HIGHER EDUCATION DIVISION

Department of Education,
Training and Youth Affairs

# Equity in Higher Education

Equity in Higher Education

Occasional Paper Series 99–A

ISBN 0 642 23841 3
DETYA No. 6249.HERC99A

Printed by J.S. McMillan Printing Group Canberra (02) 6230 6200

# Equity in Higher Education

99-A

Occasional Paper Series

Higher Education Division
Department of Education, Training and Youth Affairs

March 1999

ISBN 0 642 23841 3

# Contents

# Charts and Tables

## Charts

# Tables

# Executive Summary

The paper presents higher education statistics for 1997 for each university against each of the equity performance indicators (access, participation, success and retention) for each of the equity groups, and gives national and State amalgamations of the data. The paper also looks at changes in participation rates for the equity groups over the period 1991 to 1997.

The main points to emerge from the data are:

- the overall poor rates of success and retention of Indigenous students remain a cause for concern; and
- other areas of concern are the continuing low participation rates of people from rural backgrounds, the low participation and retention rates of people from isolated backgrounds, and the low participation rates of people from low socio-economic status (SES) backgrounds.

Other points of interest are:

- there appears to be a negative relationship between the number of Indigenous commencing students at a university and their success and retention, with universities with higher rates of access by Indigenous students having lower success and retention rates;
- universities in State capitals have much higher participation levels of people from non-English-speaking backgrounds than regional universities;
- the States with the highest levels of people from low SES backgrounds have the lowest rates of low SES access to higher education;
- there are huge variations among universities in the proportion of low SES school leavers they attract, ranging from a low of 5.4 per cent of total commencing students at one university to a high of 40 per cent at another;
- similarly, there are huge variations in access rates for people with a disability, ranging from 0.2 per cent of commencing students to 9.1 per cent;
- the participation of people from rural, isolated and low SES backgrounds has decreased slightly over the period 1991–1997;
- the proportion of students from a non-English-speaking background (having arrived in Australia within the previous ten years) rose rapidly between 1991 and 1995, but has since dropped away slightly;
- the participation of women in non-traditional fields of study has risen in all areas between 1991 and 1997, and is close to, or has exceeded, the 40 per cent mark, except in Engineering;
- the participation of women in higher degrees by coursework and research has risen over this period;
- the participation of Indigenous Australians in higher education has increased steadily during the 1990s; and
- a large increase in the participation of students with a disability between 1996 and 1997, the only two years for which we have data.

One good aspect to emerge is that the success and retention rates of members of equity groups are, in general (excluding the Indigenous and isolated groups), on a par with, or only slightly below, those for other (non-equity group) students. This indicates that once members of those equity groups are in the university system they can, with appropriate support, achieve outcomes little different to those of the rest of the student body.

# 1. Introduction

The Commonwealth has had a continuing commitment to equity in higher education, beginning with the broadening of entry to universities in the post-World War II period. Equity interests have also been served by the long tradition of part-time study and the continuing expansion of distance education, which was given further impetus with the creation of Open Learning Australia.

In recent years, Australia has experienced one of the highest growth rates of any OECD country. (Between 1983 and 1996 there was approximately an 80 per cent increase in student enrolments.) While growth can facilitate the achievement of greater equity, growth alone is not sufficient.

In 1990, the Commonwealth identified six groups for particular attention:

- people of Aboriginal and Torres Strait Islander descent;
- women (especially in non-traditional areas);
- people with disabilities;
- people from rural and isolated backgrounds;
- people from a non-English-speaking background who had arrived in Australia within the previous ten years; and
- people from socio-economically disadvantaged backgrounds.

While universities have had to take responsibility for improving the participation in higher education of these groups, the Commonwealth has provided support through the Commonwealth Higher Education Equity Programme. These funds have been linked to universities' equity performance and are allocated to institutions as part of their operating grant. The Commonwealth has played an active role in monitoring the participation and performance of the six equity groups in higher education.

This paper presents a snapshot of the position of the equity groups in 1997, as well as changes that have occurred since 1991. The picture that emerges is that some of the equity groups (particularly women and people from non-English-speaking backgrounds) have made significant progress while others have made little or no progress over this period. For Indigenous people the situation is mixed; their access to higher education has increased substantially over the period in question, yet their success and retention rates relative to non-Indigenous students remain a cause for concern.

The paper is in two parts. The first part presents an overview which draws out a number of significant issues. The second part contains a fuller description of the statistical data for each university, following brief background and explanatory comments.

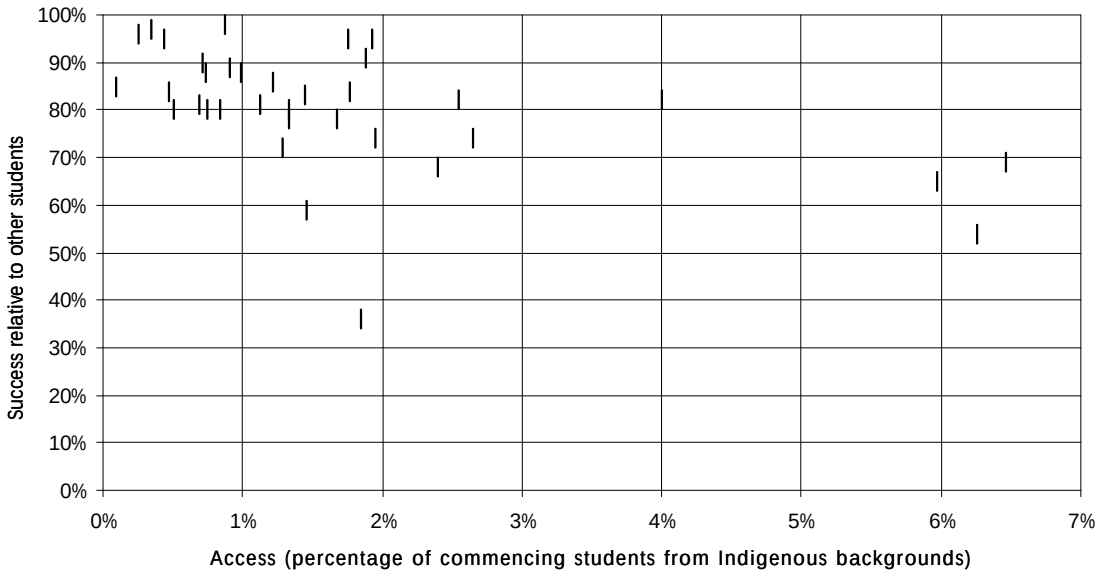
# 2. Overview

## 2.1 Indigenous students

The access rate of Indigenous people to higher education, at 1.5 per cent of commencing students, is now only slightly less than their population share of 1.7 per cent. Their academic success and retention in higher education remain very low, however. The high attrition means that participation by Indigenous people in higher education overall is also low, at 65 per cent of what would be expected from this group's share of the general population.

When individual universities are examined, there seems to be a negative relationship between access on the one hand and success and retention on the other. For example, the three universities with the highest access rates (around 6 per cent) all have very low success and retention rates. The following graph shows success against access for Indigenous students. Each diamond represents a university.

Chart 1 Access rates compared with success rates of Indigenous Australians at Australian universities



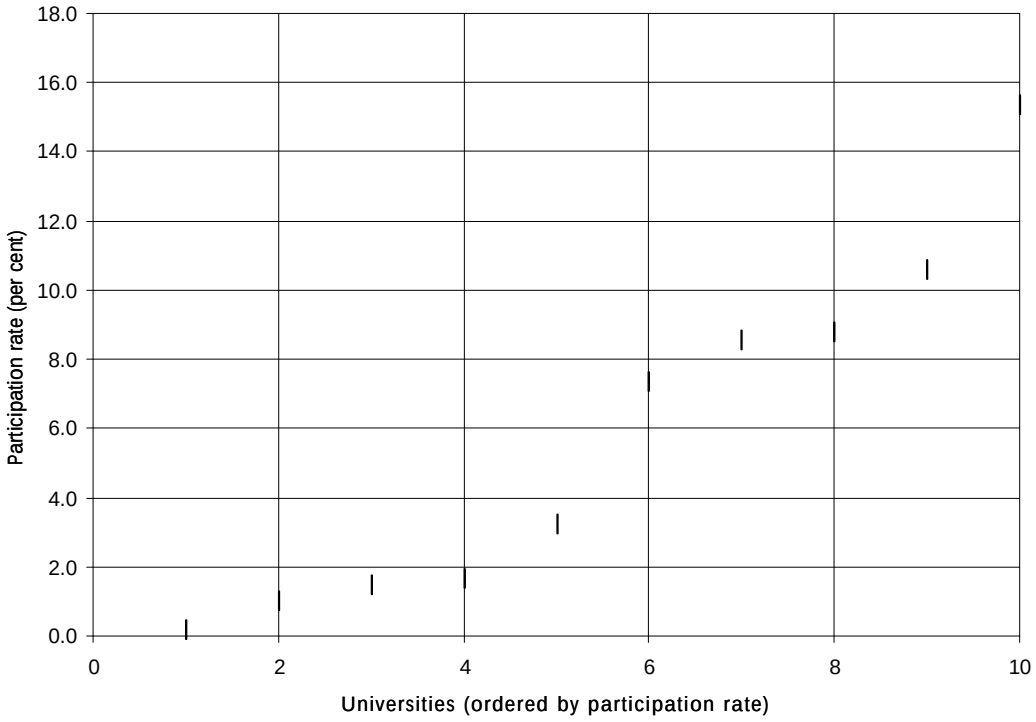

For the sake of comparison, the success rate (proportion of units passed) of Indigenous Australian students for the whole of Australia is 79 per cent of the success rate of non-Indigenous students. The graph shows that there are only eight universities with success rates at 90 per cent or above, and these all have access rates below 2 per cent. This pattern is also apparent for retention.

## 2.2 People from non-English-speaking backgrounds

The Higher Education Equity Programme focuses on people from non-English-speaking backgrounds (NESBs) who have arrived in Australia within the previous ten years. As a whole, such people have a slightly higher rate of access to higher education than the rest of the population. The group's success and retention are around those achieved by the rest of the student body. Participation for this group is, however, very much dependent on location.

Reflecting the distribution of the NESB population, urban universities in State capitals have much higher participation rates than regional universities. The following graph shows participation of the NESB group for each university in New South Wales, which has five universities in Sydney and five regional universities. Each diamond on the graph represents a university. The five universities with participation rates above five per cent are all located in Sydney. The University of New South Wales (with NESB students representing 15.3 per cent of the student body) has a significantly greater proportion of NESB students than other New South Wales universities.

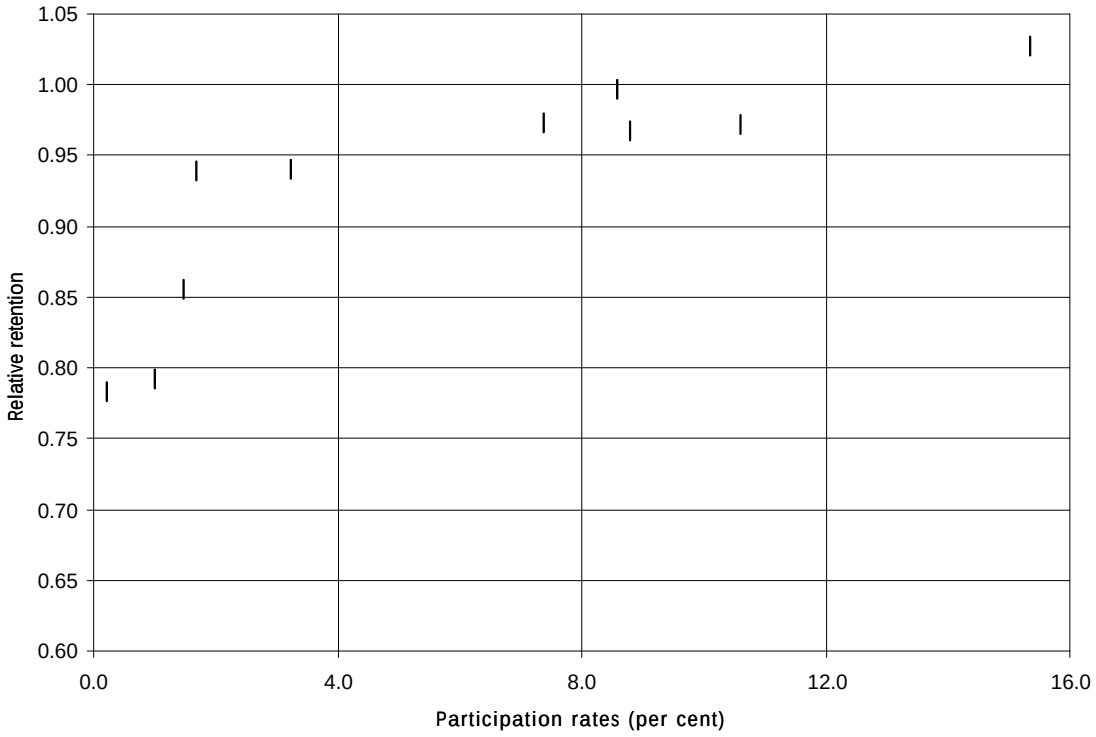
Chart 2 Participation rates of NESB students at New South Wales universities




By contrast with Indigenous students, there appears to be a positive correlation between participation levels for NESB students and success and retention rates, as the following graph shows for retention for New South Wales universities (1.0

represents parity of the NESB group with the rest of the student population). The retention rates of those students at the metropolitan universities are virtually identical to those of all students. By contrast, the retention rates are relatively low at those regional universities with low numbers of NESB students. The implication of this is that the relative size of the population of students from non-English-speaking backgrounds at an institution appears to have a bearing on their retention within the institution, at least within regional universities.

Chart 3 Comparison of NESB participation and retention in New South Wales

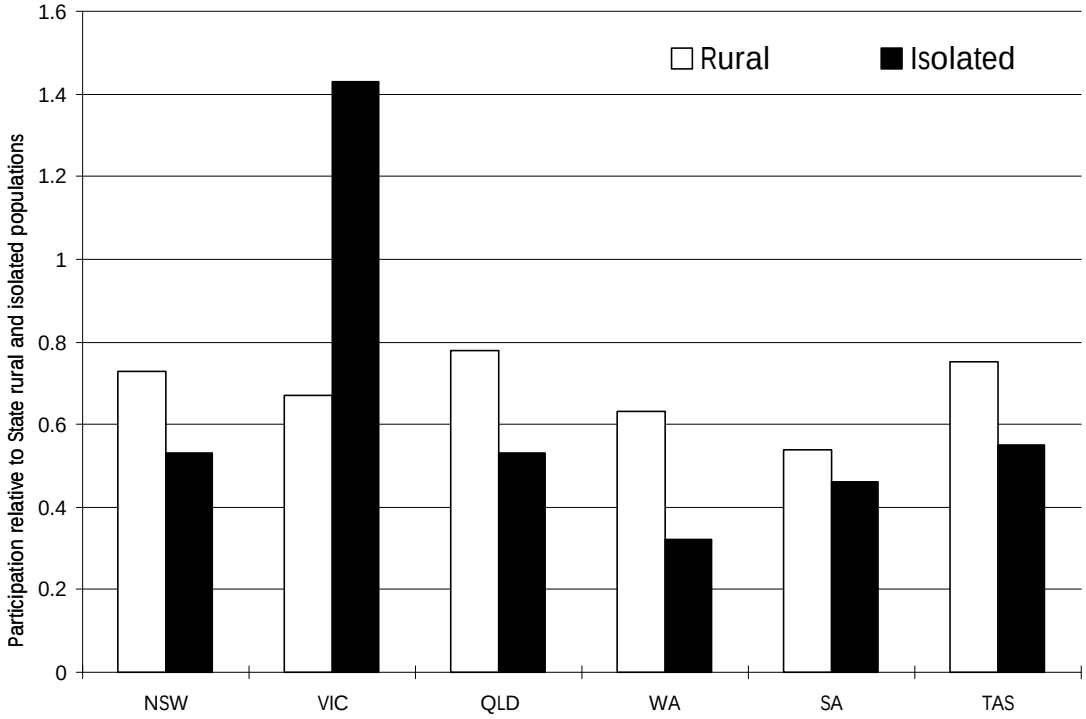


## 2.3 People from rural and isolated backgrounds

People from rural backgrounds have low rates of access to higher education compared with their population share, but their success and retention rates are around the same as the rest of the student body. The South Australian universities have a particularly low level of representation by rural students, while New South Wales and Queensland have comparatively high levels. This may reflect the absence of rural universities in South Australia and the presence of them in other States. New South Wales and Queensland between them have five universities in rural areas, several of which are multi-campus institutions, as well as other non-capital city universities. It should be noted, however, as Postle et al. (1997, p. 77) shows, two-thirds of students from rural backgrounds are enrolled at urban universities.

The chart below shows the participation of higher education students from rural and isolated backgrounds in each State, relative to the representation of these groups in the relevant State population. A relative participation of 1.0 would mean that people from rural and isolated backgrounds were represented in the student population at the same rate as in the general population. It can be seen that in all cases but one, relative participation is well below parity. The high relative participation rate of people from isolated backgrounds in Victoria stands out from the rest, and may reflect the low numbers of people in this category in that State. By contrast the State with the highest population in isolated locations, Western Australia, has the lowest relative representation by this group in higher education.

Chart 4 Participation of students from rural and isolated backgrounds in each state



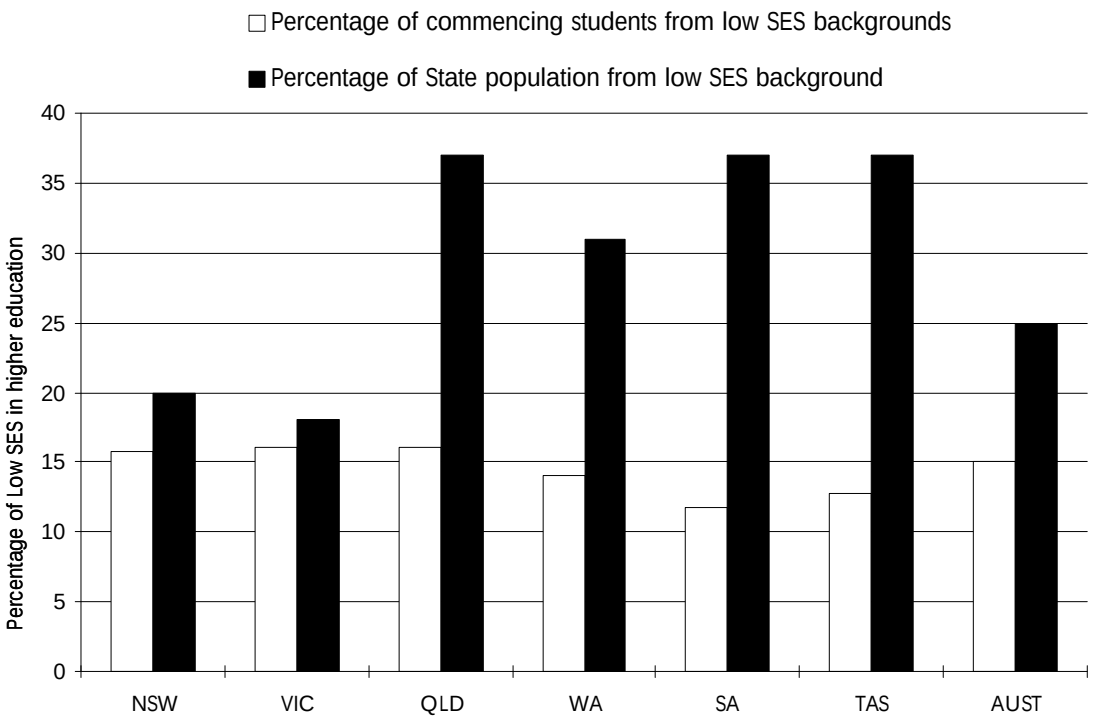

The access of people from isolated backgrounds to higher education, at 1.92 per cent of commencing students, is very low compared to their population share of 4.5 per cent. Their success rate, at 95 per cent of the success rate of other students, is only marginally low, but their retention, at 90 per cent, is significantly low. This retention rate may well reflect the fact that four-fifths of students from isolated backgrounds study at urban universities and around one-third of students from isolated backgrounds study externally (Postle et al. 1997, pp. 77–79).

The two-thirds of students from rural and isolated backgrounds who study on campus at urban universities are a long way from home and may experience the problems associated with this (such as homesickness, lack of contacts and support network, additional costs of living away from home), while those students who study externally tend to have the low retention rates associated with that mode of study.

## 2.4 People from low socio-economic status backgrounds

People from low SES backgrounds are defined as those whose postcodes of permanent home address fall within the lowest 25 per cent of the population of a given region (i.e. Australia, a State or an urban area), determined by the Australian Bureau of Statistics Index of Education and Occupation. Access to higher education by people from low SES backgrounds remains very low. This is especially so for those aged 25 or more. The following graph highlights the differences between the percentage of people considered to be low SES within each State (by definition, 25 per cent) and the access rate of low SES people to universities in that State. Although there are some differences between States, these do not appear to be particularly significant.

Chart 5 Access to higher education by people from low SES backgrounds




There are huge variations from one university to the next in the proportion of low SES students they attract, ranging in 1997 from a low of 5.4 per cent for recent school leavers at Macquarie University to a high of 40 per cent at Central Queensland University. There is much more uniformity between institutions as far as success and retention relative to other students are concerned, with a very small range from the institutions with the highest and lowest results. Overall, there is little difference between the success and retention rates of low SES students and the rest of the student body.

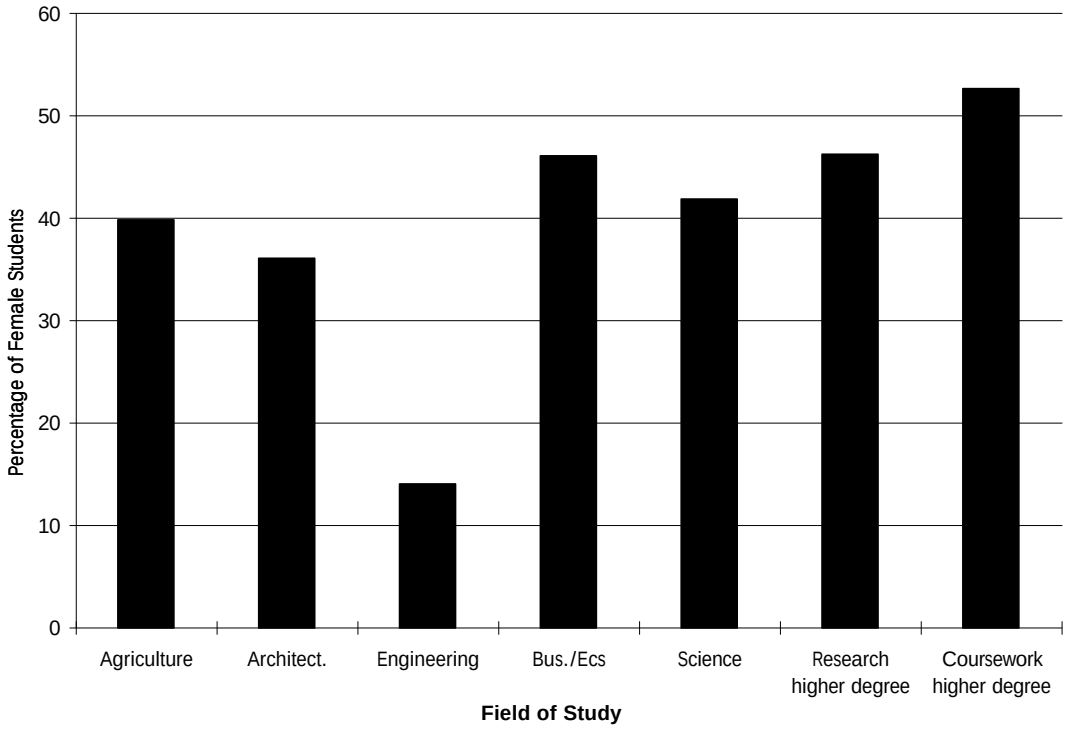
On a field of study basis, low SES students are over-represented in Agriculture, Education, Engineering and Nursing, and under-represented in the more prestigious areas of Law, Architecture, Dentistry and Medicine. When level of course is examined, low SES students are severely under-represented in higher degree studies, both by research and by coursework. They are over-represented, however, in sub-degree and enabling courses.

## 2.5 Women in non-traditional courses

In Engineering, the participation of women continues to remain quite low (at 14.1 per cent). Of the other fields of study identified in *A Fair Chance for All* (Department of Employment, Education and Training 1990) as having participation levels below 40 per cent, only Architecture (at 36.1 per cent) has failed to reach that target level. There is considerable variation between universities in each of these fields of study, with, for example, women comprising 23 per cent of Engineering students at The University of Melbourne, while at eight other institutions women make up less than 10 per cent of Engineering students.

It is interesting to note that a much smaller percentage of female Indigenous Australian students goes into non-traditional areas of study for women than is the case for non-Indigenous female students (8.2 per cent compared with 18.9 per cent). By contrast, female NESB students enter non-traditional areas of study at a much higher rate than is the case for other female students (28 per cent compared with 18.9 per cent).

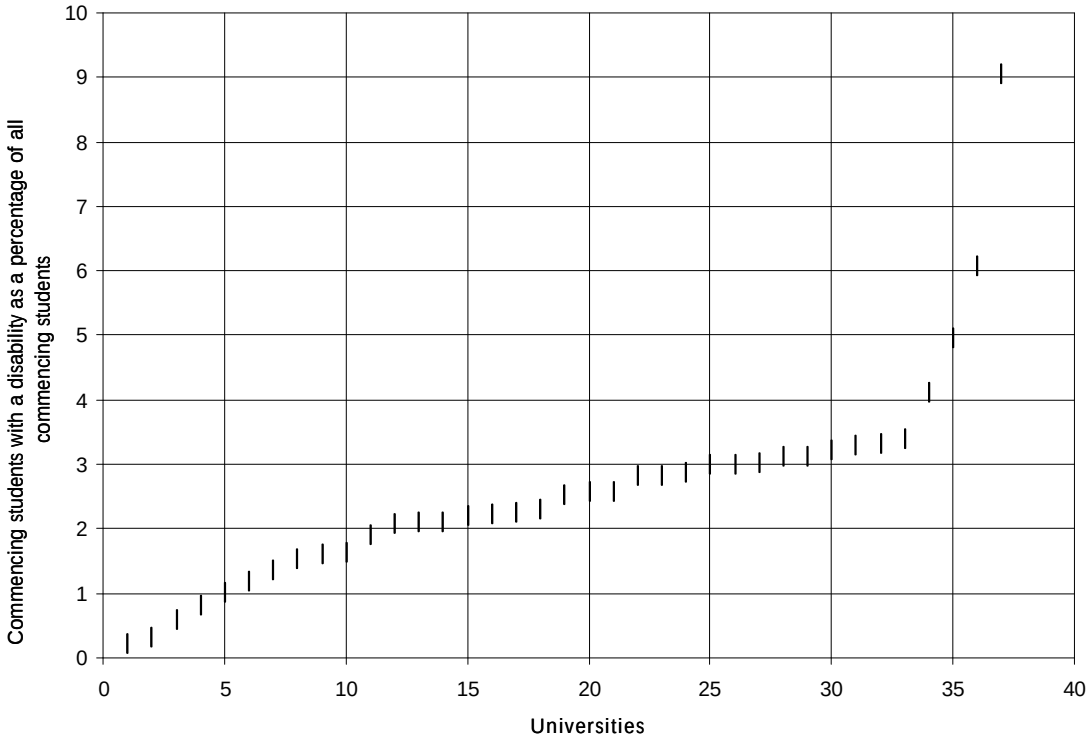
Chart 6 Women in non-traditional areas, 1997



## 2.6 People with a disability

In 1997, the number of people with a disability made up 2.4 per cent of the student body (compared with 4 per cent of the relevant population group). As the graph below shows, there is huge variation between universities in terms of access for this group. Each diamond on the graph represents a university, with the universities presented from those with lowest access to those with the highest. The universities with the highest proportion of commencing students with a disability are Southern Cross University (9.1 per cent), the University of Wollongong (6.1 per cent), The Flinders University of South Australia (5.0 per cent) and the University of Canberra (4.1 per cent).

Chart 7 Access for students with a disability, 1997

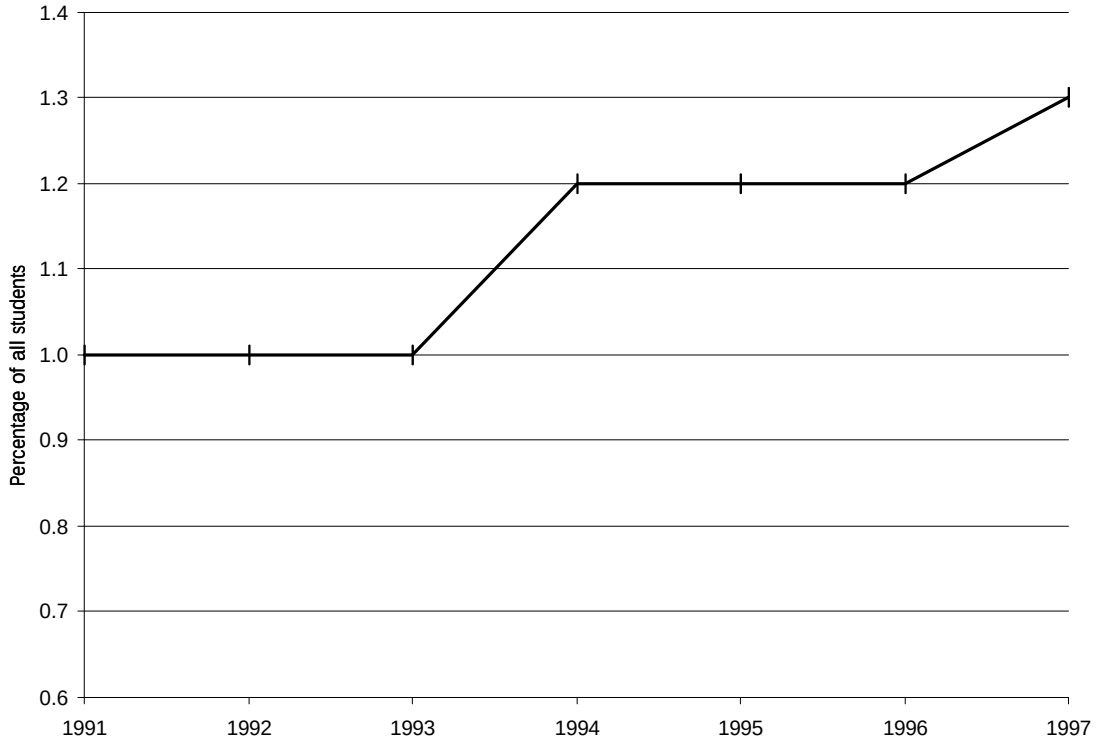



There is far less variation in success and retention between universities. The retention rate for students with a disability is almost identical to the rate for other students, though success is 94 per cent of the rate for other students.

## 2.7 Time series, 1991–1997

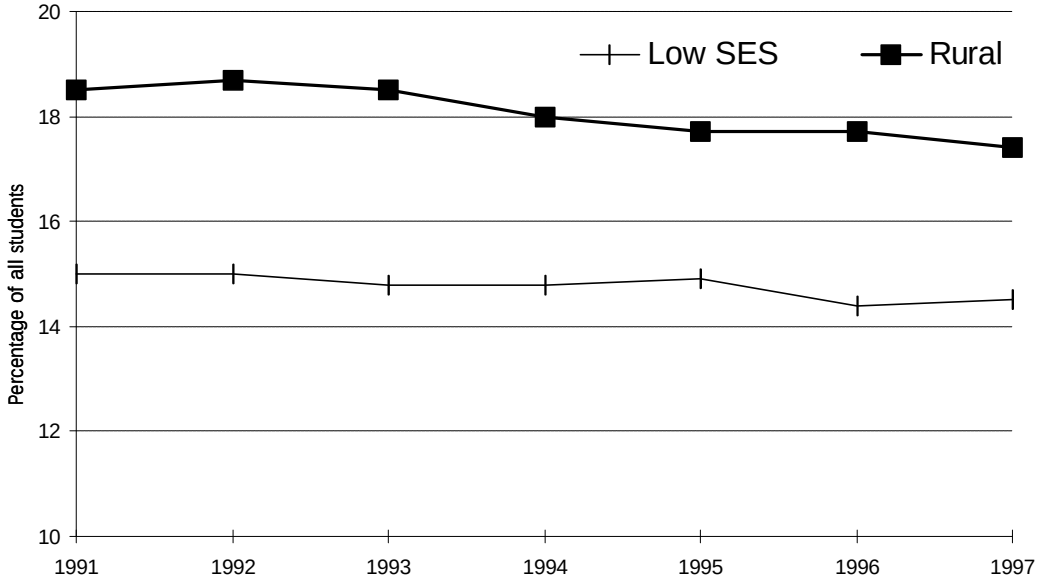
The first chart shows that the proportion of students who are **Indigenous Australians** has increased from 1991 to 1997. However, at the same time the percentage of the Australian population identifying as Indigenous rose from 1.4 per cent at the 1991 Census to 1.7 per cent at the 1996 Census.

Chart 8 Participation of Indigenous Australians, 1991–1997




The participation of people from **rural and low SES** backgrounds has decreased slightly over the period in question. In the case of students from rural backgrounds, this may be related to a suspected decrease in the rural population as a result of the rural decline in recent years. This factor may also play a part in the declining participation of students from an isolated background.

Chart 9 Participation of people from low SES and rural backgrounds in higher education, 1991–1997



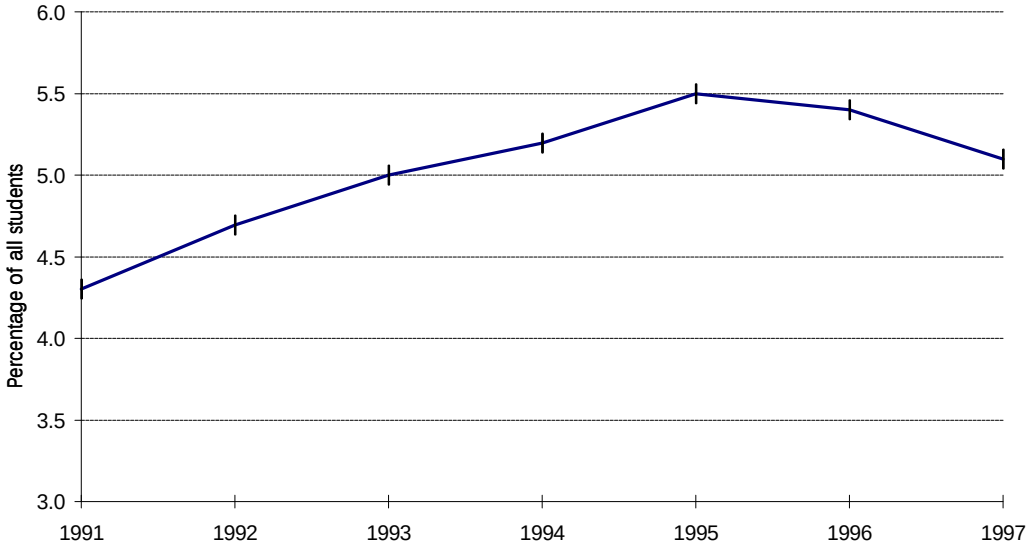

The proportion of students from an **isolated** background in higher education has suffered a slight decrease overall between 1991 and 1997, after hovering near 2.0 per cent between 1991 and 1995.

Chart 10 Participation of people from isolated backgrounds, 1991–1997


The proportion of students from a **non-English-speaking background** (having arrived in Australia within the previous ten years) rose rapidly between 1991 and 1995, but has since dropped away slightly. The proportion of the general population fitting into this category dropped slightly from 4.9 per cent in 1991 to

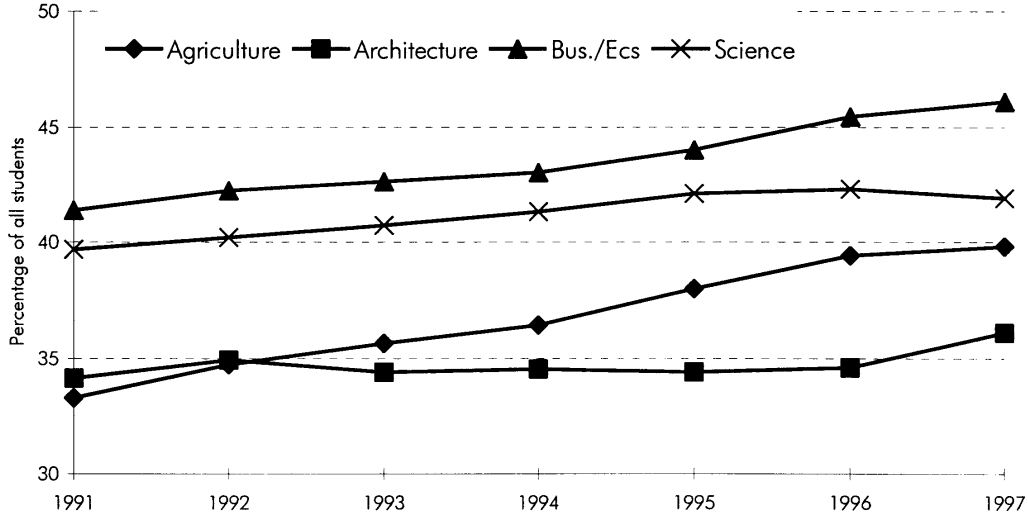
4.8 per cent in 1996. It is unclear to what extent the rise and decline in participation by this group reflect the success or failure of efforts by the higher education sector to attract members of this group, and to what extent they reflect changes in the migration programme over this period.

Chart 11 Participation of people from non-English-speaking backgrounds, 1991–1997



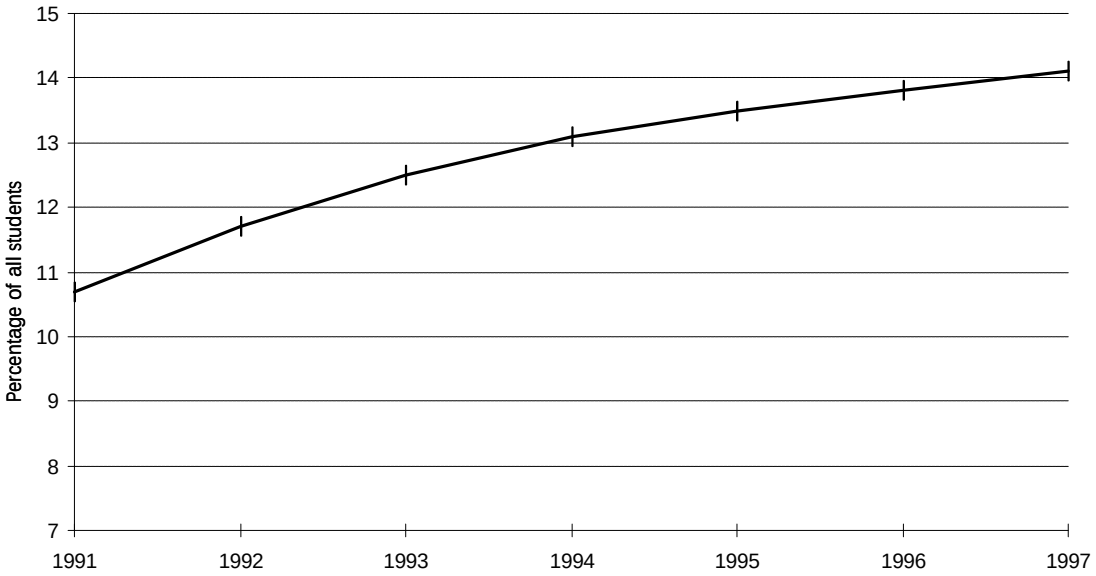

The graphs below show that the participation of **women in non-traditional areas** has risen over the period 1991–1997.

Chart 12 Women in non-traditional areas



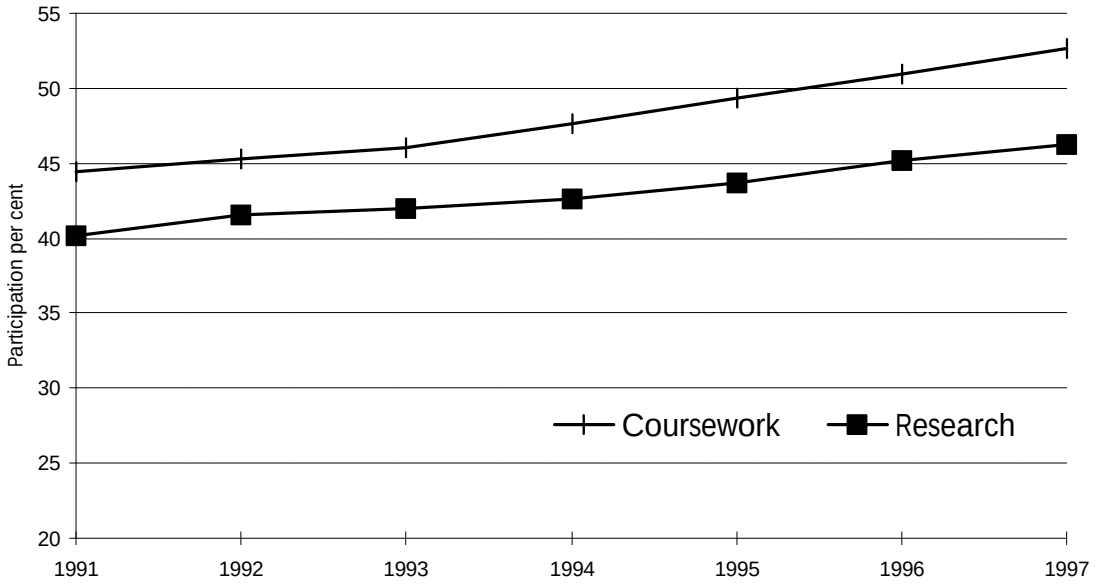

For Engineering, participation has risen from 10.7 per cent to 14.1 per cent, which is an increase of 32 per cent.

Chart 13 Women in engineering




The graph of **women in higher degree studies** below shows a continually improving participation rate for both higher degrees by research and higher degrees by coursework. Women have now exceeded the 50 per cent mark for coursework, and are approaching it for research.

Chart 14 Women in higher degree studies



# 3. Institutional data

As noted at the beginning of the paper six groups have been identified as disadvantaged[1].

**Aboriginal and Torres Strait Islander people** are defined through self-identification by a positive response to the question 'Are you an Aboriginal or Torres Strait Islander?', on universities' student enrolment forms.

**Women, especially in non-traditional areas and postgraduate study**. In *A Fair Chance for All,* non-traditional areas of study were defined as those fields of study or types of course for which the percentage of female enrolments was less than 40 per cent.

**People from non-English-speaking backgrounds** are defined as those people who were born overseas, arrived in Australia within the previous ten years and speak a language other than English at home. (The definition is intended to identify those students who have undertaken some part of their primary or secondary education outside Australia.)

**People with disabilities** are defined through self-identification by a positive response on student enrolment forms to the question, 'Do you have a disability, impairment or long term medical condition which may affect your studies?'.

**People from rural and isolated backgrounds** are defined as those people whose permanent home address is identified as rural or isolated according to the 1992 classification of postcodes by the Commonwealth Department of Primary Industries and Energy (DPIE). The two groups (rural and isolated) are treated as separate equity groups. Under the DPIE classification cities of 100 000 people or more, plus Darwin and Townsville, are defined as urban. The division between rural and isolated is based on an index of remoteness which combines population density and distance from the nearest provincial city (population 25 000 or more).

**People from socio-economically disadvantaged backgrounds** (low SES) are defined as those whose postcodes of permanent home address fall within the lowest 25 per cent of the population of a given region (i.e. Australia, a State or an urban area), determined by the Australian Bureau of Statistics (ABS) Index of Education and Occupation (EdOcc).

Groups of students analysed under this definition are further classified by age (under 25 and 25 or older), mainly to separate out school leavers, who may be dependent on parental income, from mature-age students who are considered to be independent and thus have a socio-economic status derived from their own personal characteristics rather than those of their parents.

[1] The six groups were identified in *A Fair Chance for All* (Department of Employment, Education and Training 1990). The definitions come from Martin (1994).

## 3.1 Performance indicators for equity

As advised above, the following indicators were developed in *Equity and General Performance Indicators in Higher Education* (Martin 1994).

**Access** is interpreted as the provision of opportunities for commencing students from each of the equity groups. *Access indicators* show the number of commencing students in each equity group as a percentage of total commencing students.

**Participation** is the share that members of each equity group have of total student enrolments. *Participation indicators* show the proportion of each equity group's participation in higher education as a *ratio* of what might be expected from each group's share of the total 15–64 year-old population derived from census or other survey data.

This measure applies to all equity target groups except for:

- participation of women in non-traditional fields of study, which is measured as a *percentage* of total enrolments;
- participation of women in higher degree research and coursework programmes, which is measured as the *ratio* of the percentage of women in higher degree research and coursework programmes to the percentage of women in undergraduate programmes; and
- participation of students from low SES backgrounds, which is measured as a *ratio* of the number of students from low SES backgrounds to the number of students from high SES backgrounds (for these purposes, the general population is considered to consist of 25 per cent high SES, 50 per cent medium SES and 25 per cent low SES).

**Success** is defined as student progress rate, which is the proportion of units passed within a year compared with the total units enrolled. *Success indicators* show the *ratio* of the student progress rate for each equity target group to the progress rate for all other students.

**Retention** is defined as the number of students who re-enrol at an institution in a given year, as a proportion of the students who were enrolled in the previous year, less those who completed their course. It provides a broad measure of retention, but does not count as retained in the system those students who defer their study or who transfer successfully to another university. It is therefore a *measure of apparent retention* at the particular institution. *Retention indicators* show the *ratio* of each equity group's apparent retention to the apparent retention rate of all other students.

## 3.2 Reference values

Performance indicators imply a point of reference or relativity. A reference value is a population equivalence or broad equity objective for a group. The reference value for all the *access* indicators is the percentage of population, aged 15 to 64, belonging to each particular equity group. For example, for women it is taken to be 50 per cent and for low SES, 25 per cent.

As with access, the *participation* reference value for women is 50 per cent. The reference value for *all other indicators* is 1.

## 3.3 Caveats on interpretation of the data

Students from rural, isolated and low SES backgrounds are defined on the basis of the postcode of their permanent home address and not on their actual status. This method of identification, though simple and practical, is considered unreliable in many cases, given the diversity to be found within postcode areas. For low SES students, the postcode of home address may be a useful indicator at the group level but is unreliable at the level of the individual student.

In addition, the classifications of postcodes by both DPIE and the ABS are based on the 1991 census data and, therefore, do not cover changes or additions to postcode areas since that time. That said, the data provide a good indicator of the sector's overall performance in relation to the access, participation and educational performance of these groups at the aggregate level. Because of the unsuitability of using postcodes at the individual level, the Department is currently investigating the possibility of implementing the measures identified in the report recently completed by Professor Western (1998). It is hoped that a new system of identification can be introduced in the year 2000.

Comparisons between institutions and with State and national reference values may help some institutions to make judgements about their relative performance. It should be noted that reference values are not necessarily national targets, nor is it appropriate that they be used as institutional targets, at least in the short term. An institutional target would take account of characteristics such as the demographics of the community served and historical enrolment factors.

For access and participation, comparisons need to take account of differences in institutions' catchment areas. However, comparisons of success and retention between institutions and against the national average are usually valid.

Two institutions have special characteristics that need to be mentioned. The Australian Catholic University has campuses in four capital cities (Canberra, Sydney, Melbourne and Brisbane). Each of the States in which the campuses are to be found has different characteristics as far as reference values for the equity groups are concerned. Because of the limitations of the DEETYAPAC equity module, however, the outcomes for the university are compared with the reference values for Australia as a whole. The appropriateness of this depends on the equity group under consideration. The university has rightly argued that it is inappropriate to compare its low SES results with the Australian low SES reference values, as the SES characteristics of the four cities in question are quite different to those of Australia as a whole. Care should therefore be taken when interpreting the equity indicators for the Australian Catholic University and, in general, we have refrained from comment on this institution when discussing the tables.

The Australian Maritime College is a specialist institution with small enrolments and limited course offerings. It cannot be expected to have similar access and participation patterns to other institutions included in the tables in this report. For these reasons, care should be taken when interpreting its outcomes against the equity indicators.

One final caveat relates to student numbers. In the tables which follow, equity group enrolments are generally compared with enrolments for non-equity group members, or with the student population as a whole. The percentages do not indicate the distribution of actual numbers. For example, James Cook University has 1 427 commencing students from rural backgrounds and an access rate of 42.7 per cent, which is well above the State reference value. On the other hand, The University of Queensland has an access rate for rural students of only 18.8 per cent, which is about half the State reference value, but has 1 922 commencing rural students.

# 3.4 Aboriginal and Torres Strait Islander students

Table 1 Aboriginal and Torres Strait Islander Students, 1997 by access, participation, success (1996) and retention

| Institution | Access (%) | Participation | Success | Retention |
|---|---|---|---|---|
| Charles Sturt University | 1.8 | 0.95 | 0.84 | 0.84 |
| Macquarie University | 1.8 | 0.91 | 0.95 | 0.87 |
| Southern Cross University | 2.4 | 1.17 | 0.68 | 0.77 |
| The University of New England | 1.1 | 0.68 | 0.81 | 0.84 |
| The University of New South Wales | 0.5 | 0.30 | 0.80 | 0.77 |
| The University of Newcastle | 1.4 | 1.14 | 0.83 | 0.85 |
| The University of Sydney | 0.9 | 0.50 | 0.89 | 0.98 |
| University of Technology, Sydney | 1.3 | 0.71 | 0.80 | 0.97 |
| University of Western Sydney | 0.8 | 0.83 | 0.80 | 0.91 |
| University of Wollongong | 1.2 | 0.73 | 0.86 | 0.88 |
| Deakin University | 1.3 | 2.11 | 0.72 | 0.87 |
| La Trobe University | 0.3 | 0.48 | 0.97 | 0.88 |
| Monash University | 0.7 | 1.34 | 0.90 | 0.82 |
| Royal Melbourne Institute of Technology | 0.1 | 0.32 | 0.85 | 0.89 |
| Swinburne University of Technology | 0.4 | 0.72 | 0.95 | 1.05 |
| University of Ballarat | 0.4 | 0.64 | 0.89 | 0.74 |
| The University of Melbourne | 0.5 | 0.84 | 0.84 | 0.87 |
| Victoria University of Technology | 0.3 | 0.60 | 0.96 | 0.89 |
| Central Queensland University | 2.7 | 0.90 | 0.74 | 0.87 |
| Griffith University | 1.3 | 0.49 | 0.78 | 0.86 |
| James Cook University | 6.5 | 2.37 | 0.69 | 0.64 |
| Queensland University of Technology | 0.8 | 0.34 | 0.80 | 0.84 |
| The University of Queensland | 0.7 | 0.32 | 0.88 | 0.88 |
| University of Southern Queensland | 1.9 | 0.52 | 0.36 | 0.50 |
| Curtin University of Technology | 4.0 | 0.93 | 0.82 | 0.76 |
| Edith Cowan University | 6.3 | 1.66 | 0.54 | 0.61 |
| Murdoch University | 1.0 | 0.37 | 0.88 | 0.76 |
| The University of Western Australia | 2.0 | 0.50 | 0.74 | 0.69 |
| The Flinders University of South Australia | 0.7 | 0.43 | 0.81 | 0.94 |
| The University of Adelaide | 1.5 | 0.75 | 0.59 | 0.61 |
| University of South Australia | 1.7 | 1.22 | 0.78 | 0.75 |
| Australian Maritime College | 0.9 | 0.22 | 0.66 | 0.13 |
| University of Tasmania | 2.5 | 0.72 | 0.82 | 0.83 |
| Northern Territory University | 6.0 | 0.21 | 0.65 | 0.67 |
| The Australian National University | 0.9 | 1.09 | 0.98 | 0.84 |
| University of Canberra | 1.9 | 1.36 | 0.91 | 0.78 |
| Australian Catholic University | 1.9 | 1.27 | 0.95 | 0.98 |
| National* | 1.5 | 0.65 | 0.78 | 0.78 |
| New South Wales | 1.2 | 0.70 | ** | 0.85 |
| Victoria | 0.6 | 1.00 | | 0.86 |
| Queensland | 1.7 | 0.45 | | 0.72 |
| Western Australia | 3.9 | 0.77 | | 0.67 |
| South Australia | 1.4 | 0.90 | | 0.73 |
| Tasmania | 2.4 | 0.69 | | 0.80 |
| Northern Territory* | 6.0 | 0.21 | | 0.67 |
| Australian Capital Territory | 1.4 | 1.22 | | 0.82 |

| Reference Values (proportion of equity group in pop) | |
|---|---|
| NSW | 1.5 |
| Vic | 0.4 |
| Qld | 2.5 |
| WA | 2.5 |
| SA | 1.3 |
| Tas | 2.7 |
| NT | 22.6 |
| ACT | 0.8 |
| Aust | 1.7 |

Notes: (*for* Table 1 - Aboriginal and Torres Strait Islander Students, 1997 by access, participation, success (1996) and retention)

For an explanation of the performance indicators, see pages 14–15. Values for the participation indicator were calculated using State, Territory and national reference values obtained from the 1996 Census.

Access is the proportion of commencing students belonging to the equity group.

Participation is the proportion of equity group members in the student population relative to the representation of the group in the relevant State or Territory population.

Success is the proportion of units passed by members of the equity group compared with the proportion passed by other students.

Retention is the proportion of equity group students retained from one year to the next compared with the proportion of other students retained.

The reference value for participation, success and retention is 1.

* Batchelor College is not included in National and Northern Territory figures, as it is an Indigenous institution with Indigenous students only, and therefore has no comparative data. If Batchelor College figures were added to the other statistical data, the national averages would be: Access—1.7 per cent; Participation—0.73; Success—0.79; Retention—0.78, while the Northern Territory averages would be: Access—27.9 per cent; Participation—0.71; and Retention—0.70.

** The State amalgamations for success produced by the DEETYAPAC Equity Module are unreliable and have not been included.

## Access

Table 1 shows that, for 1997, the proportion of commencing students who were of Aboriginal or Torres Strait Islander descent was 1.5 per cent. With Batchelor College included, the figure rises to 1.7 per cent. As Indigenous people made up 1.7 per cent of the population aged 15 to 64 at the 1996 census, this group has achieved an equitable representation among commencing students.

A close analysis of the data reveals that nearly one-third (30 per cent) of Indigenous Australian commencing students in 1997 was enrolled in enabling courses, compared with 1 per cent of non-Indigenous students. By contrast, Indigenous Australians made up only 1 per cent of all students commencing Bachelor degree courses. Indigenous males are relatively disadvantaged in their access to higher education, comprising only 39 per cent of all Indigenous Australian enrolments in 1997.

When the State averages in Table 1 are compared with the appropriate State reference value at the top right hand side of the table, it can be seen that Victoria, Western Australia, South Australia and the Australian Capital Territory have access rates higher than would be expected from the Indigenous percentage of the State population.

Universities well above their State reference value in terms of access by Indigenous students in 1997 were James Cook University (6.5 per cent), Edith Cowan University (6.3 per cent), Curtin University of Technology (4 per cent), Southern Cross University (2.4 per cent), the University of Canberra (1.9 per cent) and Deakin University (1.3 per cent). In some cases these statistics are to be expected as they reflect the institution's catchment area.

## Participation

Nationally, Indigenous participation in higher education is improving only slowly, with participation (as a proportion of their representation in the national population) increasing from 0.68 (or 68 per cent) in 1991 to 0.73 (or 73 per cent) in 1997. The figure of 0.65 shown in Table 1 gives participation with Batchelor College excluded (see footnote to Table 1).

Reflecting the national rate, nearly all the States and Territories show a participation ratio for Indigenous students below the reference value of 1. Only in Victoria and the ACT does their representation in the student population reach the participation reference value.

Individual institutions with high participation ratios for this group relative to their representation in the relevant population group are James Cook University (2.37), Deakin University (2.11), Edith Cowan University (1.66), the University of Canberra (1.36), Monash University (1.34), the Australian Catholic University (1.27), the University of South Australia (1.22), Southern Cross University (1.17), The University of Newcastle (1.14), and The Australian National University (1.09).

## Success

Table 1 clearly indicates that Indigenous students generally have substantially lower success rates than non-Indigenous students. In 1997 the pass rates of Indigenous students in units in which they were enrolled were 0.78 against a reference value of 1. None of the individual institutions reaches the reference value of 1. Those with success rates of 0.9 or above relative to non-Indigenous students are the Australian Catholic University, The Australian National University, La Trobe University, Macquarie University, Monash University, Swinburne University of Technology, the University of Canberra and the Victoria University of Technology. Many of these universities have very low access rates. On the other hand, Edith Cowan University, which has very high access and participation levels, has a success rate of 0.54 (or 54 per cent of the success rate for non-Indigenous students), the second lowest of all institutions.

## Retention

Aboriginal and Torres Strait Islander students are in overall terms less likely to persist with their university studies than other students. The apparent retention rate of Indigenous students nationally is 0.78 against a reference value of 1. This means that they are retained within institutions at 78 per cent of the rate for non-Indigenous students. At the State and Territory level, Victoria, with 0.86, has the highest retention rate for Indigenous students, as against Western Australia and the Northern Territory with 0.67. As regards institutions, high retention rates are at Swinburne University of Technology (1.05), the Australian Catholic University and The University of Sydney (0.98) and the University of Technology, Sydney (0.97).

A study by Colin Bourke and others at the University of South Australia (Bourke 1996) suggests that several factors affect the success and retention rates of Indigenous students at university. The Bourke study found that the most useful predictors at the University of South Australia were gender, enjoyment of university life, mode of study, family situation and whether students had been studying in the year before commencing their course. The highest incidence of attrition occurred

among those Indigenous students who were male, lived alone, studied on campus (as opposed to external study), did not enjoy their studies and had not studied in the twelve months prior to commencing university. The authors make an interesting point that:

> *Many Indigenous students came to university to meet the expectations of their communities. The desire on the part of the Indigenous students to meet such expectations was evidently insufficient to enable them to overcome their sudden exposure to the reality of university life and the discouragement many of them experience in their studies at the university.*
> *(Bourke 1996, p. xiii).*

In a second study, staff of the Faculty of Business and the Capricornia Aboriginal and Islander Tertiary Education Centre at Central Queensland University undertook a project investigating the factors affecting Indigenous students' progress in completing the Business degree programme (Anderson 1998). The report's conclusions and recommendations include the need for universities to recognise and value diversity among their students, the need to respond to knowledge which Indigenous students bring with them to university, and the need to provide a range of support services for Indigenous students. The findings of both these studies may be useful to institutions wishing to examine their policies and practices in regard to Indigenous students.

## 3.5 Students from non-English-speaking backgrounds

Table 2 People from non-English-speaking backgrounds, 1997 by access, participation, success (1996) and retention

| Institution | Access (%) | Participation | Success | Retention |
|---|---|---|---|---|
| Charles Sturt University | 0.1 | 0.03 | 0.86 | 0.78 |
| Macquarie University | 9.9 | 1.31 | 0.95 | 0.97 |
| Southern Cross University | 1.4 | 0.15 | 0.93 | 0.79 |
| The University of New England | 2.0 | 0.25 | 0.93 | 0.94 |
| The University of New South Wales | 16.5 | 2.29 | 0.97 | 1.03 |
| The University of Newcastle | 1.6 | 0.22 | 0.89 | 0.86 |
| The University of Sydney | 8.4 | 1.28 | 0.98 | 1.00 |
| University of Technology, Sydney | 12.3 | 1.58 | 0.97 | 0.97 |
| University of Western Sydney | 7.2 | 1.10 | 1.04 | 0.97 |
| University of Wollongong | 3.4 | 0.48 | 0.95 | 0.94 |
| Deakin University | 2.2 | 0.44 | 0.95 | 1.05 |
| La Trobe University | 2.1 | 0.44 | 0.96 | 1.03 |
| Monash University | 7.9 | 1.35 | 0.97 | 1.06 |
| Royal Melbourne Institute of Technology | 7.8 | 1.25 | 0.92 | 1.01 |
| Swinburne University of Technology | 5.5 | 1.16 | 0.96 | 0.98 |
| University of Ballarat | 1.0 | 0.17 | 0.82 | 0.90 |
| The University of Melbourne | 5.7 | 0.99 | 0.98 | 1.16 |
| Victoria University of Technology | 9.8 | 1.92 | 0.92 | 0.96 |
| Central Queensland University | 1.9 | 0.78 | 0.91 | 1.05 |
| Griffith University | 4.8 | 1.58 | 1.00 | 1.09 |
| James Cook University | 1.3 | 0.32 | 1.04 | 0.92 |
| Queensland University of Technology | 3.6 | 1.44 | 1.00 | 1.06 |
| The University of Queensland | 6.2 | 2.20 | 0.99 | 1.07 |
| University of Southern Queensland | 1.1 | 0.54 | 0.83 | 0.94 |
| Curtin University of Technology | 6.0 | 1.35 | 0.98 | 1.13 |
| Edith Cowan University | 3.4 | 0.79 | 0.91 | 1.00 |
| Murdoch University | 3.5 | 0.82 | 0.98 | 1.00 |
| The University of Western Australia | 5.9 | 1.63 | 1.03 | 1.06 |
| The Flinders University of South Australia | 2.3 | 0.79 | 0.94 | 0.97 |
| The University of Adelaide | 3.4 | 1.40 | 1.03 | 1.03 |
| University of South Australia | 3.7 | 1.31 | 0.94 | 0.97 |
| Australian Maritime College | 3.0 | 3.15 | 0.82 | 0.97 |
| University of Tasmania | 1.7 | 1.27 | 0.95 | 0.99 |
| Northern Territory University | 2.7 | 1.20 | 1.03 | 1.18 |
| The Australian National University | 2.4 | 0.59 | 0.90 | 0.99 |
| University of Canberra | 4.1 | 1.01 | 0.94 | 1.00 |
| Australian Catholic University | 2.6 | 0.43 | 0.95 | 0.95 |
| National | 5.2 | 1.05 | 0.97 | 1.05 |
| New South Wales | 6.8 | 1.00 | * | 1.04 |
| Victoria | 5.6 | 1.01 | | 1.05 |
| Queensland | 3.7 | 1.38 | | 1.09 |
| Western Australia | 4.7 | 1.15 | | 1.09 |
| South Australia | 3.3 | 1.21 | | 1.00 |
| Tasmania | 1.8 | 1.37 | | 0.97 |
| Northern Territory | 2.7 | 1.20 | | 1.18 |
| Australian Capital Territory | 3.3 | 0.79 | | 0.98 |

| Reference Values (proportion of equity group in population) | |
|---|---|
| NSW | 6.7 |
| Vic | 5.5 |
| Qld | 2.6 |
| WA | 3.9 |
| SA | 2.5 |
| Tas | 1.0 |
| NT | 2.3 |
| ACT | 4.3 |
| Aust | 4.8 |

Notes (*for* Table 2 - People from non-English-speaking backgrounds, 1997 by access, participation, success (1996) and retention)

For an explanation of the performance indicators, see pages 14–15. The reference value for participation, success and retention is 1.

Access is the proportion of commencing students belonging to the equity group.

Participation is the proportion of equity group members in the student population relative to the representation of the group in the relevant State or Territory population.

Success is the proportion of units passed by members of the equity group compared with the proportion passed by other students.

Retention is the proportion of equity group students retained from one year to the next compared with the proportion of other students retained.

* The State amalgamations for success produced by the DEETYAPAC Equity Module are unreliable and have not been included.

## Access

Commencing students from a non-English speaking background (NESB) made up 5.2 per cent of the total population of commencing students, while the percentage of NESB people in the general population in 1997 was 4.8 per cent. This indicates a level of access to higher education which is slightly higher than might have been expected from this group's share of the general population.

If the average access rates for this group for each State and Territory, given in Table 2, are compared with the group's share of the relevant population, it emerges that in every State and Territory (except the Australian Capital Territory) NESB students access higher education at a higher rate than the level of their representation in the general population.

It is not surprising that universities in Sydney and Melbourne, which are cities with relatively large NESB populations, have high access rates for this group. Among them are The University of New South Wales (16.5 per cent), the University of Technology, Sydney (12.3 per cent), Macquarie University (9.9 per cent), Victoria University of Technology (9.8 per cent), Monash University (7.9 per cent) and the Royal Melbourne Institute of Technology (7.8 per cent).

The low rates at some institutions seem largely attributable to their location outside capital cities, where immigrants tend to settle. Indeed, all the universities with relatively high NESB access rates are situated in metropolitan areas.

## Participation

The relatively high access rate of the NESB group is matched by the national participation ratio of NESB students compared with their representation in the national population, which stands at 1.05. The participation ratio for this group is also above 1 in each State and Territory, except for the Australian Capital Territory which has a participation ratio of 0.79. In the case of the ACT, it should be noted that The Australian National University has a participation ratio of 0.59 as against the University of Canberra's ratio of 1.01 which may perhaps be partly explained by the vocational orientation of the University of Canberra and the apparent preference of many NESB students for vocational courses.

In individual institutions, the participation of NESB students ranges from the high ratios of 2.29 at The University of New South Wales, 2.2 at The University of Queensland and 1.92 at the Victoria University of Technology to the lowest ratio of 0.03. The tendency noted above for immigrants to settle in capital cities is no doubt a factor in the low participation at institutions outside capital cities.

## Success

In 1996, the NESB group fell just short (at 0.97 nationally) of the success reference value of 1. This means that their success rate (units passed as a proportion of units attempted) was 97 per cent of that for other students. Institutions with high success rates for NESB students include James Cook University and the University of Western Sydney (1.04) and The University of Western Australia, Northern Territory University and The University of Adelaide (1.03).

## Retention

Retention rates for NESB students, at 1.05 nationally (or 105 per cent of the rate for other students), are higher than for the student population as a whole. Institutions vary from the higher rates of 1.18 (Northern Territory University), 1.16 (The University of Melbourne) and 1.13 (Curtin University of Technology) to the lower rates of 0.79 and 0.78.

While NESB students, overall, perform at least as well as other students, it appears that a very strong performance by students from some countries in Asia and in Eastern Europe may be masking an under-representation of students from other backgrounds, particularly from the Middle East and Southern Europe (Postle et al. 1997, pp. 71–73). It could therefore be useful for individual institutions, if they are not already doing so, to identify and target particular language or country-of-origin groups in their catchment areas.

# 3.6 Students from rural backgrounds

Table 3 Rural students, 1997 by access, participation, success (1996) and retention

| Institution | Access (%) | Participation | Success | Retention |
|---|---|---|---|---|
| Charles Sturt University | 43.9 | 1.89 | 1.04 | 1.09 |
| Macquarie University | 3.3 | 0.16 | 1.01 | 1.02 |
| Southern Cross University | 53.8 | 2.40 | 1.05 | 1.13 |
| The University of New England | 40.3 | 1.71 | 1.03 | 1.11 |
| The University of New South Wales | 5.9 | 0.27 | 1.02 | 1.00 |
| The University of Newcastle | 17.1 | 0.73 | 1.04 | 1.08 |
| The University of Sydney | 8.4 | 0.35 | 1.01 | 0.97 |
| University of Technology, Sydney | 3.3 | 0.14 | 1.02 | 1.02 |
| University of Western Sydney | 3.9 | 0.16 | 0.99 | 1.04 |
| University of Wollongong | 17.2 | 0.68 | 1.03 | 1.03 |
| Deakin University | 16.8 | 0.74 | 1.00 | 1.04 |
| La Trobe University | 30.5 | 1.15 | 1.06 | 0.96 |
| Monash University | 13.3 | 0.54 | 0.97 | 0.98 |
| Royal Melbourne Institute of Technology | 10.0 | 0.41 | 1.03 | 1.04 |
| Swinburne University of Technology | 7.2 | 0.27 | 1.02 | 1.03 |
| University of Ballarat | 69.2 | 2.93 | 1.06 | 1.06 |
| The University of Melbourne | 13.8 | 0.51 | 0.99 | 0.83 |
| Victoria University of Technology | 8.0 | 0.29 | 1.07 | 1.00 |
| Central Queensland University | 68.6 | 1.84 | 1.07 | 1.13 |
| Griffith University | 12.5 | 0.34 | 1.00 | 1.00 |
| James Cook University | 42.7 | 1.14 | 1.01 | 1.04 |
| Queensland University of Technology | 20.0 | 0.48 | 0.99 | 1.00 |
| The University of Queensland | 18.8 | 0.51 | 1.00 | 1.00 |
| University of Southern Queensland | 48.3 | 1.37 | 1.08 | 1.14 |
| Curtin University of Technology | 5.5 | 0.49 | 1.01 | 0.95 |
| Edith Cowan University | 10.6 | 0.90 | 0.99 | 0.98 |
| Murdoch University | 7.4 | 0.65 | 1.00 | 0.96 |
| The University of Western Australia | 4.6 | 0.37 | 0.96 | 0.94 |
| The Flinders University of South Australia | 10.6 | 0.46 | 1.05 | 0.99 |
| The University of Adelaide | 10.9 | 0.48 | 1.01 | 0.98 |
| University of South Australia | 11.6 | 0.60 | 1.04 | 0.99 |
| Australian Maritime College | 32.0 | 0.61 | 1.02 | 1.06 |
| University of Tasmania | 42.0 | 0.76 | 1.00 | 0.99 |
| Northern Territory University | 3.1 | n.a.* | 1.00 | 0.91 |
| The Australian National University | 14.9 | n.a.* | 1.04 | 1.11 |
| University of Canberra | 14.4 | n.a.* | 1.02 | 1.05 |
| Australian Catholic University | 14.5 | 0.61 | 1.02 | 1.00 |
| National | 18.3 | 0.72 | 0.99 | 0.97 |
| New South Wales | 17.4 | 0.73 | ** | 0.96 |
| Victoria | 16.6 | 0.67 | | 0.97 |
| Queensland | 29.4 | 0.78 | | 0.99 |
| Western Australia | 7.4 | 0.63 | | 0.94 |
| South Australia | 11.2 | 0.54 | | 0.99 |
| Tasmania | 41.1 | 0.75 | | 0.99 |
| Northern Territory | 3.1 | n.a.* | | 0.91 |
| Australian Capital Territory | 14.6 | n.a.* | | 1.08 |

| Reference Values (proportion of equity group in population) | |
|---|---|
| NSW | 24.0 |
| Vic | 23.7 |
| Qld | 36.8 |
| WA | 11.1 |
| SA | 20.4 |
| Tas | 55.3 |
| NT | 0.0 |
| ACT | 0.0 |
| Aust | 24.3 |

Notes (*for* Table 3 - Rural students, 1997 by access, participation, success (1996) and retention)

For an explanation of the performance indicators, see pages 14–15. The reference value for participation, success and retention is 1.

Access is the proportion of commencing students belonging to the equity group.

Participation is the proportion of equity group members in the student population relative to the representation of the group in the relevant State or Territory population.

Success is the proportion of units passed by members of the equity group compared with the proportion passed by other students.

Retention is the proportion of equity group students retained from one year to the next compared with the proportion of other students retained.

* The percentage of population living in areas with rural postcodes is 0.

** The State amalgamations for success produced by the DEETYAPAC Equity Module are unreliable and have not been included.

## Access

At the national level, rural students make up 18.3 per cent of all commencing students. This figure varies considerably by State and Territory, reflecting their different proportions of rural population. For example, rural students constitute 41.1 per cent of commencing students in Tasmania and 29.4 per cent in Queensland. These figures reflect closely the proportion of rural population in those two States (55.3 per cent in Tasmania and 36.8 per cent in Queensland). Western Australia, on the other hand, has a low access rate of only 7.4 per cent for rural students but this level also reflects the rural component in the State's population (11.1 per cent). The Northern Territory also has a low access rate at 3.1 per cent, but this may partly be due to the absence in the Northern Territory of postcodes classified as rural (NT postcodes for locations outside Darwin are classified as isolated). At 17.4 per cent and 16.6 per cent respectively, the large States of New South Wales and Victoria have access rates that fall between the two extremes. As the rural population comprises around 24 per cent of the overall population in both these States, there is scope for an increase in their rural population's access to university study.

There is considerable variation between the access rates of individual institutions. Universities with a high percentage of rural commencing students relative to their State's reference value are the University of Ballarat (69.2 per cent), Central Queensland University (68.6 per cent), Southern Cross University (53.8 per cent), Charles Sturt University (43.9 per cent), and The University of New England (40.3 per cent). There is nothing unexpected in this grouping, given that the institutions are located in regional centres and offer courses and delivery modes suited to rural students.

Those institutions with low proportions of rural students in the commencing cohort, relative to their State population share, are all to be found in the capital cities. Indeed, all the universities located in Sydney, Melbourne, Brisbane and Adelaide have low rural access rates. This does not necessarily mean that city universities have low *numbers* of rural students. Indeed, a greater percentage of students from rural backgrounds study at urban universities than at rural universities. It may also be the case that there is some under-reporting of rural

students at city universities. This could occur where students from a rural background move to the city to attend university and then give their new city address as their permanent home address on student enrolment forms. This consideration would also apply to the figures for students from isolated backgrounds.

## Participation

In 1997, the representation of people from rural backgrounds in higher education was 0.72 of their representation in the general population. This means that rural students' participation at university is less than three-quarters of what might be expected from the group's share of the general population.

There is not much variation among the States and Territories, with rural students being under-represented everywhere. Queensland, not unexpectedly, has the highest representation for this group at 0.78 of their representation in the State population, with the lowest representation being 0.54 in South Australia.

There is considerable variation, however, among the individual institutions. As might be expected, universities in rural catchment areas have representation rates well above the national average. The representation of this group at the University of Ballarat is 2.9 times its representation in the State, while the corresponding figure for Southern Cross University is 2.4, for Charles Sturt University is 1.9, for Central Queensland University is 1.8, for The University of New England is 1.7 and for the University of Southern Queensland is 1.4.

Rural students' share of enrolments at Australian universities has declined during the 1990s. The representation of this group in higher education relative to its national representation dropped from 0.76 in 1991 to 0.72 in 1997. The rural decline in the 1990s may well have a bearing on the decrease between 1991 and 1997 in the participation indicator. It should be noted that the participation indicator is calculated using a classification of postcodes devised by DPIE in 1992, based on 1991 Census data. This classification has not been updated to take account of 1996 Census details. The relative participation levels for the later years of the period in question are compared with the 1991 rural population, and do not reflect subsequent changes in that population.

## Success

According to the data in Table 3, students from rural backgrounds generally succeed in their university studies about as well as the general student population. The success rate nationally for rural students in 1996 was 0.99, compared to the reference value for other students of 1. Variation between the universities is low, with a range from 0.96 to 1.08. Institutions with high rates are the University of Southern Queensland (1.08), Central Queensland University (1.07) and the Victoria University of Technology (1.07).

## Retention

Rural students are retained at university at a rate of 0.97 nationally, compared with the reference value (for non-rural students) of 1. There is some variation among the States and Territories, ranging from 0.91 in the Northern Territory to 1.08 in the

Australian Capital Territory. It should be noted that as there are no rural postcodes in either of these Territories, their rural students must have come from interstate. The variation is much smaller for the six States (from 0.94 to 0.99) which do have rural postcodes.

There is only slight variation across universities. The University of Southern Queensland (1.14), Southern Cross University and Central Queensland University (both 1.13) have the highest retention rates. Apart from the Northern Territory University, the variations between institutions are minor, showing that throughout the higher education sector the success and retention rates for rural students are similar to those of the student body at large.

# 3.7 Students from isolated backgrounds

Table 4 Isolated students, 1997 by access, participation, success (1996) and retention

| Institution | Access | Participation | Success | Retention |
|---|---|---|---|---|
| Charles Sturt University | 2.6 | 1.80 | 0.98 | 0.96 |
| Macquarie University | 0.5 | 0.22 | 0.91 | 0.90 |
| Southern Cross University | 0.9 | 0.64 | 0.95 | 0.87 |
| The University of New England | 3.4 | 2.44 | 1.00 | 0.96 |
| The University of New South Wales | 0.3 | 0.23 | 0.97 | 0.89 |
| The University of Newcastle | 0.4 | 0.19 | 0.92 | 1.03 |
| The University of Sydney | 0.6 | 0.48 | 0.86 | 0.93 |
| University of Technology Sydney | 0.2 | 0.09 | 0.98 | 1.09 |
| University of Western Sydney | 0.2 | 0.15 | 0.95 | 0.93 |
| University of Wollongong | 0.2 | 0.19 | 1.07 | 0.80 |
| Deakin University | 1.0 | 3.20 | 0.91 | 0.90 |
| La Trobe University | 0.4 | 1.00 | 1.12 | 1.20 |
| Monash University | 0.5 | 1.69 | 0.95 | 0.82 |
| Royal Melbourne Institute of Technology | 0.1 | 0.47 | 1.06 | 0.97 |
| Swinburne University of Technology | 0.2 | 0.58 | 1.09 | 1.25 |
| University of Ballarat | 1.2 | 3.64 | 1.06 | 0.88 |
| The University of Melbourne | 0.5 | 1.17 | 0.97 | 0.65 |
| Victoria University of Technology | 0.1 | 0.21 | 0.81 | 0.80 |
| Central Queensland University | 5.5 | 1.00 | 0.96 | 1.00 |
| Griffith University | 1.1 | 0.17 | 0.97 | 0.96 |
| James Cook University | 11.3 | 1.80 | 0.93 | 0.93 |
| Queensland University of Technology | 1.5 | 0.24 | 1.00 | 1.03 |
| The University of Queensland | 2.3 | 0.35 | 0.99 | 0.99 |
| University of Southern Queensland | 5.1 | 0.92 | 0.97 | 0.99 |
| Curtin University of Technology | 7.6 | 0.42 | 0.97 | 0.91 |
| Edith Cowan University | 5.2 | 0.32 | 0.93 | 0.79 |
| Murdoch University | 6.1 | 0.37 | 0.98 | 0.93 |
| The University of Western Australia | 4.6 | 0.23 | 0.99 | 0.95 |
| The Flinders University of South Australia | 2.2 | 0.37 | 0.95 | 0.95 |
| The University of Adelaide | 1.9 | 0.34 | 0.96 | 0.94 |
| University of South Australia | 3.3 | 0.64 | 0.97 | 0.93 |
| Australian Maritime College | 4.6 | 2.80 | 0.97 | 0.92 |
| University of Tasmania | 0.7 | 0.41 | 0.92 | 0.91 |
| Northern Territory University | 10.5 | 0.11 | 1.06 | 0.96 |
| The Australian National University | 0.4 | n.a.* | 1.01 | 0.98 |
| University of Canberra | 0.4 | n.a.* | 0.79 | 1.02 |
| Australian Catholic University | 1.1 | 0.80 | 0.99 | 1.08 |
| National | 1.92 | 0.39 | 0.95 | 0.90 |
| New South Wales | 0.9 | 0.53 | ** | 0.91 |
| Victoria | 0.5 | 1.43 | | 0.86 |
| Queensland | 3.3 | 0.53 | | 0.94 |
| Western Australia | 6.0 | 0.32 | | 0.88 |
| South Australia | 2.7 | 0.46 | | 0.93 |
| Tasmania | 1.1 | 0.55 | | 0.88 |
| Northern Territory | 10.5 | 0.11 | | 0.96 |
| Australian Capital Territory* | 0.4 | n.a.* | | 1.00 |

| Reference Values (proportion of equity group in population) | |
|---|---|
| NSW | 1.4 |
| Vic | 0.3 |
| Qld | 5.7 |
| WA | 16.3 |
| SA | 5.1 |
| Tas | 1.5 |
| NT | 96.1 |
| ACT | 0.0 |
| Aust | 4.5 |

Notes (*for* Table 4 - Isolated students, 1997 by access, participation, success (1996) and retention)

For an explanation of the performance indicators, see pages 14–15. The reference value for participation, success and retention is 1.

Access is the proportion of commencing students belonging to the equity group.

Participation is the proportion of equity group members in the student population relative to the representation of the group in the relevant State or Territory population.

Success is the proportion of units passed by members of the equity group compared with the proportion passed by other students.

Retention is the proportion of equity group students retained from one year to the next compared with the proportion of other students retained.

* The percentage of population living in isolated areas is 0.

** The State amalgamations for success produced by the DEETYAPAC Equity Module are unreliable and have not been included.

## Access

Students from isolated backgrounds take up higher education studies at a very low rate. Nationally, these students comprise only 1.9 per cent of all commencing students. If their share mirrored the representation of isolated people aged 15 to 64 in the general population, the figure would be around 4.5 per cent.

Among the States and Territories, only Victoria has an access rate for isolated students higher than its State reference value. Tasmania and the Northern Territory have access rates considerably lower than their reference values. Within Victoria, Deakin University and the University of Ballarat have access rates well above the State reference value. This is probably due, in the case of Deakin, to its large numbers of external students. The city universities of RMIT, Swinburne University of Technology and Victoria University of Technology have very low access rates, which suggests, as one might expect, that they draw their students in large part from the Melbourne suburbs.

In general, as would be expected, universities in large cities tend to have low percentages of students from isolated backgrounds, while those in rural areas or regional cities have higher percentages of such students. This does not necessarily mean that city universities are not pulling their weight in attracting students from isolated backgrounds. Indeed, The University of Melbourne has more than twice as many commencing students from an isolated background as does the University of Ballarat but, because of the relative sizes of the universities, it has a much lower percentage of such students.

## Participation

Students from isolated areas are the most disadvantaged group in higher education in terms of access and participation and it appears that the situation is worsening. The participation of this group in university studies dropped from 1.9 per cent of the student body in 1991, rising to 2.0 per cent in 1994 and 1995 and dropping to 1.8 per cent in 1996 and 1997, compared with a population rate of 4.5 per cent (see Table 15). It should be noted that the participation indicator is calculated using a

classification of postcodes devised by the Department of Primary Industries and Energy in 1992 based on 1991 Census data. This classification has not been updated to take account of 1996 Census details. The relative participation levels for the later years of the period in question are compared with the 1991 isolated population, and do not reflect subsequent changes in that population.

The pattern of representation of isolated students in higher education courses resembles that for Aboriginal and Torres Strait Islander students and there may be some overlap of students in these two groups.

Nationally, the participation indicator was 0.39, relative to the reference value of 1, which means that this group participates in higher education at only 39 per cent of their representation in the general population. There was considerable variation from State to State, as would be expected. The high participation indicator of 1.4 for Victoria should be compared with the low proportion of isolated people (0.3 per cent) in its population. The rates of most remaining States cluster somewhere around 0.5 of the reference value. Tasmania and the Northern Territory have very low indicators (0.01 and 0.11 per cent respectively) in contrast to the large proportions of isolated inhabitants within their borders.

Universities with high representation for this group relative to the representation of people from isolated backgrounds in the relevant population are the University of Ballarat (3.64), Deakin University (3.2), the Australian Maritime College (2.8) and The University of New England (2.44). In the case of Deakin University and The University of New England, strong participation is due in part to their high external student populations. As with rural students, there may be some under-reporting of students from isolated backgrounds at city universities where a new city address is given as a student's permanent home address on university enrolment forms.

## Success

The national success rate of this group in 1996 was 0.95 against the reference value of 1.00. The institutions with the highest success rates for isolated students are La Trobe University (1.12), Swinburne University of Technology (1.09) and the University of Wollongong (1.07).

## Retention

Nationally, the retention rate for isolated students is 0.9, which is quite low relative to the reference value of 1 for other students. This rate varies at the State and Territory level from 0.96 in the Northern Territory to 0.86 in Victoria. There is also wide variation among institutions, with high rates occurring at Swinburne University of Technology (1.25), La Trobe University (1.2), the University of Technology, Sydney and the Australian Catholic University (1.1), while the lowest rate for any institution is 0.65. There may be a connection between the need for many students from isolated backgrounds to study externally and the lower retention rate for external students.

# 3.8 Students from low socio-economic status (SES) backgrounds

Table 5 People from low socio-economic status (low SES) backgrounds: access 1997

| Institution | Australia | | State | | Urban | |
|---|---|---|---|---|---|---|
| | under 25 % | 25+ % | under 25 % | 25+ % | under 25 % | 25+ % |
| Charles Sturt University | 16.4 | 13.4 | 24.5 | 19.3 | 13.7 | 14.5 |
| Macquarie University | 5.4 | 3.3 | 7.3 | 5.1 | 9.8 | 6.9 |
| Southern Cross University | 20.2 | 16.7 | 27.0 | 23.6 | 27.9 | 22.6 |
| The University of New England | 23.4 | 16.0 | 33.9 | 20.4 | 20.5 | 14.2 |
| The University of New South Wales | 5.9 | 4.8 | 9.4 | 7.1 | 10.8 | 10.1 |
| The University of Newcastle | 26.5 | 25.7 | 34.6 | 33.0 | 31.1 | 33.6 |
| The University of Sydney | 7.1 | 7.1 | 10.4 | 8.1 | 12.7 | 10.2 |
| University of Technology Sydney | 7.4 | 5.3 | 10.9 | 7.8 | 16.0 | 12.2 |
| University of Western Sydney | 8.1 | 7.4 | 15.6 | 12.6 | 22.9 | 19.0 |
| University of Wollongong | 11.6 | 8.8 | 18.2 | 16.0 | 17.5 | 17.4 |
| Deakin University | 10.5 | 8.5 | 14.6 | 9.8 | 12.5 | 7.9 |
| La Trobe University | 14.8 | 10.7 | 24.4 | 18.4 | 21.4 | 14.6 |
| Monash University | 9.5 | 7.3 | 14.7 | 10.5 | 14.2 | 11.2 |
| Royal Melbourne Institute of Technoloyg | 14.5 | 8.9 | 19.8 | 11.8 | 20.2 | 14.1 |
| Swinburne University of Technology | 9.0 | 6.3 | 12.8 | 8.1 | 12.6 | 10.2 |
| University of Ballarat | 14.2 | 12.3 | 29.6 | 26.0 | 18.1 | 15.1 |
| The University of Melbourne | 8.9 | 6.6 | 13.4 | 9.6 | 11.6 | 10.3 |
| Victoria University of Technology | 22.5 | 18.6 | 28.8 | 23.0 | 33.9 | 29.2 |
| Central Queensland University | 40.0 | 34.7 | 29.0 | 27.7 | 22.9 | 17.4 |
| Griffith University | 25.2 | 21.3 | 13.3 | 10.3 | 20.7 | 20.2 |
| James Cook University | 25.5 | 14.3 | 14.7 | 6.7 | 1.7 | 1.1 |
| Queensland University of Technology | 22.7 | 18.0 | 15.9 | 13.4 | 14.2 | 11.7 |
| The University of Queensland | 21.5 | 14.9 | 14.2 | 9.5 | 12.3 | 10.3 |
| University of Southern Queensland | 35.8 | 24.7 | 25.7 | 20.5 | 20.9 | 20.9 |
| Curtin University of Technology | 21.1 | 20.4 | 13.8 | 13.0 | 14.0 | 15.3 |
| Edith Cowan University | 19.4 | 20.3 | 13.6 | 15.6 | 13.9 | 14.9 |
| Murdoch University | 23.4 | 25.4 | 18.3 | 20.4 | 17.1 | 20.6 |
| The University of Western Australia | 14.4 | 10.1 | 9.9 | 6.7 | 8.4 | 7.5 |
| The Flinders University of South Australia | 16.9 | 15.4 | 11.4 | 10.0 | 9.5 | 10.8 |
| The University of Adelaide | 17.7 | 13.5 | 11.5 | 7.3 | 11.0 | 10.2 |
| University of South Australia | 21.3 | 19.3 | 14.2 | 12.7 | 15.1 | 15.6 |
| Australian Maritime College | 30.3 | 19.5 | 17.7 | 22.5 | 0.0 | 14.3 |
| University of Tasmania | 31.8 | 26.8 | 12.5 | 12.8 | 9.6 | 8.6 |
| Northern Territory University | 2.8 | 2.7 | 0.9 | 1.3 | 0.4 | 1.7 |
| The Australian National University | 5.5 | 2.2 | 8.4 | 11.7 | 8.4 | 11.9 |
| University of Canberra | 6.6 | 1.9 | 9.7 | 9.5 | 9.6 | 9.5 |
| Australian Catholic University | 10.1 | 11.8 | | | | |
| National | 16.0 | 13.5 | 16.3 | 13.6 | 15.6 | 13.7 |
| New South Wales | 11.5 | 10.7 | 16.8 | 14.5 | 17.0 | 14.8 |
| Victoria | 12.5 | 9.0 | 18.5 | 12.6 | 17.5 | 12.9 |
| Queensland | 25.7 | 21.5 | 16.8 | 14.9 | 15.0 | 14.1 |
| Western Australia | 19.4 | 20.2 | 13.5 | 14.7 | 13.1 | 15.2 |
| South Australia | 19.1 | 17.0 | 12.7 | 10.7 | 12.4 | 13.0 |
| Tasmania | 31.7 | 25.9 | 12.6 | 13.0 | 9.5 | 8.7 |
| Northern Territory | 2.8 | 2.7 | 0.9 | 1.3 | 0.4 | 1.7 |
| Australian Capital Territory | 6.0 | 2.0 | 9.1 | 10.4 | 9.0 | 10.5 |

Note (for Table 5 - People from low socio-economic status (low SES) backgrounds: access 1997)

Access is the proportion of commencing students belonging to the equity group.

Reference value is 25 per cent.

## Access

The following discussion will focus mainly, for the sake of brevity, on the Australian level of postcodes, rather than State or urban. This will also provide a common baseline for comparison. It should be noted, however, that many institutions draw their students from an urban or State catchment, and their outcomes for the low SES group appear much better when considered from a perspective other than the Australian postcode level. Readers may wish to examine for themselves the State and urban data of the tables and draw their own conclusions.

It should also be noted that, when viewed from the Australian level, the Northern Territory has a very low number of low SES postcodes (embracing only 8 per cent of the population), while the ACT has none at all. For this reason, the outcomes for the two Territories appear particularly low. Hence, these are excluded from the following commentary.

Martin (1994, pp 132–135) gives tables showing the percentage of low SES people within each State and within urban areas in each State. The tables show that the balance between low, medium and high SES is far from uniform across the States. For example, Victoria has 18 per cent low SES and 30 per cent high SES, while Queensland has 37 per cent low SES and only 9 per cent high SES. An abridged version of Martin's tables is attached below, and readers may wish to refer to it when examining the low SES access and participation tables.

Table 6 Low SES population distribution by state

| | NSW | Vic | Qld | WA | SA | Tas | NT | ACT | Aus |
|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % |
| General population | 20 | 18 | 37 | 31 | 37 | 37 | 8 | 0 | 25 |
| Urban population | 14 | 17 | 18 | 21 | 25 | 18 | 0 | 0 | 17 |

Students aged under 25 years from low socio-economic backgrounds made up 16 per cent of commencing students in this age group, with this percentage falling somewhat short of the group's population share (25 per cent). Tasmania had the highest percentage of low SES students among the commencing cohort (31.7 per cent), followed by Queensland (25.7 per cent), Western Australia (19.4 per cent) and South Australia (19.1 per cent).

There is considerable variation among individual institutions. Students aged under 25 from low SES backgrounds made up 40 per cent of the total student commencements in this age group at Central Queensland University, 35.8 per cent at the University of Southern Queensland, 31.8 per cent at the University of Tasmania, and 30.3 per cent at the Australian Maritime College. Three other universities had commencements above the 25 per cent national population share: Griffith University, James Cook University and The University of Newcastle. The

relatively poor performance of a number of institutions in Sydney would appear to be tied in part to the demographics of that city, and the smaller representation within the city of people from low SES backgrounds. To put them into perspective, all these results should be compared with the relevant State reference value given in the table above.

The access of low SES people aged 25 and above is even lower than that of the younger age group. In 1997 only 13.5 per cent of commencing students from this age group came from low SES backgrounds. Only four institutions had low SES access rates above 25 per cent for this age group. When the relevant State low SES population is taken into account, only two institutions (The University of Newcastle and Victoria University of Technology) exceed the reference value for the group.

Quite a few institutions show significant differences when their intakes of students under 25 years and those over 25 are compared. For example, James Cook University has 25.5 per cent low SES students in the younger age group, but only 14.3 per cent in the over 25 group. A similar comment could be made about the Australian Maritime College, La Trobe University, Macquarie University, Royal Melbourne Institute of Technology, The University of Melbourne, The University of New England, The University of Queensland, the University of Southern Queensland and the University of Wollongong. It would be interesting to explore the reasons why mature-age low SES people are much less attracted to these institutions than are school leavers.

## Table 7 People from low socio-economic status (low SES) backgrounds: participation 1997

| Institution | Australia | | State | | Urban | |
|---|---|---|---|---|---|---|
| | under 25 | 25+ | under 25 | 25+ | under 25 | 25+ |
| Charles Sturt University | 0.83 | 0.50 | 1.63 | 0.87 | 0.33 | 0.56 |
| Macquarie University | 0.08 | 0.06 | 0.11 | 0.08 | 0.17 | 0.13 |
| Southern Cross University | 1.74 | 0.87 | 3.21 | 1.66 | 1.09 | 0.72 |
| The University of New England | 1.03 | 0.44 | 1.55 | 0.56 | 0.75 | 0.42 |
| The University of New South Wales | 0.11 | 0.09 | 0.18 | 0.13 | 0.23 | 0.22 |
| The University of Newcastle | 1.80 | 1.74 | 2.56 | 2.39 | 2.64 | 3.72 |
| The University of Sydney | 0.13 | 0.12 | 0.21 | 0.15 | 0.29 | 0.22 |
| University of Technology Sydney | 0.14 | 0.09 | 0.22 | 0.15 | 0.38 | 0.29 |
| University of Western Sydney | 0.43 | 0.32 | 0.66 | 0.50 | 1.25 | 0.92 |
| University of Wollongong | 0.43 | 0.42 | 1.03 | 1.32 | 2.38 | 2.33 |
| Deakin University | 0.27 | 0.21 | 0.43 | 0.29 | 0.41 | 0.25 |
| La Trobe University | 0.47 | 0.27 | 0.78 | 0.46 | 0.61 | 0.38 |
| Monash University | 0.17 | 0.15 | 0.30 | 0.23 | 0.30 | 0.25 |
| Royal Melbourne Institute of Technoloyg | 0.36 | 0.20 | 0.53 | 0.28 | 0.60 | 0.41 |
| Swinburne University of Technology | 0.20 | 0.13 | 0.29 | 0.16 | 0.35 | 0.24 |
| University of Ballarat | 1.41 | 1.19 | 4.90 | 4.97 | 1.38 | 0.91 |
| The University of Melbourne | 0.15 | 0.13 | 0.24 | 0.20 | 0.21 | 0.24 |
| Victoria University of Technology | 1.05 | 0.72 | 1.50 | 1.06 | 2.19 | 1.75 |
| Central Queensland University | 9.92 | 3.54 | 4.49 | 2.05 | 0.80 | 0.57 |
| Griffith University | 1.38 | 0.98 | 0.30 | 0.20 | 0.54 | 0.50 |
| James Cook University | 7.33 | 3.34 | 1.37 | 0.33 | 1.19 | 0.50 |
| Queensland University of Technology | 0.83 | 0.66 | 0.30 | 0.23 | 0.31 | 0.27 |
| The University of Queensland | 0.60 | 0.37 | 0.25 | 0.14 | 0.19 | 0.16 |
| University of Southern Queensland | 5.65 | 1.61 | 2.11 | 0.81 | 0.78 | 0.59 |
| Curtin University of Technology | 0.65 | 0.63 | 0.36 | 0.36 | 0.39 | 0.43 |
| Edith Cowan University | 0.67 | 0.74 | 0.36 | 0.43 | 0.42 | 0.44 |
| Murdoch University | 0.76 | 0.84 | 0.54 | 0.65 | 0.51 | 0.65 |
| The University of Western Australia | 0.28 | 0.19 | 0.17 | 0.12 | 0.16 | 0.14 |
| The Flinders University of South Australia | 0.36 | 0.28 | 0.21 | 0.17 | 0.21 | 0.20 |
| The University of Adelaide | 0.36 | 0.25 | 0.21 | 0.13 | 0.23 | 0.21 |
| University of South Australia | 0.65 | 0.55 | 0.38 | 0.31 | 0.45 | 0.43 |
| Australian Maritime College | 1.21 | 0.74 | 0.55 | 0.45 | 0.20 | 0.60 |
| University of Tasmania | 0.81 | 0.61 | 0.24 | 0.20 | 0.16 | 0.13 |
| Northern Territory University | 0.03 | 0.05 | 0.01 | 0.02 | 0.01 | 0.05 |
| The Australian National University | 0.08 | 0.04 | 0.20 | 0.26 | 0.19 | 0.26 |
| University of Canberra | 0.10 | 0.02 | 0.20 | 0.24 | 0.20 | 0.23 |
| Australian Catholic University | 0.26 | 0.31 | | | | |
| National | 0.42 | 0.35 | 0.39 | 0.32 | 0.39 | 0.36 |
| New South Wales | 0.29 | 0.26 | 0.44 | 0.37 | 0.49 | 0.42 |
| Victoria | 0.29 | 0.21 | 0.46 | 0.31 | 0.44 | 0.35 |
| Queensland | 1.12 | 0.95 | 0.39 | 0.32 | 0.32 | 0.32 |
| Western Australia | 0.53 | 0.61 | 0.31 | 0.38 | 0.32 | 0.40 |
| South Australia | 0.47 | 0.40 | 0.28 | 0.22 | 0.30 | 0.30 |
| Tasmania | 0.82 | 0.61 | 0.24 | 0.21 | 0.16 | 0.13 |
| Northern Territory | 0.03 | 0.05 | 0.01 | 0.02 | 0.01 | 0.05 |
| Australian Capital Territory | 0.09 | 0.03 | 0.20 | 0.25 | 0.20 | 0.25 |

Note (for Table 7 - People from low socio-economic status (low SES) backgrounds: participation 1997)

The participation of students from low SES backgrounds is measured as a *ratio* of the number of students from low SES backgrounds to the number of students from high SES backgrounds. The reference value for participation is 1.

## Participation

With the Australia-level postcodes as a common base, the participation indicator for students aged below 25 years from low SES backgrounds is 0.42 nationally against the reference value of 1, which compares the numbers of low SES students with the numbers of high SES students. It is clear that people from low SES backgrounds do not have an equitable share of student enrolments at Australian universities.

As with low SES access, the reference values are by no means uniform across the States. When one compares the low and high SES populations for each State and for the urban areas within the States, an indication can be obtained of the participation levels needed to achieve equity between the groups in different geographical areas. The following table extrapolates from Martin (1994) Tables 41 and 42, and should be considered when looking at the outcomes for individual universities in Table 7 above.

Table 8 Urban and general population distribution, states and Australia, by SES group (%)

| | Area | Low | Medium | High |
|---|---|---|---|---|
| NSW | urban | 14 | 48 | 38 |
| | general | 20 | 50 | 30 |
| Vic | urban | 17 | 44 | 39 |
| | general | 18 | 51 | 30 |
| Qld | urban | 18 | 66 | 16 |
| | general | 37 | 54 | 9 |
| SA | urban | 25 | 48 | 27 |
| | general | 37 | 42 | 20 |
| WA | urban | 31 | 48 | 32 |
| | general | 31 | 48 | 23 |
| Tas | urban | 18 | 40 | 42 |
| | general | 37 | 45 | 18 |
| NT | urban | 0 | 11 | 89 |
| | general | 8 | 49 | 44 |
| ACT | urban | 0 | 12 | 88 |
| | general | 0 | 12 | 88 |
| Australia | urban | 17 | 49 | 34 |
| | general | 25 | 50 | 25 |

A few individual institutions appear to have very high participation by low SES students less than 25 years of age. The ratio of low SES to high SES students for

Central Queensland University is 9.9, for James Cook University 7.3, and for the University of Southern Queensland 5.7. The relative numbers of low SES and high SES people in Queensland should be taken into account, however, when interpreting these results. Other universities, with ratios above the reference value of 1 are The University of Newcastle (1.8), Southern Cross University (1.7), the University of Ballarat (1.4), Griffith University (1.4), the Australian Maritime College (1.2), Victoria University of Technology (1.1) and The University of New England (1.0).

Examination of the data for low SES students aged 25 and above reveals that, in two-thirds of universities this group has much lower participation ratios than the under-25 age group. This is also the case for the nation as a whole. Of all the universities, only four (Australian Catholic University, Edith Cowan University, Northern Territory University and Murdoch University) have higher participation ratios for the 25 and over age group than for the under 25s. Western Australia as a whole also has higher participation levels for the older age group than for the younger. With these few exceptions, the 25 and over age group appears to be a particularly poorly served subset of a group that is already poorly served by higher education.

## Table 9 People from low SES backgrounds: success 1996

| Institution | Australia | | State | | Urban | |
|---|---|---|---|---|---|---|
| | under 25 | 25+ | under 25 | 25+ | under 25 | 25+ |
| Charles Sturt University | 1.02 | 0.98 | 1.03 | 0.99 | 0.96 | 0.95 |
| Macquarie University | 0.99 | 0.94 | 0.99 | 0.95 | 0.98 | 0.95 |
| Southern Cross University | 1.04 | 0.99 | 1.04 | 0.98 | 1.03 | 0.99 |
| The University of New England | 0.99 | 0.99 | 1.00 | 0.99 | 0.95 | 0.98 |
| The University of New South Wales | 0.99 | 0.93 | 0.98 | 0.94 | 0.96 | 0.94 |
| The University of Newcastle | 0.99 | 0.99 | 0.99 | 0.99 | 0.98 | 0.99 |
| The University of Sydney | 1.00 | 0.92 | 0.99 | 0.94 | 0.99 | 0.96 |
| University of Technology Sydney | 0.98 | 0.98 | 0.97 | 0.98 | 0.96 | 0.96 |
| University of Western Sydney | 0.95 | 0.94 | 0.96 | 0.95 | 0.96 | 0.94 |
| University of Wollongong | 1.02 | 1.03 | 1.01 | 1.03 | 1.00 | 1.01 |
| Deakin University | 0.96 | 0.95 | 0.98 | 0.96 | 0.96 | 0.94 |
| La Trobe University | 0.96 | 0.98 | 0.98 | 0.99 | 0.94 | 0.97 |
| Monash University | 0.96 | 0.95 | 0.97 | 0.94 | 0.96 | 0.95 |
| Royal Melbourne Institute of Technoloyg | 1.00 | 0.97 | 1.00 | 0.97 | 0.98 | 0.98 |
| Swinburne University of Technology | 0.95 | 0.98 | 0.96 | 0.98 | 0.94 | 0.98 |
| University of Ballarat | 0.98 | 1.01 | 1.02 | 1.03 | 0.92 | 1.02 |
| The University of Melbourne | 0.98 | 0.97 | 0.99 | 0.97 | 0.99 | 0.98 |
| Victoria University of Technology | 0.95 | 0.96 | 0.95 | 0.96 | 0.94 | 0.96 |
| Central Queensland University | 1.01 | 1.02 | 1.01 | 1.02 | 0.93 | 0.99 |
| Griffith University | 1.00 | 0.98 | 1.00 | 0.95 | 1.00 | 0.98 |
| James Cook University | 1.04 | 0.96 | 1.06 | 0.92 | 0.96 | 0.97 |
| Queensland University of Technology | 1.00 | 0.98 | 0.99 | 0.97 | 0.99 | 0.97 |
| The University of Queensland | 0.98 | 0.97 | 0.99 | 0.95 | 0.97 | 0.98 |
| University of Southern Queensland | 1.03 | 1.01 | 1.03 | 0.99 | 1.03 | 0.97 |
| Curtin University of Technology | 0.99 | 0.98 | 1.00 | 0.97 | 0.98 | 0.97 |
| Edith Cowan University | 0.99 | 0.95 | 0.99 | 0.94 | 0.98 | 0.96 |
| Murdoch University | 1.00 | 0.98 | 1.00 | 0.98 | 1.00 | 0.99 |
| The University of Western Australia | 0.98 | 0.92 | 0.98 | 0.89 | 0.99 | 0.90 |
| The Flinders University of South Australia | 0.98 | 0.95 | 0.98 | 0.96 | 0.95 | 0.94 |
| The University of Adelaide | 0.98 | 0.94 | 0.99 | 0.93 | 0.99 | 0.92 |
| University of South Australia | 0.98 | 0.95 | 0.97 | 0.96 | 0.94 | 0.96 |
| Australian Maritime College | 1.01 | 0.98 | 0.96 | 0.96 | 0.83 | 1.21 |
| University of Tasmania | 0.98 | 0.98 | 0.98 | 0.96 | 0.92 | 1.03 |
| Northern Territory University | 1.02 | 0.98 | 1.38 | 0.93 | 0.80 | 1.15 |
| The Australian National University | 1.02 | 1.08 | 0.96 | 1.02 | 0.96 | 1.02 |
| University of Canberra | 1.00 | 0.97 | 1.01 | 0.97 | 1.01 | 0.97 |
| Australian Catholic University | 1.01 | 0.99 | | | | |
| National | 0.97 | 0.96 | 0.97 | 0.96 | 0.97 | 0.96 |

Note (*for* Table 9 - People from low SES backgrounds: success 1996)

Success is the proportion of units passed by members of the equity group compared with the proportion passed by other students. The reference value for success is 1. The State amalgamations for success produced by the DEETYAPAC Equity Module are unreliable and have not been included.

## Success

Once students from low SES backgrounds enrol at university and pursue their studies, they tend to do about as well as the general student population. That the success rate of low SES students is little different to that of the larger student body suggests that, once access to higher education has been achieved, these students may not need a great deal of subsequent intervention to ensure their success.

For students aged under 25 years, the national success rate is 0.97 relative to the reference value of 1, or 97 per cent of the success of other students. For students aged 25 and over, the success rate drops slightly to 0.96.

When all three levels of postcode groupings are examined, a number of features emerge. The University of Wollongong is the sole institution to achieve results of 1 or over in all six columns of the table. Southern Cross University achieves consistently high results for low SES students aged below 25 years of age, while The Australian National University has high results for students above 25 years of age. It is generally, though not invariably, the case that the older students achieve slightly lower success rates than the 'school leaver' group, and this may be tied in with the additional pressures on them, such as family and employment demands.

## Table 10 People from low SES backgrounds: retention 1997

| Institution | Australia | | State | | Urban | |
|---|---|---|---|---|---|---|
| | under 25 | 25+ | under 25 | 25+ | under 25 | 25+ |
| Charles Sturt University | 1.02 | 1.01 | 1.03 | 1.00 | 0.95 | 0.98 |
| Macquarie University | 0.95 | 0.98 | 0.99 | 0.94 | 0.99 | 0.93 |
| Southern Cross University | 1.09 | 0.98 | 1.09 | 0.98 | 1.09 | 1.03 |
| The University of New England | 1.01 | 0.98 | 1.05 | 0.97 | 0.93 | 0.98 |
| The University of New South Wales | 0.98 | 0.95 | 0.98 | 0.96 | 0.98 | 0.94 |
| The University of Newcastle | 0.98 | 0.97 | 0.99 | 1.00 | 0.97 | 0.98 |
| The University of Sydney | 1.00 | 0.93 | 1.00 | 0.95 | 0.99 | 1.00 |
| University of Technology Sydney | 1.01 | 1.02 | 1.01 | 1.00 | 1.01 | 0.99 |
| University of Western Sydney | 1.01 | 0.97 | 1.01 | 0.97 | 1.02 | 0.96 |
| University of Wollongong | 1.00 | 1.03 | 1.01 | 1.04 | 1.01 | 1.04 |
| Deakin University | 0.99 | 1.02 | 0.99 | 1.08 | 0.99 | 1.08 |
| La Trobe University | 1.02 | 1.03 | 0.99 | 1.00 | 1.02 | 1.02 |
| Monash University | 0.99 | 0.96 | 1.00 | 0.98 | 0.99 | 0.98 |
| Royal Melbourne Institute of Technology | 1.01 | 0.97 | 1.01 | 0.96 | 1.02 | 0.97 |
| Swinburne University of Technology | 0.98 | 1.04 | 0.98 | 1.01 | 0.98 | 0.97 |
| University of Ballarat | 1.00 | 1.09 | 1.07 | 1.06 | 0.95 | 1.14 |
| The University of Melbourne | 0.93 | 0.94 | 0.93 | 0.92 | 1.00 | 0.98 |
| Victoria University of Technology | 1.00 | 1.05 | 0.99 | 1.04 | 0.98 | 1.03 |
| Central Queensland University | 1.03 | 1.05 | 1.03 | 1.00 | 1.06 | 1.03 |
| Griffith University | 1.01 | 0.97 | 0.99 | 0.95 | 1.00 | 0.97 |
| James Cook University | 1.09 | 0.93 | 1.13 | 0.96 | 1.06 | 0.84 |
| Queensland University of Technology | 1.02 | 1.01 | 1.01 | 1.00 | 1.02 | 1.01 |
| The University of Queensland | 0.97 | 1.01 | 0.97 | 0.99 | 0.94 | 1.05 |
| University of Southern Queensland | 1.08 | 1.03 | 1.06 | 0.99 | 1.14 | 0.99 |
| Curtin University of Technology | 1.00 | 0.96 | 0.99 | 0.94 | 1.00 | 1.00 |
| Edith Cowan University | 0.98 | 0.95 | 0.99 | 0.93 | 1.00 | 0.99 |
| Murdoch University | 1.01 | 1.01 | 1.01 | 1.00 | 1.00 | 1.04 |
| The University of Western Australia | 0.98 | 0.89 | 0.97 | 0.90 | 1.00 | 0.89 |
| The Flinders University of South Australia | 1.00 | 0.96 | 1.01 | 1.00 | 1.01 | 0.98 |
| The University of Adelaide | 1.01 | 0.94 | 1.01 | 1.02 | 1.02 | 0.95 |
| University of South Australia | 0.99 | 0.97 | 1.00 | 1.00 | 0.97 | 1.01 |
| Australian Maritime College | 0.93 | 0.69 | 0.82 | 0.69 | 0.60 | 3.00 |
| University of Tasmania | 0.99 | 0.95 | 0.95 | 0.93 | 0.90 | 0.96 |
| Northern Territory University | 0.89 | 0.88 | 0.69 | 0.94 | 0.69 | 1.03 |
| The Australian National University | 1.02 | 1.12 | 0.99 | 1.04 | 0.99 | 1.04 |
| University of Canberra | 0.99 | 1.01 | 0.96 | 1.03 | 0.96 | 1.03 |
| Australian Catholic University | 0.99 | 1.01 | | | | |
| National | 0.97 | 0.97 | 0.98 | 0.97 | 0.98 | 0.98 |
| New South Wales | 0.96 | 0.94 | 0.96 | 0.94 | 0.96 | 0.94 |
| Victoria | 0.98 | 1.00 | 0.98 | 1.00 | 0.98 | 1.00 |
| Queensland | 0.99 | 1.00 | 0.99 | 0.98 | 0.98 | 1.00 |
| Western Australia | 0.98 | 0.96 | 0.98 | 0.95 | 0.99 | 0.99 |
| South Australia | 0.99 | 0.96 | 1.00 | 1.00 | 0.99 | 0.99 |
| Tasmania | 0.99 | 0.95 | 0.95 | 0.92 | 0.90 | 0.97 |
| Northern Territory | 0.89 | 0.88 | 0.69 | 0.94 | 0.69 | 1.03 |
| Australian Capital Territory | 1.00 | 1.07 | 0.98 | 1.03 | 0.98 | 1.03 |

Note (for Table 10 - People from low SES backgrounds: retention 1997)

Retention is the proportion of equity group students retained from one year to the next compared with the proportion of other students retained. The reference value for retention is 1.

## Retention

From an examination of the retention outcomes in the table it would appear that, generally speaking, retention is not a problem for low SES students. With the reference value (i.e. the success rate for other students) at 1, the national indicator for students from low SES backgrounds is 0.97. There is not much variation among the States and Territories with all but the Northern Territory falling within the range of 0.96 to 1.

Considering the table as a whole, many institutions achieve results above the reference value of 1. In particular, Central Queensland University, Murdoch University, the Queensland University of Technology, the University of Technology, Sydney and the University of Wollongong achieve rates at 1 or above across all six columns of the table. On the other hand, a number of institutions obtain consistently low results across the table, especially in the 25 and above age group.

## 3.9 Women in non-traditional areas

Table 11 Women in non-traditional areas: access 1997

| Institution | Agriculture | Architecture | Engineering | Bus/Econ | Science |
|---|---|---|---|---|---|
| Charles Sturt University | 40.5 | | | 48.8 | 39.6 |
| Macquarie University | | | 20.0 | 40.3 | 34.4 |
| Southern Cross University | 42.9 | | | 42.9 | 30.4 |
| The University of New England | 32.6 | 39.6 | 11.8 | 43.2 | 41.8 |
| The University of New South Wales | * | 50.6 | 17.7 | 37.9 | 44.2 |
| The University of Newcastle | | 20.8 | 9.8 | 45.4 | 40.0 |
| The University of Sydney | 37.4 | 35.6 | 15.8 | 46.1 | 46.9 |
| University of Technology, Sydney | 37.9 | 30.8 | 9.7 | 49.2 | 43.5 |
| University of Western Sydney | 38.2 | 32.1 | 7.4 | 48.2 | 38.5 |
| University of Wollongong | | | 11.7 | 36.1 | 50.2 |
| Deakin University | | 19.4 | 13.7 | 41.8 | 43.5 |
| La Trobe University | 39.5 | | 9.9 | 46.9 | 49.5 |
| Monash University | | | 12.8 | 46.5 | 40.1 |
| Royal Melbourne Institute of Technology | | 44.2 | 16.5 | 49.5 | 43.5 |
| Swinburne University of Technology | | 65.7 | 17.0 | 47.6 | 33.3 |
| University of Ballarat | | | 17.9 | 42.1 | 35.4 |
| The University of Melbourne | 42.7 | 33.4 | 23.1 | 44.3 | 57.3 |
| Victoria University of Technology | | | 11.5 | 53.6 | 38.8 |
| Central Queensland University | | 16.7 | 5.3 | 52.0 | 46.8 |
| Griffith University | | 41.2 | 15.1 | 52.3 | 35.6 |
| James Cook University | 46.2 | 18.8 | 14.7 | 54.9 | 47.9 |
| Queensland University of Technology | | 34.7 | 9.9 | 52.9 | 34.8 |
| The University of Queensland | 41.9 | 31.4 | 19.0 | 45.6 | 48.6 |
| University of Southern Queensland | | | 10.5 | 43.7 | 64.9 |
| Curtin University of Technology | 36.2 | 40.3 | 10.8 | 49.6 | 33.8 |
| Edith Cowan University | | | 10.9 | 50.4 | 38.2 |
| Murdoch University | | | 19.0 | 49.1 | 42.8 |
| The University of Western Australia | 53.3 | 57.0 | 22.2 | 45.6 | 48.5 |
| The Flinders University of South Australia | | | 23.7 | 47.7 | 44.5 |
| The University of Adelaide | 42.7 | 35.2 | 19.5 | 41.8 | 40.4 |
| University of South Australia | 43.1 | 41.3 | 11.4 | 49.2 | 30.5 |
| Australian Maritime College | 17.9 | | 5.0 | 8.6 | 3.5 |
| University of Tasmania | 27.7 | 44.9 | 8.9 | 47.3 | 40.6 |
| Northern Territory University | 57.1 | 53.9 | 10.5 | 54.1 | 43.3 |
| The Australian National University | 41.9 | | 19.4 | 45.0 | 48.0 |
| University of Canberra | | 23.1 | 5.3 | 51.0 | 47.3 |
| Australian Catholic University | | | | 52.1 | 37.7 |
| National | 40.1 | 36.7 | 14.5 | 46.8 | 42.3 |
| New South Wales | 38.3 | 36.1 | 13.5 | 44.6 | 41.6 |
| Victoria | 42.6 | 37.3 | 16.4 | 46.9 | 43.7 |
| Queensland | 42.0 | 33.2 | 12.4 | 49.4 | 44.0 |
| Western Australia | 42.3 | 46.6 | 15.6 | 49.1 | 41.2 |
| South Australia | 42.8 | 39.8 | 15.7 | 47.3 | 38.4 |
| Tasmania | 24.2 | 44.9 | 8.0 | 39.8 | 31.9 |
| Northern Territory | 57.1 | 53.9 | 10.5 | 54.1 | 43.3 |
| Australian Capital Territory | 41.9 | 23.1 | 13.6 | 47.9 | 47.7 |

Note (*for* Table 11 - Women in non-traditional areas: access 1997)

Access is the proportion of commencing students belonging to the equity group. A blank cell denotes that the area of study is not offered at that university.

* No figure is available.

## Access

As noted earlier in this paper, *A Fair Chance for All* set targets for women in non-traditional areas. The targets were for a 40 per cent participation (or enrolment) rate in these areas, except for Engineering, which was set at 15 per cent in recognition of its low starting base.

Nationally, women's access to non-traditional fields of study has reached and exceeded the target, except for Architecture and Engineering. Women made up 40.1 per cent of commencing students in Agriculture, 46.8 per cent in Business/Economics, and 42.3 per cent in Science. Architecture, with 36.7 per cent of its commencing student cohort being women, and Engineering, with 14.5 per cent, fall slightly below the targets. While in Science, overall, women have made good progress, a disaggregation of this broad field of study reveals that women are still under-represented in certain areas such as Computer and Information Sciences, Mathematics, Physical Sciences and Physics, while they are over-represented in Food Science and Home Economics.

Generally, the States and Territories follow the national pattern. The high points in the range are occupied by the Northern Territory (57.1 per cent in Agriculture, 53.9 per cent in Architecture and 54.1 per cent in Business/Economics) and Western Australia (46.6 per cent in Architecture).

Those States and Territories with low access rates are Tasmania (24.2 per cent in Agriculture, 8 per cent in Engineering, and 31.9 per cent in Science) and the Australian Capital Territory with only 23.1 per cent of women in its cohort of commencing students in Architecture. Though the Northern Territory has high access rates for women in a number of non-traditional areas of study, it has a low access rate in Engineering (10.5 per cent).

There are significant variations among institutions. In Agriculture, the institutions with the highest percentages of women among commencing students are the Northern Territory University (57.1 per cent), The University of Western Australia (53.3 per cent) and James Cook University (46.2 per cent). In Architecture, they are Swinburne University of Technology (65.7 per cent), The University of Western Australia (57 per cent), Northern Territory University (53.9 per cent) and The University of New South Wales (50.6 per cent).

In Engineering, institutions with high access rates for women are The Flinders University of South Australia (23.7 per cent), The University of Melbourne (23.1 per cent), The University of Western Australia (22.2 per cent), Macquarie University (20 per cent), The University of Adelaide (19.5 per cent), The Australian National University (19.4 per cent) and The University of Queensland (19 per cent).

Women have quite high access, relative to the 40 per cent target, to courses in Business and Economics. Only two institutions have failed to achieve the target, but their level of female access is only slightly below 40 per cent.

In Science, the universities with the highest access rates for women are the University of Southern Queensland (64.9), The University of Melbourne (57.3 per cent) and the University of Wollongong (50.2 per cent). In future, institutions may wish to target particular areas of Science for attention (e.g. Computer Science) where women only account for 18 per cent of students.

## Table 12 Women in non-traditional areas: participation 1997

| Institution | Agriculture % | Architecture % | Engineering % | Bus/Econ % | Science % |
|---|---|---|---|---|---|
| Charles Sturt University | 38.8 | | | 46.3 | 32.9 |
| Macquarie University | | | 14.3 | 38.8 | 37.2 |
| Southern Cross University | 33.3 | | | 43.6 | 34.2 |
| The University of New England | 36.0 | 37.0 | 12.7 | 42.1 | 40.9 |
| The University of New South Wales | 46.9 | 49.0 | 17.8 | 42.7 | 43.9 |
| The University of Newcastle | | 16.7 | 9.6 | 44.0 | 38.2 |
| The University of Sydney | 39.0 | 39.5 | 15.8 | 46.1 | 46.4 |
| University of Technology Sydney | 40.3 | 29.7 | 10.1 | 50.2 | 41.5 |
| University of Western Sydney | 34.4 | 31.4 | 7.6 | 44.6 | 40.5 |
| University of Wollongong | | | 12.2 | 39.2 | 48.3 |
| Deakin University | | 25.0 | 13.2 | 42.0 | 44.9 |
| La Trobe University | 45.9 | | 12.9 | 44.3 | 48.6 |
| Monash University | | | 13.1 | 45.1 | 38.4 |
| Royal Melbourne Inst of Technology | | 44.3 | 18.4 | 47.8 | 43.0 |
| Swinburne University of Technology | | 57.6 | 13.6 | 48.3 | 35.3 |
| University of Ballarat | | | 16.9 | 47.0 | 39.6 |
| The University of Melbourne | 43.4 | 38.9 | 23.2 | 43.5 | 56.1 |
| Victoria University of Technology | | 24.0 | 11.1 | 53.6 | 40.0 |
| Central Queensland University | | 7.5 | 7.7 | 51.2 | 37.0 |
| Griffith University | | 52.0 | 14.2 | 51.4 | 37.2 |
| James Cook University | 46.4 | 17.0 | 11.4 | 53.0 | 43.6 |
| Queensland University of Technology | | 32.0 | 9.9 | 51.6 | 32.6 |
| The University of Queensland | 41.1 | 39.7 | 16.5 | 45.7 | 45.9 |
| University of Southern Queensland | | | 9.0 | 43.8 | 70.0 |
| Curtin University of Technology | 37.0 | 35.1 | 10.3 | 46.0 | 30.4 |
| Edith Cowan University | | | 8.5 | 47.2 | 35.6 |
| Murdoch University | | | 18.9 | 48.0 | 45.3 |
| The University of Western Australia | 45.5 | 52.8 | 18.3 | 44.4 | 46.9 |
| The Flinders University of South Australia | | | 19.8 | 41.9 | 43.2 |
| The University of Adelaide | 40.5 | 38.2 | 16.5 | 36.3 | 41.6 |
| University of South Australia | 46.1 | 37.7 | 10.5 | 48.4 | 29.2 |
| Australian Maritime College | 18.8 | | 6.3 | 8.8 | 3.7 |
| University of Tasmania | 31.9 | 36.2 | 10.0 | 45.1 | 38.1 |
| Northern Territory University | 55.6 | 54.4 | 10.6 | 55.4 | 41.6 |
| The Australian National University | 34.4 | | 15.1 | 45.4 | 45.6 |
| University of Canberra | | 25.1 | 6.5 | 50.4 | 47.6 |
| Australian Catholic University | | | | 51.4 | 42.3 |
| National | 39.8 | 36.1 | 14.1 | 46.1 | 41.9 |
| New South Wales | 38.0 | 35.3 | 13.3 | 44.4 | 41.1 |
| Victoria | 43.6 | 39.0 | 16.5 | 46.2 | 44.1 |
| Queensland | 41.1 | 32.3 | 11.7 | 48.8 | 41.9 |
| Western Australia | 40.8 | 41.7 | 14.1 | 46.4 | 39.9 |
| South Australia | 41.1 | 37.8 | 13.7 | 44.9 | 38.4 |
| Tasmania | 28.7 | 36.2 | 9.2 | 41.3 | 34.3 |
| Northern Territory | 55.6 | 54.4 | 10.6 | 55.4 | 41.6 |
| Australian Capital Territory | 34.4 | 25.1 | 11.5 | 48.0 | 46.5 |

Note (*for* Table 12 - Women in non-traditional areas: participation 1997)

Participation for women in non-traditional fields of study is measured as a percentage of total enrolments.

A blank denotes that the area of study is not offered at that university.

## Participation

In the comments made thus far about participation rates of the different equity groups, participation has been assessed in relation to a reference value of 1. The participation rates of women in non-traditional areas of university study are expressed differently from those of the other equity groups, namely as a percentage of the participation rate for all students, along the lines of the percentage for access in the previous table.

Nationally, the number of women enrolled at university as a percentage of the total enrolment is below the 40 per cent target in Architecture (36.1 per cent). At 14.1 per cent, the participation rate in Engineering is also below the target of 15 per cent. Participation in Business/Economics and Science is above the target (46.1 per cent and 41.9 per cent respectively) and Agriculture, at 39.8 per cent, is on the target.

Variations by State and Territory are not particularly marked, but the following high and low rates may be worthy of note: the Northern Territory's rates of 55.6 per cent in Agriculture, 54.4 per cent in Architecture and 55.4 per cent in Business and Economics; the Tasmanian rates of 28.7 per cent in Agriculture and 9.2 per cent in Engineering; and the Australian Capital Territory's rate of 25.1 per cent in Architecture.

In Agriculture, universities with relatively high participation rates for women are the Northern Territory University (55.6 per cent), The University of New South Wales (46.9 per cent), James Cook University (46.4 per cent), the University of South Australia (46.1 per cent), La Trobe University (45.9 per cent) and The University of Western Australia (45.5 per cent).

In Architecture**,** universities with high participation rates for women are Swinburne University of Technology (57.6 per cent), the Northern Territory University (54.4 per cent), The University of Western Australia (52.8 per cent) and Griffith University (52.0 per cent).

In Engineering**,** the target for women's participation is 15 per cent. Women studying Engineering at The University of Melbourne make up 23.2 per cent of the institution's total Engineering enrolment. Other institutions with high participation rates in Engineering are Murdoch University (18.9 per cent), the Royal Melbourne Institute of Technology (18.4 per cent) and The University of Western Australia (18.3 per cent). In all, there are eleven institutions with participation rates that are above the target of 15 per cent, while eight institutions have participation rates below 10 per cent.

In Business and Economics, most institutions easily meet and even exceed the 40 per cent target. Those which did not meet it came very close to doing so. The same pattern applies in Science.

Tables on success and retention for women are not included in this paper. Nationally, women overall have a slightly higher *success* rate than men (1.07). This holds true for all fields of study, including the non-traditional ones. For example, the success rate of women in Engineering, where they are most under-represented, is 1.04. Overall the *retention* rate for women in higher education, at 1.02, is higher than that for men. Statistics published by Postle et al. (1997) indicate that, in the mid 1990s, female retention was above the reference value of 1 in all the non-traditional fields of study. It would appear to be the case that, once women have gained access to non-traditional courses, success and retention are not a particular problem.

## 3.10 Women in higher degrees by research and coursework

Table 13 Women in higher degree research and coursework 1997 relative to undergraduate enrolment, by institution*

| Institution | Higher degree by research | Higher degree by coursework |
|---|---|---|
| Charles Sturt University | 0.78 | 1.05 |
| Macquarie University | 0.86 | 0.77 |
| Southern Cross University | 0.76 | 0.56 |
| The University of New England | 0.79 | 0.82 |
| The University of New South Wales | 0.80 | 0.93 |
| The University of Newcastle | 0.79 | 1.07 |
| The University of Sydney | 0.84 | 0.98 |
| University of Technology, Sydney | 0.92 | 0.99 |
| University of Western Sydney | 0.86 | 0.96 |
| University of Wollongong | 0.80 | 1.09 |
| Deakin University | 0.87 | 0.91 |
| La Trobe University | 0.89 | 1.21 |
| Monash University | 0.92 | 1.07 |
| Royal Melbourne Institute of Technology | 0.69 | 0.92 |
| Swinburne University of Technology | 0.82 | 0.60 |
| University of Ballarat | 0.72 | 1.18 |
| The University of Melbourne | 0.90 | 0.90 |
| Victoria University of Technology | 0.74 | 0.79 |
| Central Queensland University | 0.86 | 0.81 |
| Griffith University | 0.83 | 1.03 |
| James Cook University | 0.75 | 1.02 |
| Queensland University of Technology | 0.89 | 1.05 |
| The University of Queensland | 0.83 | 1.03 |
| University of Southern Queensland | 0.77 | 0.88 |
| Curtin University of Technology | 0.78 | 0.85 |
| Edith Cowan University | 0.87 | 0.90 |
| Murdoch University | 0.88 | 0.88 |
| The University of Western Australia | 0.92 | 1.00 |
| The Flinders University of South Australia | 0.81 | 1.21 |
| The University of Adelaide | 0.87 | 0.97 |
| University of South Australia | 0.73 | 1.10 |
| Australian Maritime College | 2.35 | 0.80 |
| University of Tasmania | 0.82 | 1.15 |
| Northern Territory University | 0.85 | 0.94 |
| The Australian National University | 0.80 | 0.96 |
| University of Canberra | 0.96 | 0.88 |
| Australian Catholic University | 0.68 | 0.75 |
| National | 0.83 | 0.94 |

Note (*for* Table 13 - Women in higher degree research and coursework 1997 relative to undergraduate enrolment, by institution*)

* The participation of women in higher degree research and coursework programmes is measured as the *ratio* of the percentage of women in higher degree research and coursework programmes to the percentage of women in undergraduate programmes.

Table 13 differs from the previous tables on women's involvement in higher education in that the table is based on women's enrolments in all courses, not just those in non-traditional areas. Universities with high ratios of women in postgraduate research degrees relative to their undergraduate participation are the Australian Maritime College (2.3), the University of Canberra (0.96), The University of Western Australia, the University of Technology, Sydney and Monash University (0.92). In the case of the Australian Maritime College, the high ratio is no doubt related to the low numbers and proportion of female students at undergraduate level. The behaviour of a small number of students can therefore affect the ratio to a significant degree.

The picture of women's participation in higher degrees by coursework is very different to their participation in postgraduate study by research. Five institutions have rates below 0.8. Several of the remaining institutions have rates above 1, which means that, in those institutions, women's participation in postgraduate courses is higher than their participation in undergraduate courses.

For the purposes of comparison, it should be noted that the ratio of male participation in higher degrees by research to male participation in undergraduate courses is 1.21, and the corresponding ratio for coursework higher degrees is 1.07. The ratios for women are 0.83 and 0.94, respectively.

The expansion of the postgraduate fee-paying market in recent years is of interest in relation to equity groups, including women. Since the late 1980s, it has been permissible for universities to charge fees for postgraduate courses. Initially, the provision covered a limited range of courses, but Commonwealth Government policy has opened up opportunities for universities to charge fees at any level they wish for postgraduate courses, except for courses leading to an initial qualification in teaching and general nursing, or which would allow provisional registration as a medical practitioner.

An investigation into the effects of the increase of fee-paying postgraduate courses on the equity target groups found that women in particular, along with Indigenous Australians and those of low socio-economic status could be affected by this change (Anderson 1997). The findings show that, up until now, women have tended to enrol in publicly-funded courses or in those with low fees. Men were twice as likely to have employer subsidies for tuition fees and employer assistance in other areas, such as time off for study.

It can be seen from Table 16 that the participation of women in higher degrees by coursework has grown steadily over recent years and now exceeds the 50 per cent mark. This increase should, however, be interpreted in the light of the comments of Anderson et al. about women tending to concentrate in HECS-liable postgraduate courses and the current trend towards reducing such courses.

## 3.11 Students with a disability

Table 14 Students with a disability 1997 by access, participation, success (1996) and retention

| Institution | Access (%) | Participation | Success | Retention |
|---|---|---|---|---|
| Charles Sturt University | 0.2 | 0.12 | 0.94 | 0.96 |
| Macquarie University | 2.8 | 0.80 | 0.91 | 1.04 |
| Southern Cross University | 9.1 | 1.47 | 0.90 | 0.86 |
| The University of New England | 1.6 | 0.52 | 0.89 | 1.00 |
| The University of New South Wales | 2.2 | 0.55 | 0.94 | 1.00 |
| The University of Newcastle | 3.1 | 0.84 | 0.92 | 0.93 |
| The University of Sydney | 0.8 | 0.33 | 0.93 | 0.96 |
| University of Technology Sydney | 2.1 | 0.42 | 0.91 | 0.95 |
| University of Western Sydney | 2.9 | 0.54 | 0.89 | 0.85 |
| University of Wollongong | 6.1 | 1.61 | 0.99 | 1.02 |
| Deakin University | 1.6 | 0.27 | 0.92 | 0.88 |
| La Trobe University | 1.9 | 0.47 | 1.01 | 1.01 |
| Monash University | 3.0 | 0.86 | 0.95 | 0.98 |
| Royal Melbourne Institute of Technology | 2.1 | 0.52 | 0.92 | 0.97 |
| Swinburne University of Technology | 1.0 | 0.21 | 0.93 | 0.94 |
| University of Ballarat | 3.2 | 0.88 | 0.96 | 0.95 |
| The University of Melbourne | 3.1 | 0.82 | 0.98 | 1.07 |
| Victoria University of Technology | 2.3 | 0.62 | 1.03 | 1.02 |
| Central Queensland University | 3.3 | 0.96 | 0.92 | 1.00 |
| Griffith University | 3.0 | 0.75 | 0.93 | 1.01 |
| James Cook University | 3.3 | 0.86 | 1.01 | 1.00 |
| Queensland University of Technology | 2.1 | 0.54 | 0.93 | 0.93 |
| The University of Queensland | 1.2 | 0.31 | 0.91 | 0.94 |
| University of Southern Queensland | 2.2 | 1.05 | 0.96 | 1.11 |
| Curtin University of Technology | 0.3 | 0.15 | 0.97 | 0.89 |
| Edith Cowan University | 2.3 | 0.36 | 0.93 | 0.91 |
| Murdoch University | 3.4 | 0.92 | 0.92 | 0.98 |
| The University of Western Australia | 1.6 | 0.50 | 0.96 | 1.08 |
| The Flinders University of South Australia | 5.0 | 1.23 | 0.95 | 1.00 |
| The University of Adelaide | 3.0 | 0.78 | 0.90 | 1.00 |
| University of South Australia | 2.6 | 0.67 | 0.88 | 0.95 |
| Australian Maritime College | 1.4 | 0.53 | 1.02 | 0.90 |
| University of Tasmania | 2.5 | 0.51 | | |
| Northern Territory University | 2.8 | 0.87 | 0.95 | 0.92 |
| The Australian National University | 0.6 | 0.05 | | |
| University of Canberra | 4.1 | 0.97 | 0.97 | 1.02 |
| Australian Catholic University | 2.6 | 0.78 | 0.96 | 0.95 |
| National | 2.40 | 0.61 | 0.94 | 0.99 |

Notes (*for* Table 14 - Students with a disability 1997 by access, participation, success (1996) and retention)

For an explanation of the performance indicators, see pages 13–15. For the purposes of this table, people with a disability were defined as those who answered in the affirmative the question, 'Do you have a disability, impairment or long-term medical condition which may affect your studies?' on student enrolment forms. The reference value for access is 4 per cent. The reference value for participation, success and retention is 1.

Access is the proportion of commencing students belonging to the equity group.

Participation is the proportion of equity group members in the student population relative to the representation of the group in the relevant State or Territory population.

Success is the proportion of units passed by members of the equity group compared with the proportion passed by other students.

Retention is the proportion of equity group students retained from one year to the next compared with the proportion of other students retained.

A blank denotes that figures were not supplied by the institution.

As noted in the section on Target Groups at the beginning of this paper, for the purposes of this table, people with a disability are defined as those who answer in the affirmative the question, 'Do you have a disability, impairment or long-term medical condition which may affect your studies?'. According to Martin (1994, Vol. 1, p. 91), 'approximately 7 per cent of the Australian population is classified as having disabilities of some form'. When those outside the age-group relevant to higher education are excluded, along with those with severe mental disabilities, the remainder represents about 4 per cent of the population. It is this percentage which provides the reference value for judging whether the current level of representation of people with disabilities among the higher education student population is equitable.

## Access

The national average for access for students with a disability was 2.4 per cent in 1997. Though this is well down on the reference value of 4 per cent, it represents a sizeable increase on the corresponding 1996 figure of 1.86 per cent.

As regards individual institutions, four have exceeded the 4 per cent mark with the highest access being at Southern Cross University (9.1 per cent). The other institutions to exceed the reference value are the University of Wollongong (6.1 per cent), The Flinders University of South Australia (5.0 per cent), and the University of Canberra (4.1 per cent). Four institutions had rates below 1 per cent.

## Participation

Against the reference value of 1, the participation of students with disabilities, at 0.6, has still some way to go before it will reach parity. This figure is, however, a significant improvement on the 1996 participation rate of 0.5. There are no data available prior to 1996 and, while anecdotal evidence suggests that the number of students with disabilities in higher education has increased in recent years, the 1997 participation outcomes show that more needs to be done in this area.

Few institutions have a representation of people with a disability higher than their share of the general population (i.e. a participation indicator exceeding 1). The best performers are the University of Wollongong (1.6), Southern Cross University (1.5), The Flinders University of South Australia (1.2) and the University of Southern Queensland (1.1). The University of Canberra, at 0.97, comes very close to the reference value.

## Success

At 0.94, the national average for success for students with a disability is only slightly below the reference value of 1 for other students. Comparative success rates at individual institutions vary from a high of 1.03, at Victoria University of Technology, to a low of 0.88. Other high achieving universities are the Australian Maritime College (1.02), James Cook University (1.01), La Trobe University (1.01) and the University of Wollongong (0.99). It is interesting that Southern Cross University has the highest access rate but a lower-than-average success rate. On the other hand, the University of Wollongong, which has the highest participation rate, also has one of the highest success rates.

## Retention

The national retention rate for students with a disability, at 0.99 (compared with 1 for other students), shows that they continue in their studies in much the same proportions as the rest of the student population. Among institutions, however, there is wide variation, from a high of 1.11 (at the University of Southern Queensland) to a low of 0.85. Generally speaking, retention rates are very good, with twenty-three institutions having a rate of 0.95 or better. Nine of those institutions have a rate above the reference value of 1. As was the case with success, Southern Cross University has a lower-than-average retention rate despite particularly high access levels.

# 4. Equity groups time series data, 1991–1997

Table 15 Equity group participation in higher education, 1991–1997[1]

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|
| People with a Disability[2] | | | | | | 1.8 (10 976) | 2.4 (15 019) |
| Aboriginal and Torres Strait Islanders[3] | 1.0 (4 757) | 1.0 (5 059) | 1.0 (5 520) | 1.2 (6 225) | 1.2 (6 778) | 1.2 (6 956) | 1.3 (7 461) |
| People of Non-English-Speaking Background[4] | 4.3 (21 549) | 4.7 (24 515) | 5.0 (26 624) | 5.2 (28 080) | 5.5 (30 573) | 5.4 (33 508) | 5.1 (31 434) |
| People from Rural Background[5] | 18.5 (92 554) | 18.7 (97 060) | 18.5 (98 190) | 18.0 (97 280) | 17.7 (98 174) | 17.7 (105 | 17.4 (107 |
| People from Isolated Background[6] | 1.9 (9 463) | 2.0 (10 328) | 1.9 (10 155) | 2.0 (10 966) | 2.0 (10 881) | 1.8 (11 180) | 1.8 (11 348) |
| People from Low SES Background[7] | 15.0 (73 715) | 15.0 (76 237) | 14.8 (77 024) | 14.8 (77 727) | 14.9 (80 064) | 14.4 (86 787) | 14.5 (90 026) |

(Table shows percentage of equity group members in student body. Actual numbers of students are shown in brackets.)

Notes

1 Figures for 1991 to 1995 are taken from Postle et al. (1997). Figures for 1996 and 1997 for students of Aboriginal or Torres Strait Islander descent are taken from *Selected Higher Education Student Statistics* (DEETYA 1997). Other figures are from the DEETYA student statistics collection.

2 No data available prior to 1996. Figure shows students who have answered 'yes' to the question, 'Do you have a disability, impairment or long-term medical condition which may affect your studies?' Reference value is 4 per cent (estimate of persons with disabilities in Australian population in 15–64 age group potentially able to enter higher education).

3 Reference values are 1.4% of the Australian population (1991 Census) and 1.7% (1996 Census). Figures shown in the tables include data from all publicly-funded higher education institutions.

4 Reference values are 4.9% of the Australian population (1991 Census) and 4.8% (1996 Census).

5 Reference value is 24.3%, based on data obtained from 1991 Census.

6 Reference value is 4.5%, based on data from 1991 Census.

7 Reference value is 25%.

No data are available prior to 1996 for students with a disability. Table 15 shows a large increase from 1996 to 1997 in the percentage of people with a disability in higher education (from 1.8 to 2.4 per cent), which reflects the growing access to universities by this group (see Table 13). The increase is, however, from a low base and is still well below the reference value.

At the 1991 census, Indigenous Australians made up 1.4 per cent of the Australian population while at the 1996 census this figure had risen to 1.7 per cent. Table 15 shows an increase of 20 per cent in Indigenous participation in higher education from 1991 to 1997, though there has been little increase since 1994. Despite good access rates for this group, the participation rate for 1997 is well short of the 1.7 per cent reference value, partly reflecting lower retention rates over the years.

At the 1991 census, 4.9 per cent of the Australian population was from a non-English-speaking background. By 1996 this figure had dropped slightly to 4.8 per cent. Table 15 shows steady increases in the percentage of this group's participation in higher education from 1991 to 1995, with an overall increase of 27.9 per cent. In 1993, for the first time, participation in higher education by people from non-English-speaking backgrounds exceeded the population share for this group. Since 1995, the percentage of this group's participation in higher education has been decreasing, but it is still above the 1996 population share for the group.

At the 1991 census, people from a rural background made up 24.3 per cent of the Australian population. As shown in Table 15, the percentage of people from a rural background participating in higher education has dropped steadily (by around 6 per cent over the 1991–1997 period), though there was a slight rise in 1992. The decrease may be a consequence of the rural recession; however, at around 17 per cent, this group is quite disadvantaged as regards participation in higher education, and access rates indicate that the situation will probably worsen.

At the 1991 census, 4.5 per cent of the Australian population was classified as isolated. Table 15 shows that participation in higher education by people from isolated backgrounds has dropped overall by 10 per cent since 1992, though there was a small rise from 1991 to 1992 (the same year as participation by rural people rose slightly) and from 1993 to 1994. This group is extremely under-represented in higher education and is becoming more so, year after year.

Table 15 shows that the share of low SES participation in higher education has fallen steadily over the period in question, apart from a slight rise in 1995. With the share of population for this group at 25 per cent, participation in higher education by people from socio-economically disadvantaged backgrounds remains low and is becoming gradually lower.

Table 16 Women in non-traditional fields of study, 1991–1997[1]

| | Agriculture (%) | Architecture (%) | Business, Economics, Admin (%) | Engineering (%) | Science (%) | Higher Degree by Coursework (%) | Higher Degree by Research (%) |
|---|---|---|---|---|---|---|---|
| 1991 | 33.3 | 34.1 | 41.4 | 10.7 | 39.7 | 44.4 | 40.2 |
| | (3 037) | (3 521) | (41 199) | (3 880) | (27 926) | (9 944) | (6 452) |
| 1992 | 34.7 | 34.9 | 42.2 | 11.7 | 40.2 | 45.3 | 41.6 |
| | (3 370) | (3 803) | (42,874) | (4 602) | (29 951) | (11 961) | (8 458) |
| 1993 | 35.6 | 34.4 | 42.6 | 12.5 | 40.7 | 46.0 | 42.0 |
| | (3 642) | (3 890) | (44 219) | (5 138) | (31 258) | (13 854) | (10 040) |
| 1994 | 36.4 | 34.5 | 43.0 | 13.1 | 41.3 | 47.6 | 42.6 |
| | (3 891) | (4 062) | (44 640) | (5 546) | (32 475) | (15 536) | (11 279) |
| 1995 | 38.0 | 34.4 | 44.0 | 13.5 | 42.1 | 49.3 | 43.7 |
| | (4 231) | (4 162) | (47 418) | (5 763) | (33 901) | (17 478) | (12 265) |
| 1996 | 39.4 | 34.6 | 45.4 | 13.8 | 42.3 | 50.9 | 45.2 |
| | (4 638) | (4 616) | (55 508) | (6 006) | (36 822) | (20 823) | (13 596) |
| 1997 | 39.8 | 36.1 | 46.1 | 14.1 | 41.9 | 52.6 | 46.2 |
| | (4 741) | (4 911) | (58 920) | (6 105) | (37 754) | (22 873) | (14 643) |

(Table shows percentage of female enrolments in each field. Actual numbers of female students are shown in brackets.)

Note

[1] Figures for 1991 to 1995 are taken from Postle et al. (1997). Other figures are from the DEETYA student statistics collection.

Women's participation in all these areas of study has increased steadily over the seven years to 1997. In Engineering, where the target was set in *A Fair Chance for All* at 15 per cent, women's participation, while at 14.1 per cent, has increased by 32 per cent in the years since 1991. In Business/Economics, women's participation has increased by 11 per cent, and in Agriculture by 20 per cent. Women's participation in Science and Architecture, however, has only increased by 6 per cent over the period, with Science enrolments undergoing a slight drop in 1997.

In summary, female participation has risen considerably in Engineering and has increased steadily in Agriculture, and Business/Economics. In Science and Architecture it has risen at a lower rate.

Women's participation in higher degrees by coursework has increased by 18 per cent and at 52.6 per cent is now above the 50 per cent share of the population. As suggested in the study by Anderson et al., however, there are large differences in female participation in HECS-liable and fee-paying postgraduate courses. In Masters degrees by coursework women take up 61 per cent of HECS-liable places, but only 39 per cent of fee-paying places. The participation of women in higher degrees by research has risen by 15 per cent over the period 1991 to 1997 and, at 46.2 per cent, is close to the 50 per cent mark.

# 5. Conclusion

This paper has drawn attention to the areas where disadvantage still persists. The poor rates of success and retention of Indigenous students remain, eight years after *A Fair Chance for All*, a cause for major concern. Other areas of concern are:

- the continuing low participation rates of people from rural backgrounds;
- the low participation and retention rates of people from isolated backgrounds; and
- the low participation rates of the low SES group.

One good aspect to emerge from the tables is that the success and retention rates of members of equity groups are in general (excluding the Indigenous and isolated groups) on a par with, or only slightly below, those for other (non-equity group) students. This indicates that once members of those equity groups are in the university system they can, with appropriate support, achieve outcomes little different to those of the rest of the student body. Indeed, a longitudinal study of special entry students at The Flinders University of South Australia shows that such students, who would not have been admitted to the university on the basis of their TER scores, have in general a *higher* success rate than students who gained entry through the traditional TER-based methods. These findings throw on its head the notion that the increased access of disadvantaged students to higher education leads inevitably to a lowering of standards.

It seems appropriate to conclude this paper with a quote from Postle et al., which highlights the importance of equity in higher education:

> *A university qualification provides one basis for success in our society. As a result it is a right of all within society to have fair access to such a qualification. It is also to the benefit of society that the potential available to it through its citizens is fully utilised. Mass higher education brings with it the means to raise the overall level of education and skills development within society, while a greater diversity in the student body serves both to enrich the educational experience for all and to provide the basis for a more diverse and enriched society. Equity represents a sound investment in society's human capital ... Meeting the challenges created by mass higher education and student diversity should be seen as a means of enhancing the quality of universities, not detracting from it. (Postle et al. 1997, p. 151)*

It is hoped that the paper will be useful, in particular to university administrators and others concerned with equity issues in higher education, and that it will be included in the information which institutions draw upon when assessing their own achievements and adjusting their policies to address the needs of the educationally disadvantaged.

If you have any questions or comments on the material contained in this publication, please contact Ms Yvette Devlin, Director, Quality and Equity Section, Higher Education Division, on (02) 6240 9668.

# Bibliography

Anderson, D., Johnson, R. and Milligan, B. 1997, The Effects of the Introduction of Fee-paying Postgraduate Courses on Access for Designated Groups, NBEET Commissioned Report No 55, AGPS, Canberra.

Anderson, L., Singh, M., Stehbens, C. and Ryerson, L. 1998, Equity Issues: Every University's Concern, Whose Business? An Exploration of Universities' Inclusion of Indigenous Peoples' Rights and Interests, DEETYA, Canberra.

Bourke, C. J., Burden, J. and Moore, S. 1996, Factors Affecting Performance of Aboriginal and Torres Strait Islander Students at Australian Universities: A Case Study, AGPS, Canberra.

Department of Employment, Education and Training 1990, A Fair Chance for All: Higher Education that's within Everyone's Reach, AGPS, Canberra.

Higher Education Council 1996, Equality, Diversity and Excellence: Advancing the National Higher Education Framework, AGPS, Canberra.

Martin, L.M. 1994, Equity and General Performance Indicators in Higher Education, AGPS, Canberra.

Postle, G. D., Clarke, J.R., Skuja, E., Bull, D.D., Batorowicz, K. and McCann, H.A. 1997, Towards Excellence in Diversity: Educational Equity in the Australian Higher Education Sector in 1995, University of Southern Queensland Press, Toowoomba.

Western, J., McMillan, J. and Durrington, D. 1998, Differential Access to Higher Education: The Measurement of Socioeconomic Status, Rurality and Isolation, AGPS, Canberra.