

University student access and success

December 2009

Introduction

Group of Eight (Go8) universities currently provide a wide range of services and programs to facilitate access and support for students from disadvantaged backgrounds. However, Go8 Vice-Chancellors have also agreed to develop jointly a coordinated equity strategy to increase the participation and success of students from disadvantaged backgrounds.

This backgrounder reports the results of some initial research being undertaken to inform the design of the proposed joint Go8 equity initiative. The analyses are based on data from the 2009 Department of Education, Employment and Workplace Relations (DEEWR) national unit record data collection for undergraduate applications, offers and acceptances and the annual student data collection.

The Go8 Equity Strategy will be broader than the Australian Government's participation target that "by 2020, 20 per cent of higher education enrolments at the undergraduate level will be of people from a low SES (socio-economic status) background". (Australian Government, 2009, p. 13) The Government's funding commitment of \$433 million to meet this target is welcome. However, the Go8 also seeks to make a wider contribution to the national equity agenda by including other under-represented groups (Indigenous, rural and regional, women in non-traditional fields and disabled students) and by focusing on outcomes and success and access to post-graduate education.

Based on the key capabilities of Go8 universities, the main ways in which the strategy will ensure that they can contribute to a more socially inclusive higher education system are to:

- increase aspirations and readiness for those with the capacity to succeed in higher education;
- provide multiple pathways for access, including through structured arrangements with other post-secondary education and training institutions;
- improve access to graduate level courses for those from under-represented groups to facilitate better outcomes in research, the academic workforce, and professional pathways;

- contribute to the body of knowledge on improving the educational attainment, retention and success, and social inclusion of people from disadvantaged backgrounds;
- undertake research activity which reflects the broader needs of the society and looks to find solutions to current and future issues facing all Australians, and in particular Aboriginal and Torres Strait Islanders.

A key part of the Go8 Equity Strategy will be identifying target groups and building a better understanding of their unique circumstances. While target groups will differ according to the local community of each university, the Go8 universities have agreed to focus their outreach and research activities on severely disadvantaged and under-represented communities, and those potential students with poor literacy and numeracy skills and general academic readiness. In particular, it will focus on developing long-term relationships with schools and the broader community to raise aspirations and readiness to participate in higher education.

The strategy will include a set of common evaluation techniques to help identify the types of initiatives and interventions that are effective. This will assist in targeting funding to programs which lead to positive engagement and which support student success.

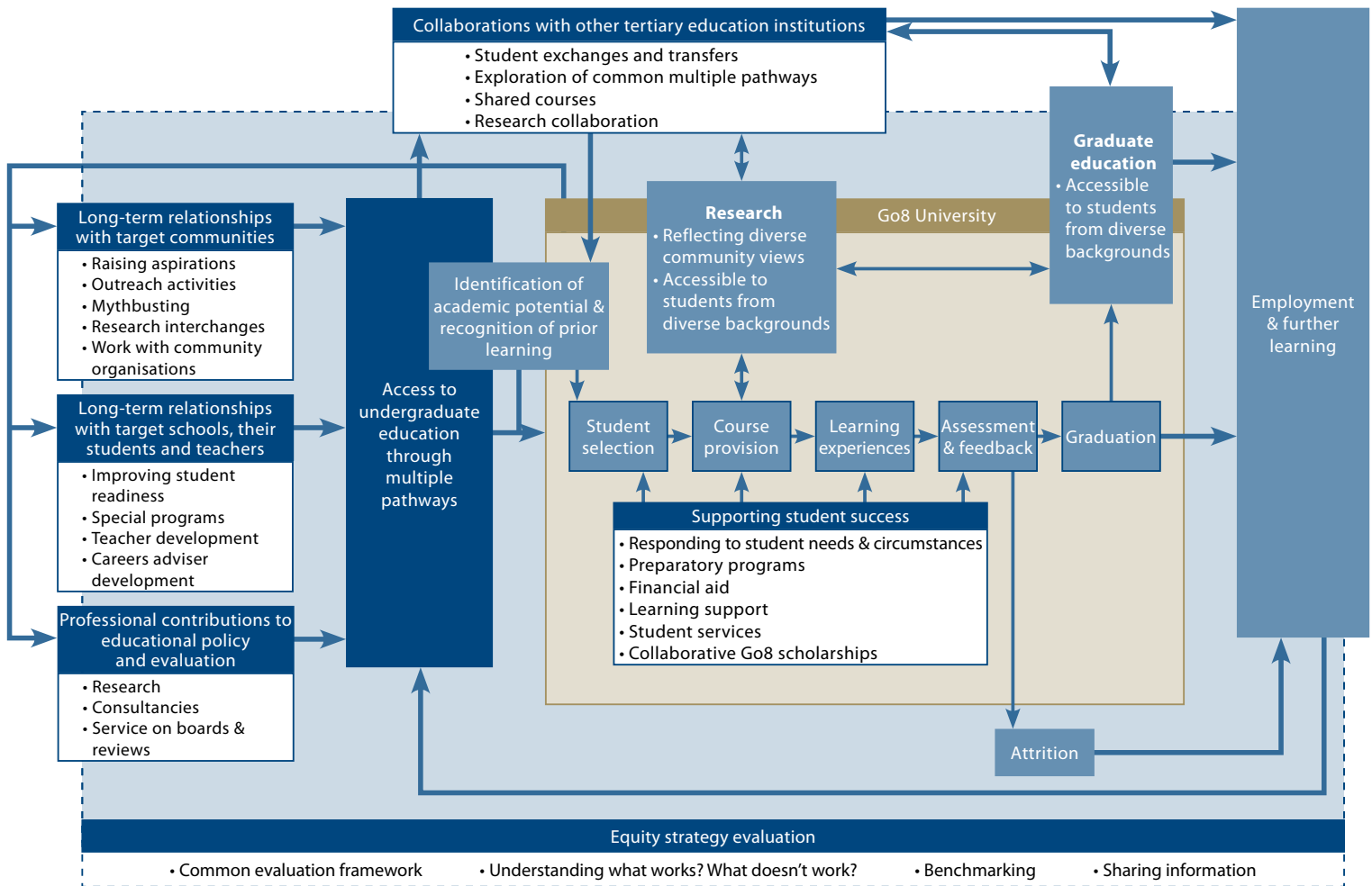
The Go8 is currently conducting research on international equity initiatives. Early results from this research indicate that while there is a wide range of activity in this area, assessing tangible outcomes of the programs has proved problematic in most countries.

Until we better understand the types of activity that are successful in raising aspirations, participation and success, there is a big risk that funding from both government and universities will be poorly targeted and ineffective.

An overview of the Go8 Equity strategy is depicted in Diagram 1.

This backgrounder is based on the paper *Measuring and improving participation and success of students in equity groups at Group of Eight universities*, presented at the Australian Association for Institutional Research (AAIR) Conference in Adelaide, November 2009 and written by Helen Montesin, Alan Mackay, Bernadine Caruana and Jo Ashley.

Diagram 1. Go8 role in building socially inclusive higher education



Analysis of data from DEEWR Undergraduate Applications, Offers and Acceptances data collection, 2009

The following analyses use the national unit record data collection for undergraduate applications, offers and acceptances derived from data held by the state Tertiary Admission Centres (TACs), and submitted to DEEWR. This new data set has been developed to provide detailed information on higher education supply and demand. It includes information for applicants who applied through TACs for undergraduate university places for semester one of the 2009 academic year. Applicants who applied directly to universities are not included in the dataset. The analyses have been restricted to applicants who were in year 12 in 2008 and had an Equivalent National Tertiary Entrance Rank (ENTER) or Interstate Transfer Index (ITI) score (DEEWR, 2009).

Applicants were categorised by their:

- Socio-Economic Status derived from their postcode using the Australian Bureau of Statistics (ABS) Socio-Economic Index for Areas (SEIFA) with low SES comprising the lowest quartile, medium SES the middle two quartiles and high SES the highest quartile (ABS, 2008)

- regionality based on the MCEETYA Classification of Geographical Location (metropolitan or regional) (Jones, 2004)
- ENTER or ITI score decile.

The derivation of an individual's SES from their postcode is not necessarily reflective of their personal circumstances. Its deficiencies are well recognised. It relates to average population socio-economic factors for the geographic area of the student's home address. Students with reasonably high personal or parental incomes may, therefore, show a low SES, while students with relatively low incomes who happen to live in areas with predominantly higher status would reflect that higher SES. However, until a more accurate measure is developed to classify students' SES, it is the only approximation available.

The question of which university a student may apply to attend is complex. It will depend on course availability and awareness of options. Other factors that may impact on the decision are whether and where parents attended university, location and availability of transport and accommodation. Studying at a metropolitan Go8 university may not have been set as an aspiration or possibility.

The application and offer data presented here reflect both the students' preferences and their achievement relative to entry criteria.

Socio-economic status

The distribution of first preference undergraduate school leaver applications in 2009 was different for Go8 and other universities, as shown in Figure 1. In particular, almost half of Go8 applicants had an ENTER score of 90.05+ (46.5%), while a similar proportion of applicants to other universities had an ENTER score of 70.00 and below (48.5%). Only 18.6% of applicants were from low SES backgrounds, while 30.9% were from high SES backgrounds.

Almost half of low SES applicants had an ENTER score of 70.00 and below (48.8%). While more than a third of high SES applicants had an ENTER score of 90.05+ (37.0%), only 14.6% of low SES applicants achieved the same result.

72.4% of applicants to Go8 universities achieved an ENTER of 80.05+. Of these, only 10.4% were from low SES backgrounds. Given that applicants with high ENTER scores were more likely to apply to Go8 universities and low SES students tended to have lower ENTER scores, it is not surprising that less than a quarter of low SES applicants applied to Go8 universities (23.9%).

The offer rate has been calculated by dividing the number of offers by the number of first preference applications. Some applicants received an offer at a university that was not their first preference. When the number of offers exceeded the number of first preference applications, the offer rate was greater than 100%.

The offer rate for Go8 universities decreased as ENTER scores decreased, while in other universities the offer rate was highest for applicants with ENTER scores between 70.05 and 90.00 (Figure 2). While there was some variation in offer rates for applicants from the different SES bands within ENTER deciles, there did not appear to be any patterns of bias in offer rates.

The acceptance rate for applicants who received an offer may vary between the states. This is due to differences in administrative processes of the TACs whereby some TACs require applicants to formally accept their offer while others do not. Based on the data available, applicants with ENTER scores between 70.05 and 90.0 were marginally more likely to accept an offer than those with higher or lower ENTER scores. Low SES applicants were slightly more likely to accept an offer than other applicants, as shown in Figure 3. Applicants with an ENTER score of 70.00 and below who received an offer at a Go8 university were less likely to accept it than those who received an offer elsewhere (77.2% acceptance rate at Go8 universities compared to 84.3% at other universities).

Figure 1. Number of first preference undergraduate school leaver applications by SES band, 2009

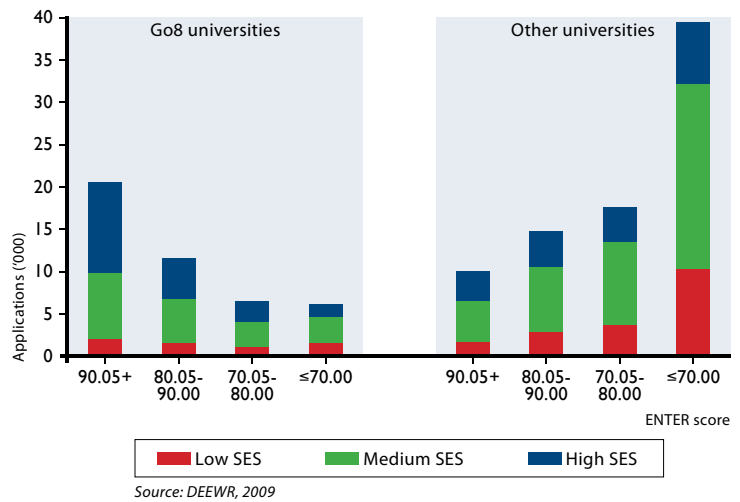
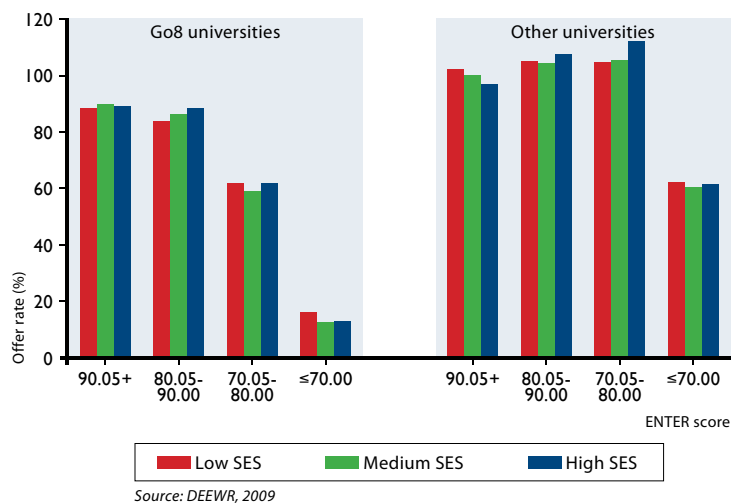
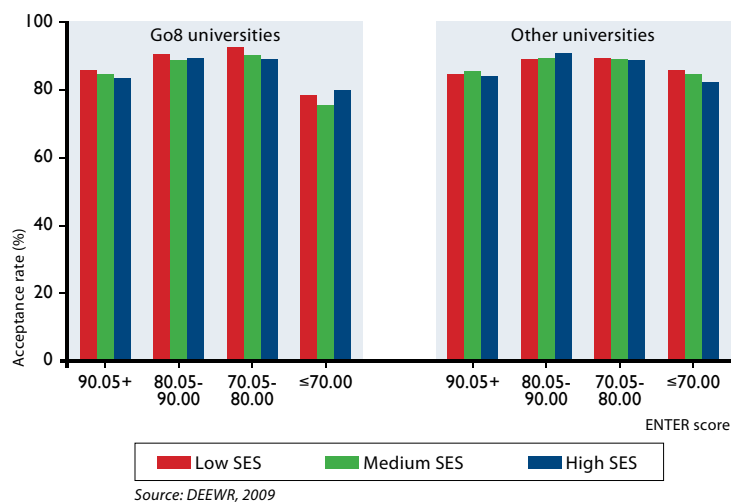


Figure 2. Proportion of undergraduate school leaver applicants receiving an offer by SES band, 2009



Note: the number of offers may exceed the number of first preference applications resulting in a percentage of greater than 100%.

Figure 3. Proportion of undergraduate school leaver applicants accepting an offer by SES band, 2009



Key finding 1

72.4% of applicants to Go8 universities achieved an ENTER of 80.05+. Of these only 10.4% were from low SES backgrounds, reflecting inequitable outcomes in the school leaver population.

Key finding 2

Offer rates for low SES applicants to Go8 universities were similar to all other categories of students.

Regionality

Figure 4 shows the distribution of applications by region. Less than a quarter of applicants were from non-metropolitan areas (24.2%). Of the non-metropolitan applicants, only a quarter applied to Go8 universities (25.3%). Non-metropolitan applicants with an ENTER score of 70.00 and below were more likely to receive an offer than the corresponding metropolitan applicants in both Go8 and other universities (Figure 5). This may be a reflection of differences in the type of courses applied for. Non-metropolitan applicants were less likely to accept their offer than metropolitan applicants, as shown in Figure 6.

Figure 4. Number of first preference undergraduate school leaver applications by regionality, 2009

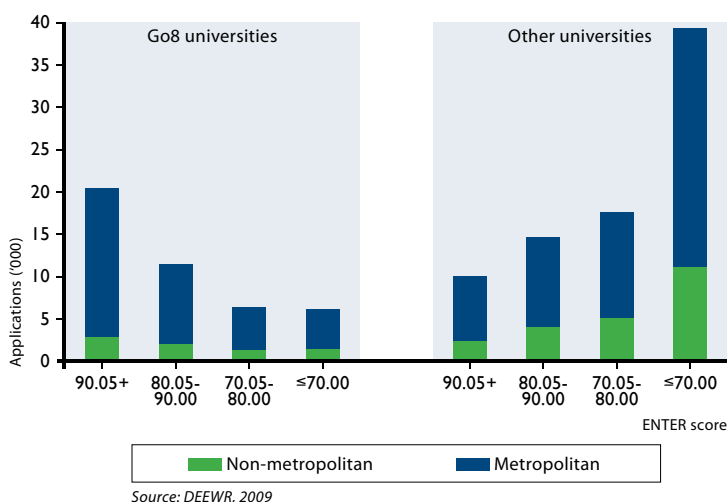
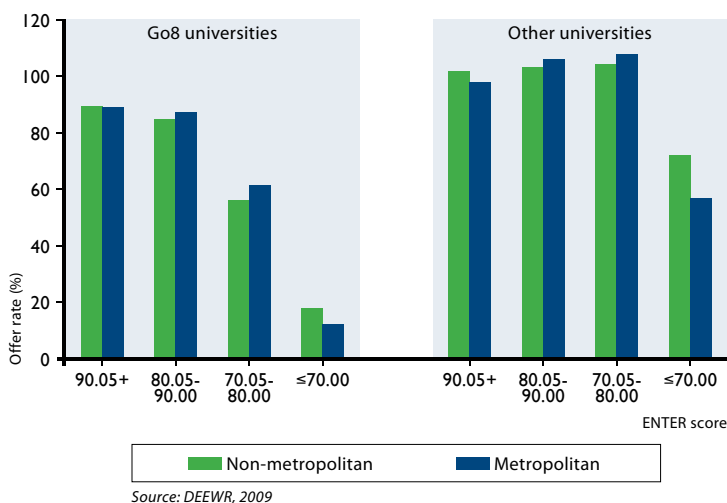
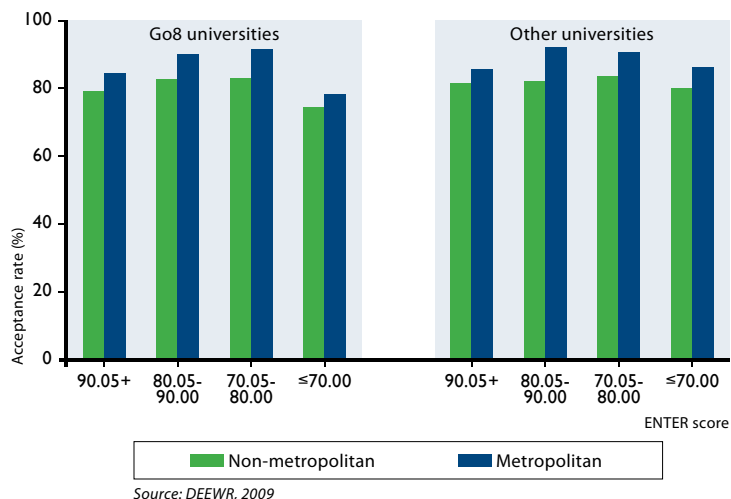


Figure 5. Proportion of undergraduate school leaver applicants receiving an offer by regionality, 2009



Note: the number of offers may exceed the number of first preference applications resulting in a percentage of greater than 100%

Figure 6. Proportion of undergraduate school leaver applicants accepting an offer by regionality, 2009



Key finding 3

Non-metropolitan applicants were less likely to accept an offer to university than metropolitan applicants.

These results indicate that low ENTER scores and the location of the universities were probably a significant impediment to low SES and regional applicants applying to Go8 universities. Further research is required to determine if this is the case and how this could be overcome to improve access to Go8 universities for these groups.

Analysis of data from DEEWR annual student data collection, 2002 to 2007

The following analyses use the DEEWR data on equity groups from the annual student data collection from the universities (DEEWR, 2002-2007). They explore differences in participation and success of Australian domestic students in the equity groups studying at different course levels from 2002 to 2007.

The equity groups have been specified by DEEWR and include students:

- from geographic areas that have been determined as low socio-economic locations based on the 2006 Census SEIFA (Low SES)
- who speak a language other than English at home and arrived in Australia less than 10 years prior to the reference year (NESB)
- from regional areas defined using the MCEETYA Geographic Location Classification (Regional)
- from remote areas defined using the MCEETYA Geographic Location Classification (Remote)
- who have stated that they have a disability, impairment or long term medical condition which may affect their studies (Disability)

- who have identified themselves as being of Australian Aboriginal or Torres Strait Islander descent (Indigenous).

It is possible for students to be in more than one equity group. When this occurred, the student was counted in each group, but they were only counted once overall.

Courses were grouped by level into:

- Doctorate by Research
- Masters by Research
- Masters by Coursework
- Other Postgraduate (including Higher Doctorate, Postgraduate Qualifying or Preliminary, Graduate Diploma, Postgraduate Diploma, Graduate Certificate, Doctorate by Coursework and Cross Provider programs for postgraduate courses)
- Bachelor (including Bachelor's Pass, Bachelor's Graduate Entry and Bachelor's Honours)
- Other Undergraduate (including Associate degree, Advanced Diploma, Diploma, Associate Diploma, Other undergraduate award courses and Cross Provider programs for undergraduate courses).

The outcome measures analysed are:

- Participation rate (the percentage of all students who are in an equity group)
- Attrition rate (the percentage of students who commence a course, who neither complete nor return in the following year)
- Retention rate (the percentage of continuing students out of all students enrolled the previous year who did not complete their course in that year)
- Success rate (the Effective Full Time Student Load (EFTSL) of units passed, as a percentage of all units attempted, for a particular group of students).

The data have a number of limitations which need to be taken into account when interpreting the results. In particular:

- Students' SES is determined from their home postcode (as discussed above)
- Attrition and retention rates do not take account of students who transfer to a different university to complete their course or an alternative program
- Success rate is a measure of the proportion of units passed, but does not evaluate the standard of the units themselves or their assessment
- There are no measures of course completion rates or time to complete course.

Despite the limitations of the data, they are a useful starting point to assess the effectiveness of current equity initiatives. In particular, they allow comparison between Go8 and other universities. Analysis of the overall data, aggregated over the five to six year period that they were available, shows differences between Go8 and other universities in participation and success of students.

Participation rates were lower in Go8 universities than other universities for all equity groups except NESB in the six year period from 2002 to 2007 (Figure 7). The preceding analysis of undergraduate applications, offers and acceptances indicates that this is probably a reflection of the entry requirements at Go8 universities, their location and application rates by different groups of students.

Attrition rates were lower in Go8 universities than other universities across all equity groups in the five year period from 2002 to 2006 (Figure 8). The difference in attrition rates between Go8 and other universities was widest for Remote students (26.0% in Go8 universities compared to 39.0% in other universities) and Indigenous students (36.1% in Go8 universities and 47.3% in other universities).

Retention rates were higher in Go8 universities than other universities across all equity groups in the five year period from 2002 to 2006, as shown in Figure 9. The difference was greatest for Remote students (77.0% in Go8 universities compared to 66.9% in other universities) and Indigenous students (70.2% in Go8 universities compared to 60.6% in other universities).

During the six year period from 2002 to 2007, success rates were higher in Go8 universities across all equity groups and course levels (Figure 10). The difference in success rates was greatest for Indigenous students (77.2% in Go8 universities compared to 65.7% in other universities) and Remote students (88.9% in Go8 universities compared to 79.1% in other universities).

Figure 7. Overall participation rate, all course levels, 2002-07

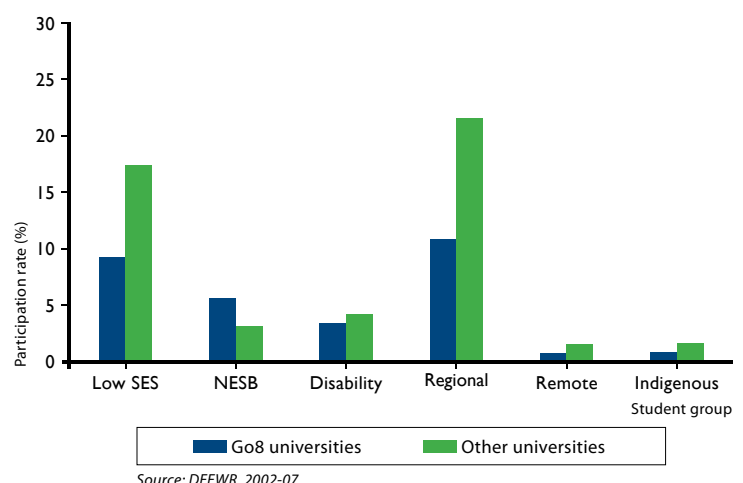


Figure 8. Overall attrition rate, all course levels, 2002-06

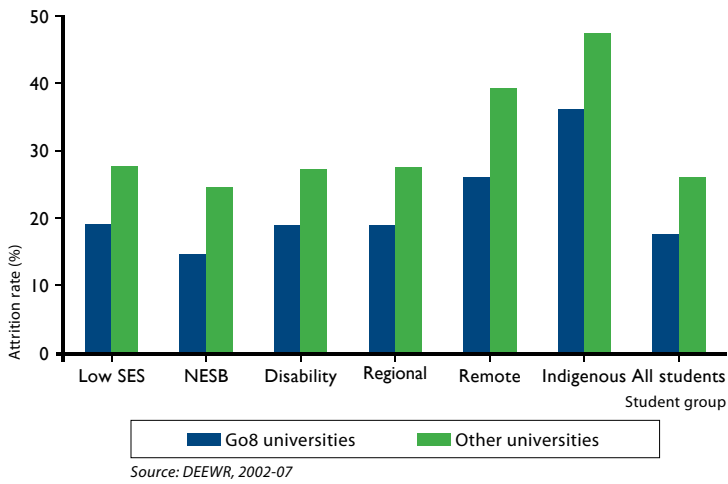


Figure 9. Overall retention rate, all course levels, 2002-06

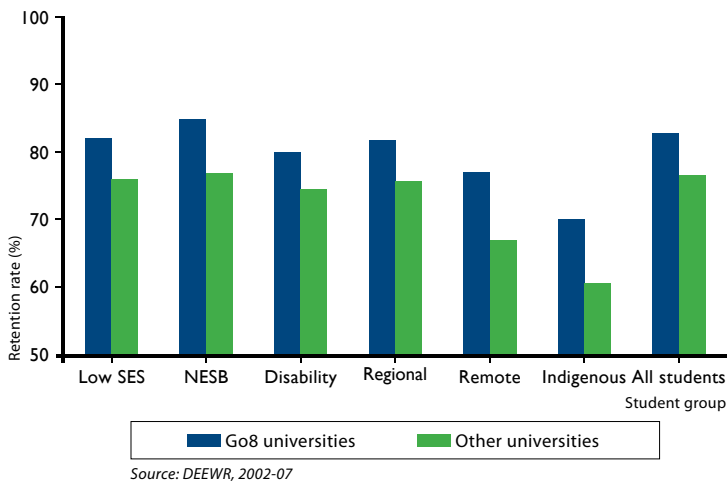
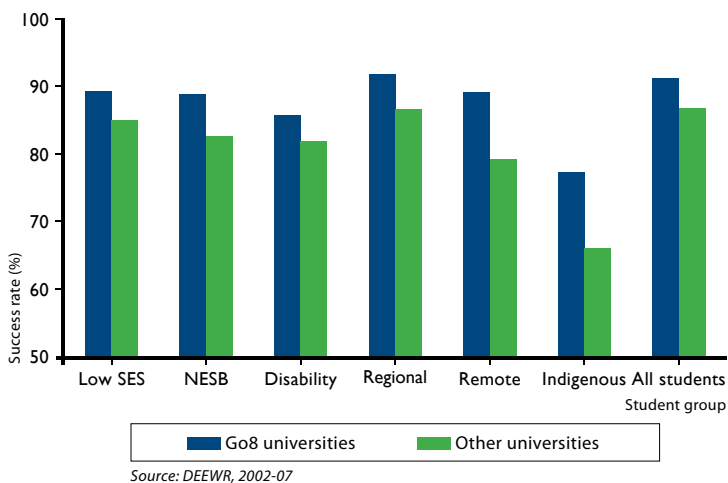


Figure 10. Overall success rate, all coursework courses, 2002-07



Key finding 4
 Students in all equity groups have better outcomes in terms of attrition, retention and success at Go8 universities than at other universities. Outcomes for Remote and Indigenous students are markedly better at Go8 universities.

Low SES students

Given that raising the participation in higher education of students with low SES backgrounds is a key part of the Government's social inclusion strategy and an element of its wider goal of increasing the proportion of the workforce with at least Bachelor degree qualifications, the data were further analysed to explore the participation and success of these students, by level of course.

Figure 11 shows that participation rates for low SES students were lower for postgraduate students than undergraduates during the six year period from 2002 to 2007. This may be a reflection of the use of postcode to determine SES and the greater mobility of postgraduate students. Participation of low SES students was lower at Go8 universities than other universities, for all course levels. Once again, this reflected the application rate of low SES students outlined above.

In the five year period from 2002 to 2006, low SES students in Doctorate by Research courses had lower attrition rates than other course levels (6.2% in Go8 universities and 10.5% in other universities), as shown in Figure 12. Other Undergraduate courses had the highest attrition rates for low SES students during the same period, which may be a reflection of the types of courses and the diversity of students included in this category. Low SES students at Go8 universities had lower attrition rates than those at other universities for all course levels.

Low SES students at all course levels in Go8 universities had higher retention rates than the corresponding students in other universities in the five year period from 2002 to 2006 (Figure 13). In particular, the highest retention rates were for Go8 students studying Bachelor (85.7%) and Doctorate by Research (85.2%) courses.

Postgraduate students at Go8 universities had the highest success rate of low SES coursework students in the six year period from 2002 to 2007 (92.2% for both Masters by Coursework and Other Postgraduate), as shown in Figure 14. Success rates were also higher for low SES students studying other coursework courses at Go8 universities than the corresponding students at other universities.

Figure 11. Participation rate of low SES students, 2002-07

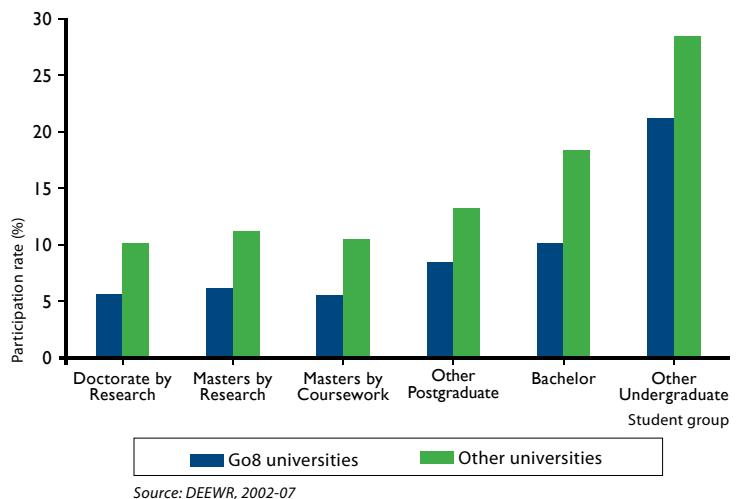


Figure 12. Attrition rate of low SES students, 2002-06

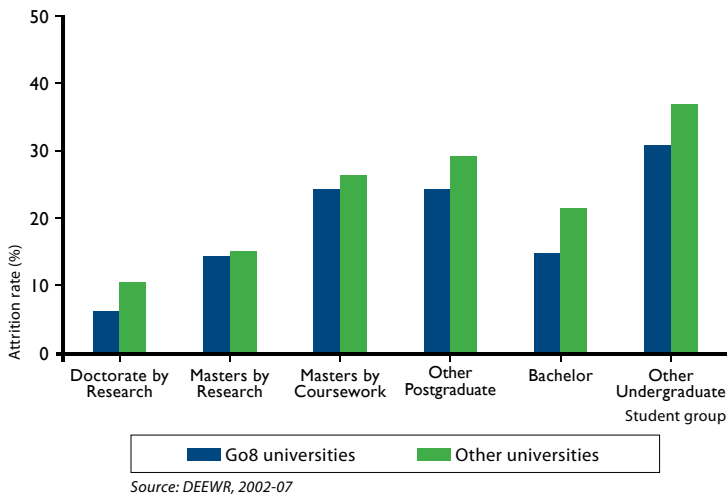


Figure 13. Retention rate of low SES students, 2002-06

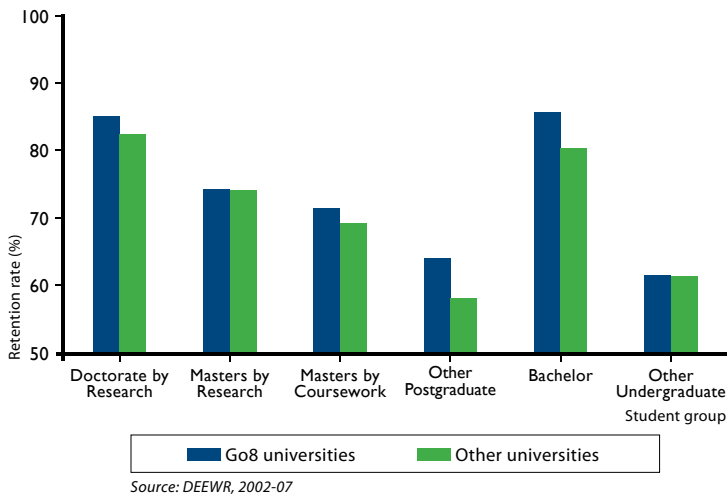
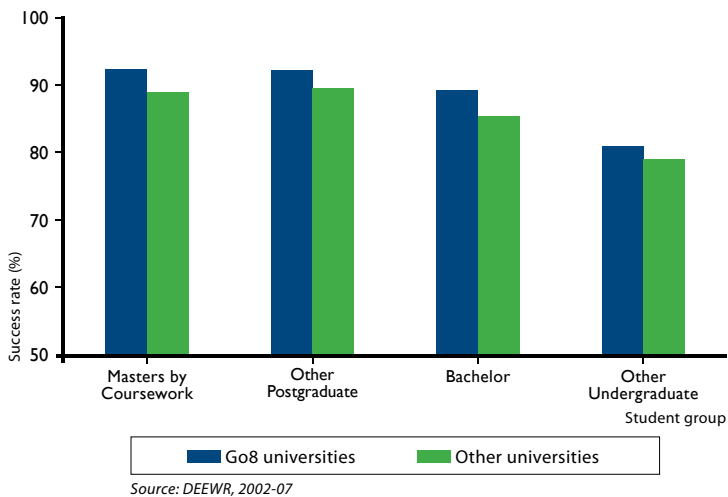


Figure 14. Success rate of low SES students, 2002-07



Bachelor students

The participation and success of Bachelor students in the equity groups were also analysed (Figures 15 to 18). While the results were similar to the aggregated results for students of all course levels in the equity groups, Bachelor students had lower attrition rates, higher retention rates and higher success rates than the aggregated course levels for all the equity groups. In particular, Indigenous Bachelor students had markedly better outcomes than other Indigenous students. With the exception of participation, Bachelor students in the equity groups at Go8 universities also had better outcomes than corresponding students at other universities.

Figure 15. Participation rate of Bachelor students, 2002-07

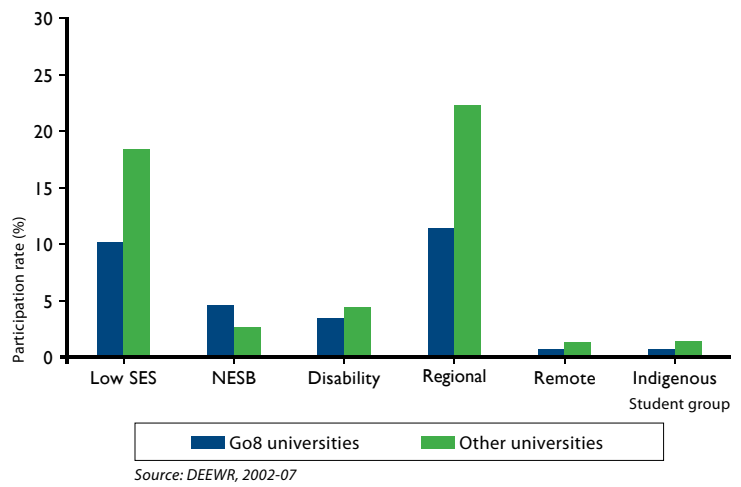
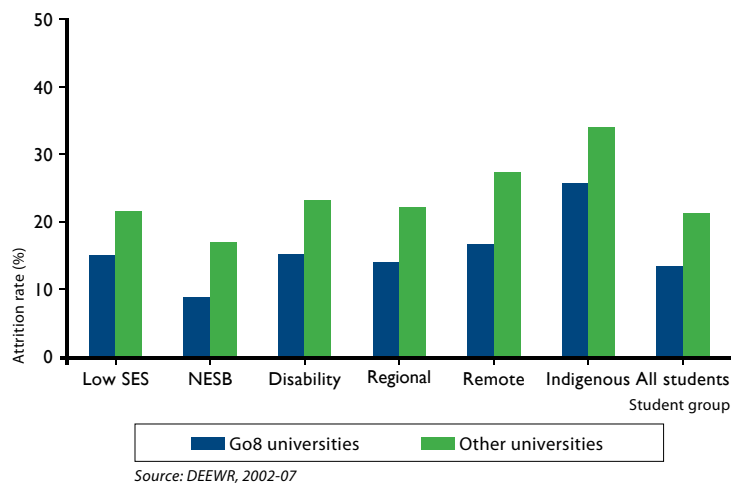


Figure 16. Attrition rate of Bachelor students, 2002-06



Key finding 5

Low SES students at all course levels have lower attrition and higher retention and success rates in Go8 universities than corresponding students in other universities.

Figure 17. Retention rate of Bachelor students, 2002-06

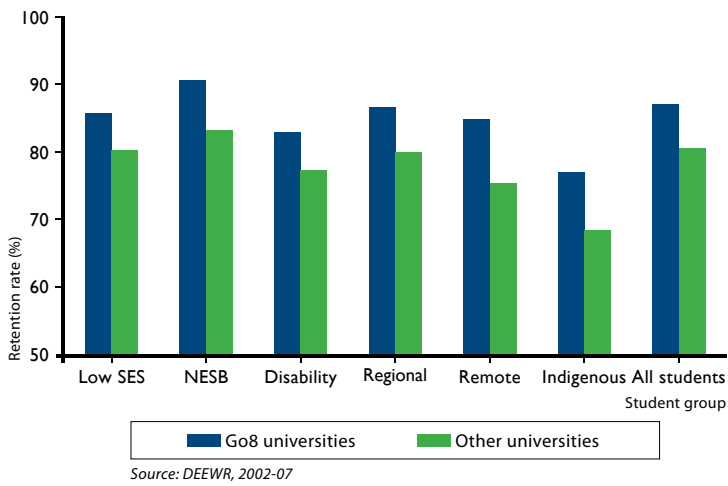
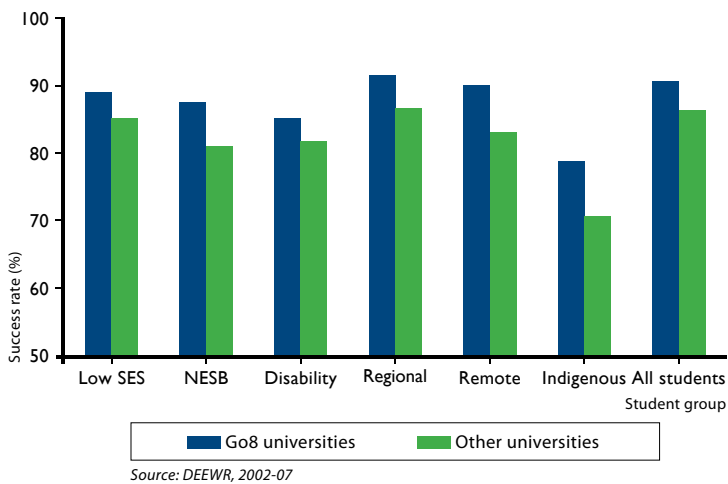


Figure 18. Success rate of Bachelor students, 2002-07



Key finding 6

Bachelor students in all equity groups have better outcomes at Go8 universities than at other universities.

Doctorate by Research students

Doctorate by Research students are of particular interest, given the research intensive nature of Go8 universities. Figure 19 shows a similar pattern of participation rates across the equity groups for Doctorate by Research students to that observed across all course levels. While there is some variation between the equity groups in the attrition of Doctorate by Research students, they had much lower attrition rates than equity group students in other course levels (Figure 20). There was little variation in retention rates between the equity groups for Doctorate by Research students, as shown in Figure 21. Doctorate by Research students from the equity groups had slightly better outcomes in Go8 universities than other universities.

Key finding 7

Doctoral students have much lower attrition rates than equity group students in other course levels.

Figure 19. Participation rate of Doctorate by Research students, 2002-07

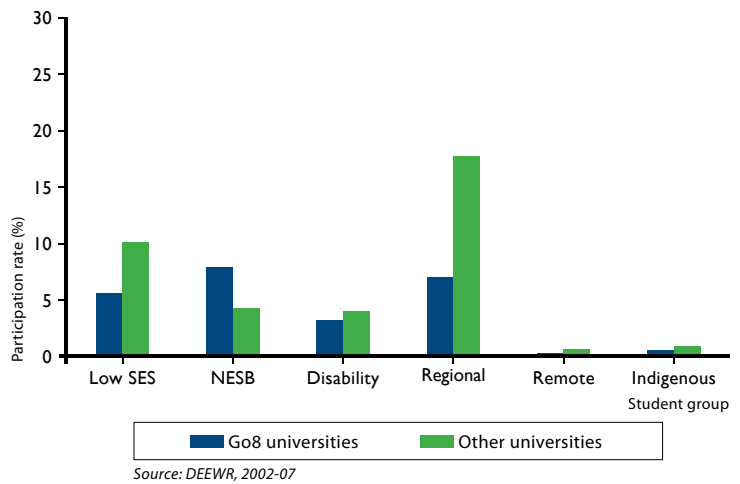


Figure 20. Attrition rate of Doctorate by Research students, 2002-06

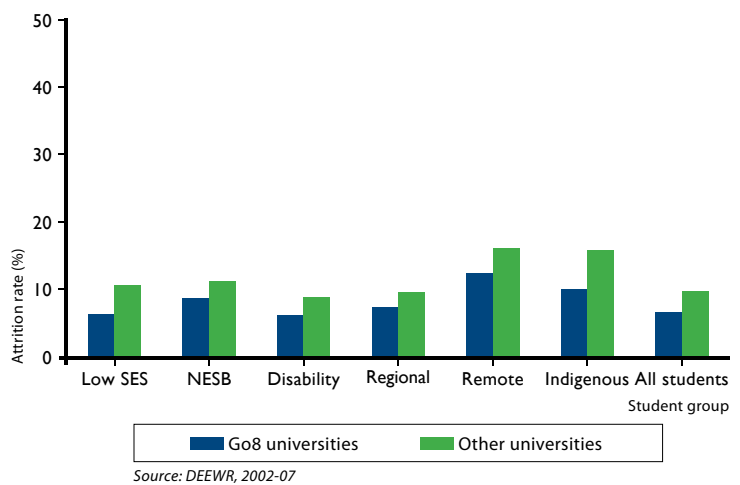
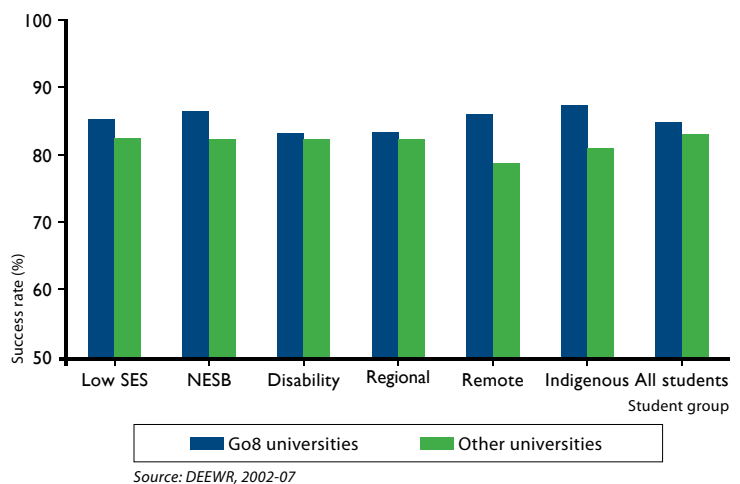


Figure 21. Retention rate of Doctorate by Research students, 2002-06



Conclusion

The analysis in this backgrounder provides an initial assessment of the effectiveness of current social inclusion strategies. It shows that while participation of students from disadvantaged backgrounds is lower at Go8 universities than other universities, equity students at all course levels have better outcomes in terms of attrition, retention and success. Outcomes for Remote and Indigenous students are markedly better at Go8 universities.

The analysis also shows that there is a need to improve the quality of school education for students from under-represented groups. While this is mainly the responsibility of government and schools, there are roles for universities in raising students' aspirations and readiness for higher education, improving teacher education and professional development and contributing to the understanding of effective education methodologies and support services.

Given the current application rate and ENTER scores achieved by low SES and regional and remote students, there will be significant challenges for Go8 universities to achieve the Government's target for participation of low SES students at undergraduate level. The Go8 Equity Strategy will seek to address this challenge but will be much broader. It will improve the identification of academic potential and develop multiple pathways through partnerships with other post-secondary education and training institutions. It will emphasise success, not just access to higher education. It will also seek to improve access to graduate level courses for those from under-represented groups to facilitate better outcomes in research, the academic workforce, and professional pathways.

Given that increased participation of low SES students is an important component of the Government's higher education reforms, a more effective measure of socio-economic status than the current postcode method is required. A measure that takes into account personal circumstances is critical. The Go8 welcomes the fact that the Government has given an undertaking to develop better measures of low socio-economic status based on the circumstances of individual students and their families.

Historically, government data collection has not enabled analysis of completion rates. The Go8 also welcomes the fact that the Government has begun collecting data with a new student identifier which should allow for more meaningful analyses in the future.

Finally, if finite resources are not to be wasted, it will be critical for universities and government to work together to develop effective evaluation techniques to measure the impact of equity initiatives on the participation and success of students from disadvantaged backgrounds.

Key finding 8

Given that increased participation of low SES students is an important component of the Government's Higher Education reforms, a more effective measure of socio-economic status than the current postcode method is required. A measure that takes into account personal circumstances is critical to better understanding the effectiveness of Government and university equity initiatives.

Key finding 9

Improved data collection by DEEWR which tracks student success longitudinally (including completion rates) will allow for more meaningful analysis of student success in future.

Key findings

Key finding 1

72.4% of applicants to Go8 universities achieved an ENTER of 80.05+. Of these only 10.4% were from low SES backgrounds, reflecting inequitable outcomes in the school leaver population.

Key finding 2

Offer rates for low SES applicants to Go8 universities were similar to all other categories of students.

Key finding 3

Non-metropolitan applicants were less likely to accept an offer to university than metropolitan applicants.

Key finding 4

Students in all equity groups have better outcomes in terms of attrition, retention and success at Go8 universities than at other universities. Outcomes for Remote and Indigenous students are markedly better at Go8 universities.

Key finding 5

Low SES students at all course levels have lower attrition and higher retention and success rates in Go8 universities than corresponding students in other universities.

Key finding 6

Bachelor students in all equity groups have better outcomes at Go8 universities than at other universities.

Key finding 7

Doctoral students have much lower attrition rates than equity group students in other course levels.

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References

Australian Government (2009). Transforming Australia's Higher Education System.

ABS (2008). Socio-Economic Indexes for Areas (SEIFA 2006) cat. no. 2033.0.55.001.

Bradley, D., Noonan, P., Nugent, H. & Scales, B. (2008). Review of Australian Higher Education Final Report

DEEWR (2002-2007). Higher Education Statistics Collection: Students.

DEEWR (2009). Undergraduate Applications, Offers and Acceptances 2009.

Jones, R (2004). Geolocation Questions and Coding Index (a report on Geocoding Secondary Students' Home Addresses), a technical report for MCEETYA (Ministerial Council on Education, Employment, Training and Youth Affairs), November 2004. Published online, accessed 13/10/09 at http://www.mceecdya.edu.au/mceecdya/geolocation_questions_and_coding_index,11968.html