics related to relative socio-economic disadvantage. There is no preconception about how important each characteristic is to the index. The importance of a characteristic is determined by the relationships between the characteristics themselves across all the areas. These complex relationships are used to create a 'weight' for each characteristic. A SEIFA score can then be calculated for an individual area using that area's own characteristics and the characteristic's weights.

SEIFA uses PCA to create 'components'. A component captures a common relationship between a group of variables. The figure below shows an example of two variables that are combined to produce a component. The First component is a 'line of best fit' through the variables. SEIFA uses only this First component because it captures the most information. This component becomes our measure of socio-economic disadvantage. This component is used to calculate the 'weights' of each variable, which depend on the importance of each variable to the component. A SEIFA 'score' for every area in Australia can then be determined.

To determine a SEIFA score for an area, we first multiply the variable weights by the variable values for that area, and then add together. As discussed in Chapter 2, the distribution of scores was then 'standardised', so that the average score is 1000 and approximately two-thirds of the scores lie between 900 and 1,100.



The variables below are used in the Australian Bureau of Statistics' Index of Education and Occupation (not sure of the weightings though):

INDEX OF EDUCATION AND OCCUPATION

Included Variables

- % People aged 15 years and over who **left school at Year 11 or lower**
- % People aged 15 years and over with **no post-school** qualifications
- % Employed people who work in a **Skill Level 5** occupation
- % Employed people who work in a **Skill Level 4** occupation
- % People (in the labour force) **unemployed**
- % People aged 15 years and over with a **certificate** qualification
- % People aged 15 years and over **at university** or other tertiary institution
- % People aged 15 years and over with an **advanced diploma or diploma** qualification
- % Employed people who work in a **Skill Level 1** occupation

Variables Dropped

- % People aged 15 years and over who are **still attending secondary school**
- % Employed people who work in a **Skill Level 2** occupation
- % People aged 15 years and over who **did not go to school**
- % People aged 15 years and over with **degree** or higher