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PARTICIPATION AND EQUITY

A review of the participation in higher
education of people from low socioeconomic
backgrounds and Indigenous people

Prepared for Universities Australia
by the
Centre for the Study of Higher Education
University of Melbourne

March 2008

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Acknowledgements

The Centre for the Study of Higher Education was pleased to have the opportunity to work with Universities Australia on this project. The initiative of Universities Australia in renewing the sector's emphasis on equity and exploring new policies for achieving equity objectives is welcome. The project team hopes this report will be a resource to assist the Australian higher education sector to respond in novel ways to the persistent inequalities for people from low socioeconomic status backgrounds and Indigenous people.

The CSHE would like to thank the Steering Group for its contribution to the study's outcomes: Professor Alan Robson (Chair), Professor Paul Clark, Professor Helen Garnett, Professor Elizabeth Harman, Professor Roger Thomas and Professor Sally Walker. The CSHE would also like to thank Angela Magarry and Keely Dreghorn of Universities Australia for their input to the project.

We are especially grateful to the staff involved in equity programs in Australian universities who responded to a survey by questionnaire. When we distributed the questionnaire in late 2007 we were aware of the demands often made on people as the year drew to a close. We continue to be impressed by the willingness of people within the Australian higher education sector to contribute to institutional research of this kind.

The project required the collection, collation and analysis of data and literature from a wide range of sources and as a result a number of CSHE staff were involved at various stages. The CSHE team that contributed to the project included Malcolm Anderson, Emmaline Bexley, Marcia Devlin, Robin Garnett, Simon Marginson and Lucy Maxwell. Emmaline coordinated the majority of the project activities.



Richard James
Director, Centre for the Study of Higher Education
Melbourne Graduate School of Education
University of Melbourne

March 2008

1. Summary of the study's findings and recommendations

This report reviews available literature and data relating to the participation and success of people from low socioeconomic status (SES) backgrounds and Indigenous people in Australian higher education, including information on school achievement and retention where this is relevant to access to higher education. Where data are available they are reported for both urban low SES people and rural/remote low SES people. The analysis does not include international students. The report also contains a broadbrush summary of the equity activities and initiatives of Australian universities and a summary of equity policies, programs and trends in selected nations, in particular United Kingdom, USA and Canada.

The purpose of the report is to shed light on the factors associated with the persistent under-representation of low SES people and Indigenous people in Australian universities with a view to informing policies and strategies and providing a framework for further analysis of equity for people from low SES backgrounds. The report includes a summary of barriers and inhibiting factors as well as suggestions for possible ways of defining and measuring socioeconomic status for higher education purposes. Recommendations for future work are also proposed.

This study follows the national study of student finances, *Australian University Student Finances 2006* (Universities Australia 2007), undertaken by the Centre for the Study of Higher Education. The student survey indicated that, on balance, students were worse off in 2006 in financial terms than in 2000 when the previous study was undertaken. A significant proportion of students reported that their financial circumstances adversely affected their capacity to study effectively, especially students who were engaged in extensive paid work during semester.

A study of this kind inevitably confronts the question of whether equity matters. Equity issues in Australian higher education are closely interwoven with complex questions regarding the ideal or desirable rates of participation in both higher education and vocational education and training in Australia. The project did not seek to examine these questions. The work of the project team was informed by the principle of individual social justice: access to higher education and success in higher education should not be determined by class, ethnicity, geographical location or other personal characteristics. This principle has underpinned the Australian higher education sector's advanced equity policy framework since its inception in the early 1990s.

The literature surveyed for the project shows that equity in higher education is a widespread international concern. In many developed nations there are persistent inequalities in educational participation and outcomes, with major social inequities in access to higher education in particular, despite mass higher education systems. Internationally, policy-makers are concerned about the low rates of higher education participation for people from lower social class backgrounds, minority groups and disadvantaged regions and communities. This concern stems not only from recognition that higher education confers significant individual benefits in terms of personal development, social status, career possibilities and lifetime earnings, but also that it is important for national and community development.

Improving the higher education participation rate of people from disadvantaged groups is believed to be important for their long-term social and economic integration. Widening participation and encouraging intergenerational social mobility might lead to more cohesive and more economically successful societies.

The scope of the project

As required by the project brief, the specific aims of the project were:

- to establish an appropriate definition of low socioeconomic status;
- to identify specific issues and barriers to entry into higher education;
- to analyse the measures that have been introduced in Australia and internationally to remedy the situation; and
- to analyse the strategies that universities in Australia and internationally currently utilise to target low SES students.

The project focused on domestic students from low SES backgrounds in three distinct groups: students from rural and regional Australia; students from metropolitan areas; and Indigenous students.

Key conclusions

The present participation imbalances

- The participation in higher education of people from low SES backgrounds and from rural and isolated areas is presently monitored using indices based on the postcode of students' home address. This approach has limitations, later discussed in the report. It should be noted that alternative approaches to defining socioeconomic status, such as using parental education or occupation for example, might lead to somewhat different results and conclusions. Notwithstanding the limitations of the postcode approach, it can be stated with confidence that people from low SES backgrounds are significantly under-represented in Australian higher education. This conclusion is confirmed by many studies. In broadbrush terms using the available data, people from low SES backgrounds are about one-third as likely as people from high SES backgrounds to participate in higher education. The share of university places for people from low SES backgrounds — approximately 15 per cent of places, compared with a population reference point of 25 per cent — has remained virtually unchanged for 15 years despite the overall expansion of access to higher education during that period.
- People from low SES backgrounds are particularly underrepresented in the professional fields of study for which there is the most competitive entry and in postgraduate education. Students from low SES backgrounds comprise less than 10 per cent of postgraduate students.
- The social imbalances in Australian higher education may not be as large as those in some developed nations, though direct comparison is difficult. Australia's apparent equity performance may be a result of: 1) an SES classification system with only three categories of social class; and 2) the use of a geographical index for SES

classification rather than, say, parental occupation or educational attainment. The geographical index may overestimate low SES participation in Australian higher education — and correspondingly underestimate the rate of high SES over-representation.

- Australian universities vary considerably in the proportion of students from low SES backgrounds. This is partly due to geographical effects, as well as the effects of competitive selection processes based on school achievement levels. While improvement in the participation of people from low SES backgrounds is an issue for collaborative action by the whole sector, the differences between university performance in this area should be noted. Presently, some universities are notably more successful in enrolling people from low SES backgrounds, reflecting their contexts, patterns of student demand and selection/recruitment policies and processes. The under-representation of people from low SES backgrounds is most marked in the Group of Eight universities. There has been a slight downturn in the proportion of students from low SES backgrounds in the Go8 as a whole over the past 5 years, though not in all group members.
- Low SES rural people are more underrepresented than low SES urban people. This conclusion should be treated with caution for there are significant measurement problems associated with the postcode index on which it is based.

The underlying reasons

- A set of interrelated factors lie behind the persistent under-representation in higher education of people from low SES backgrounds. The relative influence of these factors cannot be determined with precision from the available data. Under-representation in higher education is partially the result of lower levels of educational achievement in schools, lower educational aspirations and lower school completion rates. These three factors are significantly interrelated. It is likely that lower levels of educational achievement are the precursor for other effects. Imbalances in higher education participation reflect endemic educational disadvantage that begins in the earliest years of schooling. People from low SES backgrounds are more likely to have lower perceptions of the attainability of a university place, less confidence in the personal and career relevance of higher education and may be more likely to experience alienation from the cultures of universities.
- Financial factors are cited by students as barriers or deterrents to entry to higher education. However, it is not clear from the available data the extent to which financial considerations— including the capacity or willingness to pay university fees, the availability of income support while studying and the opportunity cost in loss of potential income while studying — are inhibitors or barriers to university for people from low SES backgrounds in comparison with broader aspirational and school achievement factors. Financial factors have more significant influence in geographical areas where there are more concentrated groups of low income earners, however more research into these effects is needed.

- All things considered, the available data do show that disadvantage with respect to higher education should not be conceptualised narrowly in terms of extrinsic barriers that confront students at or near the point of higher education, such as distance and financial cost. There are clearly broader social, educational and cultural factors involved. Thus scholarships, bursaries and fee remissions are not the entire solution to increasing access, though this is not an argument for reducing such schemes.
- Vocational educational training (VET) appears to have more appeal than higher education for some people from low SES backgrounds. The participation rates of low SES people relative to medium/high SES people are stronger in VET than in higher education. However, despite the higher rate of VET participation there is still a shortfall in overall participation in tertiary education for people from low SES backgrounds.

Performance at university

- While the available data based on postcodes prevails against fine-grained analysis, it appears that low SES participation in Australian higher education is an issue of access rather than success once enrolled. At aggregate level, socioeconomic status appears to explain little of the variation in higher education success and retention rates. Once enrolled, low SES people do almost as well as medium SES and high SES in terms of retention, success and completion. Low SES remote students and Indigenous students are an exception and particular attention needs to be given to both these groups.

The special circumstances of Indigenous people

- The low access rates and low completion rates for Indigenous people are distinct problems that require targeted policies and programs. There are some similarities in the educational participation patterns between Indigenous people and low SES people, but evidence too of distinctive challenges for Indigenous people.
- For a period there was growth in access for Indigenous people, though this has stalled and may be dropping. Indigenous people are vastly underrepresented in higher education on even the most conservative estimates based on population size, population demography and share of university places.
- A proportion of the access to higher education for Indigenous people has been provided by sub-degree and enabling programs. Higher degree enrolment and completion rates are modest.
- The challenges lie in recruiting Indigenous students who are academically prepared for university (given that school completion rates for Indigenous people are about half of those for other Australians) and in retaining students once enrolled. The university completion rate for Indigenous enrollees remains well below 50 per cent. The low retention rate of Indigenous people is a major problem. The recent national study of student finances by Universities Australia has shown that financial factors are likely to be highly significant in improving access and retention for Indigenous students.

- The issues facing the higher education sector in achieving better outcomes for Indigenous people are partly to do with socioeconomic status and levels of educational disadvantage in schooling but there are also deep cultural issues to be confronted in order for stronger relationships to be built between universities and Indigenous people and communities. The Indigenous Higher Education Advisory Council has a set of well-developed priorities for advancing Indigenous peoples' participation in higher education on which it provides advice to government.

International perspectives: UK; USA and Canada

- People from low SES backgrounds participate below representative levels across most international higher education systems regardless of the structural differences between systems and their degree of massification. There is little evidence of policies or initiatives that have created large-scale inroads into the problems of low SES and minority group participation.
- Low SES students are particularly under-represented in US Ivy League colleges, and UK Russell Group universities, mirroring the low levels of access at Go8 universities in Australia.
- Socioeconomic outcomes are highly differentiated by race in the US — low SES white students have better success rates than low SES Hispanic students for example.
- A major UK study has found that if geographic areas are to be used to describe SES the areas need to be extremely small—the census ward, for example—and that such measure are only useful for making generalisations about young people of school leaving age.
- A Canadian study has revealed that financial constraints play a very small role in accounting for low access by low SES students. Far more important were low achievement in middle high school, school grades, parental influences and school factors.

Programs and initiatives to recruit and support people from low SES backgrounds and Indigenous people

- The underlying factors in the under-representation of people from low SES backgrounds suggest multiple possibilities for policies and specialised programs, including:
 - efforts to improve school retention and student achievement;
 - efforts to raise student awareness of higher education and aspirations towards higher education, such as through outreach in schools;
 - programs for under-represented schools;
 - pathways into higher education that circumvent competitive entry based on academic achievement, such as teacher recommendations;
 - scholarships and other forms of financial incentive and support;
 - first-year transition programs;
 - articulation between VET courses and higher education courses; and
 - the recruitment of mature-age students.
- Analysis of the project's institutional survey of low SES/Indigenous student recruitment and support programs indicates a high level of commitment to equity and much innovation across the Australian higher sector. Numerous programs such as

those listed above can be found across the sector. Often there is an absence of conclusive evidence of the extent of their influence, largely due to the complexity of establishing a controlled research or evaluation environment that isolates program effects from other influences. Nonetheless there is nothing to suggest these programs are not well targeted, well designed and effective.

- Respondents to the survey acknowledged the difficulty in targeting low SES people and the shortcomings of the postcode index for targeting and monitoring purposes. Some universities reported using their own measures of SES in addition to student postcode. The value of programs in under-represented schools as a means for targeting students from low SES backgrounds was widely reported.

The measurement of socioeconomic status

- Socioeconomic status is an abstract concept for which there is no agreed international definition. Socioeconomic status is thus difficult to measure for monitoring purposes. The concept of socioeconomic status embodies differences in social, cultural and economic factors related to class differences.
- Internationally, various approaches to the definition of SES are used, including parental occupations and educational levels, family income levels and geographical indicators such as the zipcode, postal code or census ward of home address.
- The Australian higher education sector presently does not have a direct measure of individual socioeconomic status. Currently, a student's individual SES is inferred from the postcode of his/her permanent home address. Small geographical cells are likely to be better geographic measures of SES than postcode districts, however this approach is still based on our underlying assumption that location is the best signifier of the likelihood of educational advantage/disadvantage. Geographical measures of SES are less appropriate for mature-age students and postgraduates.
- Despite its lack of precision the postcode index has been an inexpensive, non-intrusiveness way of measuring imbalances at aggregate level. An area measure is also a potentially effective tool for targeting student recruitment, though less so for socially diverse postcodes. However, the use of a single postcode to classify both location and SES does not allow for analyses that might separate geographical effects from other socioeconomic effects.
- The postcode index has particular shortcomings for socially heterogeneous areas. It is unlikely that access to higher education is randomly distributed across people in socially heterogeneous areas. It is likely therefore that the postcode index underestimates the under-representation of low SES people, for it is conceivable that high SES people (high incomes, high education levels) living in postcodes designated as low SES have higher rates of access to higher education than people from low SES backgrounds (low incomes, low education levels) in the same postcode district.
- Parental educational levels and parental occupation levels are both superior indicators of individual SES compared with postcode of home address. The available data in

Australia and internationally shows that parental education levels and occupations are predictors of achievement at school, school retention and completion, and educational aspirations. Taking various studies and data into account, it appears likely that parental educational levels are the best predictor of the likelihood of higher education participation.

- From analyses of the 2006 Student Finances dataset, parental education levels — in particular father's education — reveal more substantial differences in students' financial circumstances and more differences in the effects of finances on students' capacity to study. In comparison, parental occupational levels reveal marginally fewer and smaller differences and postcodes still fewer differences again.
- In considering the suitability of potential measures of SES it should be noted that factors influencing access to higher education may not be the same as factors that affect success in higher education for students once they enrol.

Recommendations

Recommendation 1

A concerted national response: The development of new approaches to cross-portfolio policies and cross-sectoral action

The under-representation in higher education of people from low SES backgrounds is the result of patterns of social and educational disadvantage that are experienced well before people reach the point of considering whether or not university is possible and relevant for them. It follows that policies and programs focussed solely on the higher education sector can only partially influence the problem of under-representation. A national response is called for. A broad national strategy is needed that recognises the problem cuts across government portfolios and cuts across educational sectors. In particular, given the strong influence of school retention and school achievement on the choices and pathways chosen by low SES students, the challenges are decidedly cross-sectoral in character and require university-VET-school partnerships.

There are important questions to be resolved around the best role that can be played by universities. Currently, the policies and programs to improve low SES access initiated by the higher education sector can be classified into four groups as follows:

- Early intervention in the junior-middle secondary years (or earlier) to help improve school achievement and retention — to broaden horizons, boost confidence, and so on, by exposure to universities and university staff;
- Intervention close to the conventional point of transition to improve direct transfer rates to higher education — to raise awareness, provide achievable academic pathways, compensate for financial disadvantage and so on;
- Restructuring of higher education courses in ways that might make study more appealing and attainable— such as study-work 'sandwiching' that allow students to earn income and gain work experience; and

- Mature-age pathways for people who have not undertaken the conventional linear school-university pathway and who are considering returning to study, including VET-higher education pathways.

Each of these broad strategies rely heavily on the quality of partnerships of various kinds, including between schools, VET institutions, employers, communities and universities. Consideration might be given to how a federal and state framework could be developed to encourage and enhance partnerships and collaborations for approaching the issue of low SES equity.

Recommendation 2

Improved measurement: Enhanced definition and measurement of socioeconomic status

A more valid and more precise measure of socioeconomic status is needed if advances are to be made in policies and programs for the participation of people from low SES backgrounds in higher education. The principal options include using parental education levels, parental occupations, family income or a possible composite measure based on these.

On balance, the project team recommends that consideration be given to developing a measure of SES for higher education purposes that is based on parental education levels. A measure of SES based on parental educational levels would have the following advantages.

- It would provide individual level data on socioeconomic status, which the present postcode index does not provide.
- Data collection would be reasonably simple and could be achieved during data collection at enrolment time with tick-the-box items that would require no coding.
- Education levels lend themselves to relatively simple hierarchical categorisation — the Australian Qualifications Framework already does this to some extent. It would be possible to expand the number of SES subgroups from the present three groups should this be desirable for fine-grained analysis.

Parental education is favored over parental occupation. The data analysed for the study suggest a slightly stronger correlation between educational aspirations/achievement and parental education than with parental occupation. Further, it is believed that data collection would be simpler and more reliable, for occupations and occupational groupings are less stable over time.

Technical work would be necessary to develop an SES measure based on parental education and to establish suitable population reference points. The use of the postcode index could be continued to retain time-series data if this was believed desirable.

Recommendation 3

Improved measurement: Mature-age students and non-school leavers

Socioeconomic status in education implicitly refers in the main part to the socioeconomic conditions in which students have grown up, rather than those under which they may

currently be living. Being raised in a low SES environment is linked to numerous indicators of educational disadvantage, as shown throughout this report. For school-leaving undergraduates there is therefore a reasonable argument for using parental-based measures of SES. However, for the socioeconomic status of mature-age students parental-based measures are problematic. In particular, geographic measures of SES are notoriously problematic for measuring the SES backgrounds of adult populations.

Annually, roughly 20 per cent of commencing undergraduates and over two-third commencing postgraduates were aged 25 or over (DEST selected statistics 2006). Little is known of the socioeconomic background of these students given the limitations of the postcode measure. Without an individual measure of SES that is sensitive to the circumstances of mature-age students it is not possible to draw confident conclusions about equity and access in postgraduate education. Further study of the impact of low SES backgrounds and current circumstances upon the educational achievements of mature-age students would be valuable.

Recommendation 4

Indigenous students: Improving access and retention

The under-representation of Indigenous people and the low retention and completion rates for Indigenous people require concerted action. A framework for university policies and programs exists in the strategic plan of the Indigenous Higher Education Advisory Council (IHEAC) and the policy advice provided by IHEAC to government. In 2005, IHEAC established seven priority areas believed necessary to advance the participation of Indigenous people in universities (James & Devlin 2006). These priorities are significantly interwoven. The IHEAC priorities are relevant to the present study and are as follows:

Priority 1: Encourage universities to work with schools and TAFE colleges and other registered training organisations to build pathways and raise levels of aspiration and confidence of Indigenous students.

Priority 2: Develop a concerted strategy to improve the level of Indigenous undergraduate enrolment.

Priority 3: Improve the level of Indigenous postgraduate enrolment, enhance Indigenous research and increase the number of Indigenous researchers.

Priority 4: Improve the rates of success, retention and completion for Indigenous students.

Priority 5: Enhance the prominence and status of Indigenous culture, knowledge and studies on campus.

Priority 6: Increase the number of Indigenous people working in Australian universities.

Priority 7: Improve the participation of Indigenous people in university governance and management.

The participation of Indigenous people in higher education is an issue that requires a concerted national response across education sectors and communities. For its part, the higher education sector needs to continue to work closely with IHEAC to develop specific strategies to attract and retain Indigenous students. Key areas for attention include:

- improving the academic preparedness of prospective Indigenous students;
- developing alternative pathways into higher education;
- improving the academic and personal support for Indigenous people once enrolled; and
- improving financial support.

Recommendation 5

Evidence-based policies and programs: Improved knowledge of the relationships between the causal factors

The interrelationships and interactions between the multiple factors that underlie low SES under-representation are not clear. These factors include both the lack of encouraging or enabling conditions, which reduce the likelihood of people from low SES backgrounds considering higher education as a serious possibility for them, and the presence of more overt discouragement — that is, deterrents or barriers that close off options and possibilities. Improving access to higher education involves working across the spectrum: on the one hand, working on the encouraging factors, such as raising aspirations; boosting school achievement and retention; improving perceptions of the relevance and attainability of university study; and, on the other hand, removing or reducing financial and other barriers where these exist. A study that yielded a better understanding of: 1) the key factors in the formation of educational ambition on the part of young people; 2) the relative influence of these factors; and 3) the times/points at which these factors are most amenable to intervention might be valuable in shaping policy and programs.

2. Summary of project aims and method

The project's terms of reference required:

- a literature review focusing on low socioeconomic status students to be conducted to analyse the existing literature in Australia and internationally, with particular consideration given to literature in the United Kingdom, USA and Canada;
- drawing on the literature review, an appropriate definition of low SES to be established and the identification of specific issues and barriers to entry into higher education in relation to the three target groups;
- the identification of measures introduced in Australia and internationally to remedy the low proportion of low socioeconomic status students in higher education;
- the identification of measures currently utilised by universities to target low socioeconomic status students; and
- the development of a series of specific issues and questions that warrant further investigation.

The project team drew on both quantitative and qualitative data. In the main part the analysis is based on existing literature rather than new analyses of the available data. Some new analyses of existing higher education equity data was commissioned from DEEWR, principally to divide the low, medium and high SES groups into urban and rural/remote subgroups. Analysis of the student finances dataset

The review of international literature is not comprehensive of course, for the volume of international literature is immense. Our focus has been on national reports rather than small studies and case studies. We have endeavoured to analyse the most significant policy documents that were available to us.

The report draws extensively on the following papers and reports prepared previously by the Centre for the Study of Higher Education:

James, R. (2007) *Social equity in a mass, globalised higher education environment: The unresolved issue of widening access to university*. Paper presented at the University of Melbourne Faculty of Education Dean's Lecture Series, 18 September 2007 (available at www.cshe.unimelb.edu.au).

James, R. Bexley, E, Devlin, M. & Marginson, S. (2007) *Australian University Student Finances 2006: Final report of a national survey of students in public universities*. Canberra: Universities Australia.

James, R., Baldwin, G., Coates, H., Krause, K., & McInnis, C. (2004) *Analysis of Equity Groups in Higher Education 1991-2002*. Canberra: Department of Education, Science and Training.

James, R. (2002) *Socioeconomic Background and Higher Education Participation: An analysis of school students' aspirations and expectations*. Canberra: Australian Government Publishing Service.

James, R., Wyn, J., Baldwin, G., Hepworth, G., McInnis, C., & Stephanou, A. (1999) *Rural and Isolated Students and their Higher Education Choices: A re-examination of student location, socioeconomic background, and educational advantage and disadvantage*. Canberra: Australian Government Publishing Service.

The project team has drawn frequently on the following sources of data and analysis:

- The *Higher Education Statistics Collection*. This dataset is the main one used in this report. The *Higher Education Statistics Collection* is held by the ABS and DEEWR, and comprises the population data for Australian university students. In this dataset, SES is measured using the home postcode of students.
- Studies and reports arising from the *Longitudinal Surveys of Australian Youth* (LSAY). LSAY data is collected from a representative sample of young Australians across Australia. The data are drawn from achievement tests, questionnaires and annual interviews. Cohorts studied were recruited in 1995, 1998, 2003 and 2006. There are numerous reports arising from the LSAY data referred to in the present report. The SES definitions used in LSAY reports are varied. Appendix III discusses a project analysing various measures of SES based on the LSAY dataset.
- Studies and reports arising from the *On Track* program. *On Track* data are collected by the Victorian government via a telephone survey of all year 12 students aged under 21 who have successfully completed the VCE, VCAL or IB in the previous year. Although the data is for Victorian students, it is highly significant for the sample size is very large. The *On Track* project bases SES on students' residential address.

Finally, the following international reports and studies have been a valuable source of information:

Baum, S. and Ma, J. (2007) *Education Pays: The Benefits of Higher Education for Individuals and Society*. College Board: Washington.

Berger, Joseph, Motte, Anne and Parkin, Andrew (2007). *The Price of Knowledge 2006–07*. The Canada Millennium Scholarship Foundation: Montreal.

Carnevale, A. and Rose, S. (2003) *Socioeconomic Status, Race/Ethnicity, and Selective College Admissions*. The Century Foundation.

Corver, Mark (2005) *Young participation in higher education*. Higher Education Funding Council for England.

Frenette, Marc (2007) *Why Are Youth from Lower-income Families Less Likely to Attend University? Evidence from Academic Abilities, Parental Influences, and Financial Constraints*. Analytical Studies Branch Research Paper Series, Statistics Canada.

Frenette, Marc (2002) *Too Far To Go On? Distance to School and University Participation*. Analytical Studies Branch Research Paper Series, Statistics Canada.

Frenette, Marc (2003) *Access to College and University: Does Distance Matter?* Analytical Studies Branch Research Paper Series, Statistics Canada.

3. The Australian equity policy framework and the measurement of socioeconomic status

Compared with many nations Australia has a well-developed database on equity in higher education. Detailed information is collected and analysed on access, participation and completion rates, considering a wide range of factors including age, gender, SES, locality, ethnicity and disability. This data collection has become increasingly detailed and sophisticated over the last 30 years and time series analyses are published every year, allowing for detailed investigation of trends (for example, James 2004, Coates & Krause 2005). Australia has the advantage of dealing with a centralized, almost entirely public system. In contrast, while there is extensive data collection in the United States, for example, the national participation rates for subgroups are not as easily analysed because of the highly decentralized nature of the higher education system.

The national equity policy framework

The policy framework for socioeconomic status uses three groupings using a postcode index calculated on census income data. Postcodes are ranked according to the educational and occupational characteristics of residents using the SEIFA (Socioeconomic Indexes for Areas) index. The group of postcodes at the lowest end of the ranking which contain the first 25 per cent of the population are allocated a low SES classification, those containing the next 50 per cent of the population a medium SES classification and the final 25 per cent a high SES classification.

The definition of equity in Australian higher education derives from the landmark discussion paper *A Fair Chance for All* (NBEET 1990):

The overall objective for equity in higher education is to ensure that Australians from all groups in society have the opportunity to participate successfully in higher education. This will be achieved by changing the balance of the student population to reflect more closely the composition of the society as a whole.

Internationally, Australia has been a leader in establishing an equity policy framework, which has international recognition. It is summarised in Figure 3.1 on the following page.

The Australian equity framework

Equity groups

The current equity target groups were first designated in 1990 in *A Fair Chance For All*, broadly following the disadvantaged social groups identified during the mid 1970s. Data collected from students at enrolment is used for classification of group membership. The equity groups are:

- *people from lower socioeconomic backgrounds* (student socioeconomic background is measured by the postcode of their permanent home address — the 4-digit code used to identify urban and rural districts for mail delivery. All Australian postcode districts are classified using an index of low, medium and high socioeconomic status derived from national census data);
- *people from rural and isolated areas* (student location is measured by postcode of student permanent home address and classified with an index of urban, rural and isolated postcode districts derived from population density data and proximity to large cities);
- *people with a disability* (self-identified by students on enrolment, through responses to the question ‘Do you have a disability that may affect your studies?’);
- *people from a non-English speaking background* (defined as people who were born overseas, who arrived in Australia within the previous ten years and who speak a language other than English at home);
- *women in non-traditional areas of study and higher degrees*; and
- *Indigenous people* (self-identified on enrolment);.

Performance indicators

The performance of the equity groups is measured by five indicators:

- *Access* (proportion of the equity group among commencing domestic students)
- *Participation* (proportion of the equity group among domestic students overall)
- *Retention* (the proportion of equity group students who re-enrol at an institution in a given year compared with the students who were enrolled in the previous year, less those students who have completed their course).
- *Success* (the mean *student progress rate* for the previous year for the equity group, this being the proportion of units passed within a year to the total units enrolled).
- *Completions* (the proportion of students completing all the academic requirements of a course).

Monitoring and reporting

To monitor performance, the access and participation indicators are generally referenced against the proportion of people in the equity group within Australia overall. Retention, success and completion are referenced against all other students. Indicators are reported as percentages or ratios as appropriate. Universities are required annually to report the performance of the six equity groups and to have an equity plan. The Higher Education Equity Programme (HEEP) provides universities with funds to assist the equity groups, with the exception of Indigenous students who are supported through the separate Indigenous Support Funding programme.

Figure 3.1: The Australian equity framework

The equity framework treats an equitable outcome as one in which there is parity between percentage group representation in education and in the general population. Distance from parity is measured by reference to Equity Indicators, or target values, which are based on percentage equity group membership in the 15-64 year old Australian population. The

following table shows selected target values. The rural and isolated reference points are based on census data.

Table 3.1: Population reference values for selected equity groups (%)

	Equity group	Census date		
		1991	1996	2001
Reference values	Low SES students	25.0	25.0	25.0
	Rural students	24.3	24.3	
	Isolated students	4.5	4.5	

Brief summary of the trends for equity groups

Broadly, the equity dataset shows progress has been made in improving the participation of people with disabilities, people from non-English speaking backgrounds and women — women are now over-represented in most fields, but not in all and certainly not at higher degree level.

The situation with Indigenous people's participation is mixed. For a period there was growth in access, though this has stalled and may even be dropping. A proportion of the access to higher education for Indigenous people has been provided by sub-degree and enabling programs. Higher degree enrolments and completions are modest. The principal challenges are discussed in detail later in the report. They are associated with recruiting Indigenous students who are prepared for university — given that school completion rates for Indigenous people are about half of those for other Australians — and in retaining students once enrolled, for the university completion rate for Indigenous enrollees remains unacceptably low.

There are two other groups for which virtually no progress has been made in improving their participation shares: people living in rural or remote areas and people from low SES backgrounds. Both groups are highly under-represented and their participation shares have not changed markedly despite 15 years of equity policy.

Recommendations from the 2004 DEST analysis of equity groups

A major analysis of trends in the DEST equity dataset was undertaken for DEST by the CSHE in 2004. The project brief sought recommendations on whether any changes should be made to the national equity policy framework with regard to the identification of the equity groups. The project report, *Analysis of Equity Groups in Higher Education 1991 – 2002* (James *et al.* 2004), made the following recommendations regarding measurement indicators and policies for low SES students and rural and isolated students, some of which remain pertinent to the present study:

General

1. Special emphasis should be given within the equity policy framework to people from low socioeconomic backgrounds due to the continuing extent of under-representation of this group, with recognition of the particular effects of socioeconomic background for people from rural and isolated backgrounds.
2. The equity policy framework should require universities to monitor and report the higher education performance of identified population subgroups as appropriate, regardless of whether or not the sub-groups are designated as equity groups at the time.

People from low socioeconomic backgrounds

3. To align the socioeconomic background (SES) indicator with the critical environmental factors within which young people make decisions about their futures and the possibility of higher education during schooling, socioeconomic status should be measured using information collected from students on their parental occupational status. For mature-age students, their parental occupations at the time of their secondary schooling should be used. Consideration should be given to whether it is also feasible to collect information on parental educational attainment. Appropriate sub-groupings would need to be determined and work would be needed to establish reference values from census data.
4. If agreement cannot be reached on collecting the information as suggested in conclusion three, SES should be determined by categorising the students' home addresses in terms of smaller geographical units, such as census sub-districts or Statistical Local Areas (SLAs) as defined by the Australian Bureau of Statistics.
5. Greater emphasis should be given in the equity policy framework to access for people from low SES backgrounds into the individual fields of study in which there is the most significant under-representation.
6. Greater emphasis should be given in the equity policy framework to access for people from low SES backgrounds into higher degrees.
7. The access and participation indicators for low SES are currently presented using three separate classifications, National, State and Urban. This leads to potentially misleading information. A single National SES classification should be the only classification used. The student population figures for individual institutions should be compared with state reference values, that is, reference values based on the proportion of low SES people within the relevant state.

People from rural and isolated areas

8. People living outside urban regions continue to be a significantly under-represented group and should be given specific consideration within the equity policy framework. Rural and isolated areas should be given particular attention due to their low, and dwindling, participation shares.
9. The rural/isolated/urban classification requires updating to reflect new classifications used by government agencies. A new location classification must be developed. The preferred classification is one based on the geographical location recommended by the National Education Performance Monitoring Taskforce (NEPMT), drawing on the Accessibility/Remoteness Index of Australia (ARIA) in which regions are classified as metropolitan, provincial and remote—broadly aligned with the existing categories of urban, rural and isolated.

The report offered the following analysis of the postcode index and possible alternatives (James *et al.* 2004):

For the purposes of aggregated data analysis and monitoring, the current definition of SES according to postcode of students' permanent home residence has been adequate until now. This has been a cost-effective mechanism for the purposes of broad classification. However, a location based measurement is blunt and inadequate for measuring both the aggregate patterns and the potential educational disadvantage of individuals, especially for some universities. To advance the equity policy framework, we suggest data be collected on parental occupation as part of the standard data collection on enrolment. Consideration might also be given to collecting information on the highest level of parental educational attainment.

Jones (2002) has demonstrated the feasibility of collecting data on parental occupation. His pilot work relates primarily to school-leavers, so further consideration must be given to how appropriate data might be collected from mature-age students. One possibility is to seek data from mature-age students on their parents' occupational status at the time they were undertaking secondary schooling.

There are additional costs associated with data collection of this kind but these are justified given the enhancement measurement that would be possible. We do not believe that seeking such data is unacceptably intrusive. There are also issues of accuracy to be considered, but Jones' work has shown these are not insurmountable. The measurement of SES based on parental occupation (and possibly educational background) would better align the SES classification with family income and family attitudes towards the relevance of higher education. These factors are significant determinants of young people's aspirations and attitudes towards the relevance and attainability of higher education (James, 1999).

If agreement cannot be reached on collecting such information from students, we conclude that the measurement by location should be based on smaller geographical areas, such as census sub-districts or Statistical Local Areas (SLAs). The advice of the Australian Bureau of Statistics should be sought on the most appropriate and efficient measure. Measurement using SLAs might provide for slightly better SES measurement than postcodes. Nevertheless, all locational measures are of limited value compared with measures that are based as closely as possible on causal factors, in this case home influences.

Considerations in the definition and measurement of socioeconomic status

Clearly SES is a complex, abstract concept. There is no agreed international definition for this concept. Socioeconomic status is thus difficult to measure for monitoring purposes for it embodies differences in social, cultural and economic factors related to class differences.

As noted previously, participation in Australian higher education by socioeconomic status is based on a ranking of postcodes according to the educational and occupational characteristics of residents using the SEIFA (Socioeconomic Indexes for Areas) index. The group of postcodes at the lowest end of the national ranking which contain the first 25 per cent of the population are allocated a low SES classification, those containing the next 50 per cent of the population a medium SES classification and the final 25 per cent a high SES classification. Low SES figures are also calculated for each state by taking the lowest quartile within postcodes ranked within the state. The number of urban low SES students in each university is used in calculating HEEP funding, to avoid the double counting of students from rural or isolated areas.

The postcode index has been an inexpensive, non-intrusiveness way of measuring imbalances at aggregate level. An area or location measure also has potential benefits for targeting student recruitment. However, postcode of home address is not a particularly valid indicator of individual socioeconomic status. Further, the use of a single postcode to classify both location and SES does not allow for analyses that might separate geographical from socioeconomic effects. The postcode index has particularly shortcomings for socially heterogeneous areas for it is unlikely that access to higher education is randomly distributed across the people living in such areas. The postcode index may under-estimate the under-representation of low SES people, for it is conceivable that high SES people (high incomes, high education levels) living in postcodes designated as low SES have higher rates of access to higher education than people from low SES backgrounds (low incomes, low education levels) in the same postcode district.

The project team concludes that a new measure of socioeconomic status would be an important element of any new policies and programs to target the educational disadvantage of low SES people, for this would permit a closer alignment of goals, targets, performance and evaluation.

The study's findings show that parental educational levels and parental occupation levels are both superior indicators of individual SES than postcode of home address. The available data in Australia and internationally shows that parental education levels and occupations are predictors of achievement at school, school retention and completion, and educational aspirations. Taking various studies and data into account it appears likely that parental educational levels are the best predictors of the likelihood of higher education participation.

On balance, the project team believe parental education levels would be a preferred measure for SES in Australian higher education. The two sections to follow outline some of the considerations behind this recommendation. The first examines criteria for choosing a measure of SES and the second presents findings from analysis of the 2006 national student finances dataset on the relationship between students' financial circumstances — in particular their self-reported financial duress — and alternative measures of socioeconomic status, parental education, parental occupation and postcode of home address. This analysis show that, parental education levels — in particular father's education — reveal greater differences in students' financial circumstances and larger differences in the effects of finances on capacity to study. By comparison, parental occupational levels reveal marginally smaller differences and postcodes reveal even fewer differences.

Optimum characteristics of a measure of socioeconomic status

There are no international conventions or standards for measuring SES and the various approaches used reflect different social structures and economic systems, as well as pragmatic considerations associated with the availability of existing data and the costs of data collection. Internationally, the various measures in use or that have been trialled include geographical indicators, parental occupations, parental education levels and family income, wealth and access to educational resources. Composites compiled from individual measures have also been used.

An optimum measure for socioeconomic status would have the following qualities. It would:

- validly measure the construct in question;
- be simple and have face validity;
- provide for low cost collection of data and analysis;
- be minimally intrusive;
- permit the targeting of equity initiatives;
- allow population reference points to be calculated;
- be stable over time;
- be difficult to manipulate; and
- be appropriate for identifying the socioeconomic status of international students as well as domestic students.

It is unlikely to be possible to meet all of these requirements. The last is particularly challenging.

Given the breadth of the concept of socioeconomic status, it is particularly important for the measure to be closely aligned with the causal factors associated with educational advantage and disadvantage. Further, a good measure should help to identify and target disadvantage where it occurs. It is especially important that the indicator allows measurement of individual socioeconomic status as well as aggregate patterns, noting that the desirable qualities of an indicator of aggregate patterns and of individual status may differ slightly. An optimum SES measure should also permit the separation for analysis purposes of socioeconomic status from geographical location, to enable investigation and monitoring of any independent effects of rurality and/or distance on students' educational advantage or disadvantage.

Analysis of possible indicators of financial duress while studying at university

An analysis was undertaken of the 2006 student finances dataset to explore the relationship between various potential measures of SES and the degree of financial hardship experienced by students while at university. Table 3.2 reports five selected items from the study's questionnaire and the differences between low SES and high SES students when the SES coding is conducted using: postcode index, father's and mother's occupations respectively and father's and mother's education levels respectively.

The figures in the table illustrate the extent to which father's occupation reveals the largest polarization in the relative proportions of students reporting financial hardship. This finding lends support for using father's education as an indicator of socioeconomic status. In comparison, on almost every measure of financial hardship, the postcode measure of SES reveals the least polarization between 'low' and 'high' cohorts.

Table 3.2: Comparison of indicators of SES: Impact of financial situation for high and low SES full-time undergraduates, percentage of those agreeing with the proportion.

	Postcode		Father's Occupation		Mother's Occupation		Father's Education		Mother's Education	
	High SES	Low SES	High SES	Low SES	High SES	Low SES	High SES	Low SES	High SES	Low SES
Have difficulty affording books	46.0	52.5*	42.6	54.8*	43.9	50.4*	42.5	55.9*	45.3	54.0*
May cease study due to finances	2.9	5.1*	2.5	5.9*	2.6	5.2*	2.7	5.6*	2.4	5.1*
Finance often a worry	54.0	63.4*	49.8	67.7*	51.2	60.4*	50.1	67.4*	51.8	64.5*
Regularly miss class for paid work	22.2	23.5	21.1	23.2	21.9	23.6	20.0	27.4*	20.4	25.8*
Food or necessities unaffordable	13.7	16.8*	11.5	19.5*	11.9	16.0*	11.0	19.4*	12.0	17.8*

*= statistically significant difference at 0.01 level

Three regression analyses were performed on the dataset, again using various alternative measures of SES and alternative indicators of financial hardship or financial concern. In each case the measures of SES that explained the most variation in the sample were, in order of explanatory power:

1. a composite scale based on both parents' occupations and education levels
2. a composite scale based on both parents' education levels
3. father's education

Government income support and scholarship schemes

Youth allowance and Austudy

Youth Allowance was introduced in July 1998, replacing the Newstart allowance, Youth Training Allowance and Austudy for those under 25. The scheme requires people under 18 to be in either education and training or in employment, and creates a single income support service for young people as well as providing Rent Assistance for certain categories of students. Austudy continues for those entering higher and further education after the age of 25. Since 1998 there has been a substantial decline in the number of students receiving Austudy, in the main part due to the introduction of Youth Allowance. Overall, there has been a 6.4 per cent drop in the number of students receiving *either* Austudy or Youth Allowance since 1998 (figure derived from FACSIA 2006). This decline may have had a particular impact on low income students.

Independent status

Rates of Youth Allowance are affected by a student's 'independence status'. Austudy recipients, being 25 or over, are considered independent by virtue of their age. To be eligible for the independent rate of Youth Allowance, students under 25 must either: have been out of school for at least eighteen months and, in the eighteen months prior to claiming; or have earned 75 per cent of the National Training Wage Award Rate (currently \$24 700, or \$18 525 at the 75% threshold); or have been self-supporting for the previous eighteen months, and have worked full-time (at least 30 hours per week) over the previous two years; or have worked at least fifteen hours per week for at least two years since leaving school (Centrelink 2007a).

Unless students can meet the requirements for the independent rate of Youth Allowance their rate of support is substantially reduced. In 2008, the independent rate for Youth Allowance is \$355.40 per fortnight.

Living away from home rate

Anecdotal evidence, such as that compiled in the recent report *Regional Young People and Youth Allowance: Access to Tertiary Education* (Godden 2007), indicates that young people from rural and remote areas find the costs of going to university particularly prohibitive, since they usually must live away from home. Youth Allowance is granted at the independent rate if a student is assessed as needing to live away from home. To meet this requirement students must be able to show that: the travelling time from their home to their educational institution is excessive (defined as 90 minutes travelling time or more); or that they are studying at an institution away from the parental home; or that there is a compulsory requirement to reside at the institution while studying; or that they are undertaking part of their course at an overseas institution. The living away from home rate for students over 18 is the same as the independent rate: \$355.40.

Parental income and asset test

To be eligible for Youth Allowance if not independent or required to be living away from home, a student's parent(s) must also pass an income/asset test. The income test requires parents' joint taxable income to not exceed \$30 750 (plus small increments if the parent(s) are supporting other children), with the Youth Allowance payment rate decreasing by \$1 for every \$4 by which the parental income exceeds this limit. The asset test requires that parental assets do not exceed \$535 750. If parents pass the asset test, students do not receive the full rate of Youth Allowance, but rather the '18 and over, at home' rate of \$233.90 per fortnight.

ABSTUDY

The Aboriginal and Torres Strait Islander Study Assistance Scheme (ABSTUDY) is the main income support scheme for Indigenous Australian students. Indigenous students qualify for ABSTUDY if they are over 14 years of age (there is no 'cut-off age' as there is for Youth Allowance) and are studying at secondary school, TAFE or university (including distance or correspondence education). Until 2000, ABSTUDY provided funding and support for a broader range of activities than Austudy or the Youth Allowance, intended to mitigate systemic cultural disadvantage. Reforms of ABSTUDY in 2000 modified and limited a number of payment components: means testing was applied to a wider range of recipients;

travel allowances for cultural commitments were limited, and some 'away-from-base' entitlements for students studying off-campus were removed (Costello 1997). These changes brought the scheme largely into line with Youth Allowance, especially in terms of parental and recipient asset and income tests. Unlike Youth Allowance and Austudy, however, ABSTUDY is available to Masters and Doctoral students. The scheme also includes extra components such as Masters and Doctorate thesis allowances and payments to cover some travel and compulsory course costs, which are unavailable to Austudy and Youth Allowance recipients (Centrelink 2007c).

The Commonwealth Scholarships Programme

The Commonwealth Scholarships Programme provides scholarships targeted at low SES and Indigenous students. There are three scholarships, the Commonwealth Education Costs Scholarship (\$2,162 per awardee in 2008), the Commonwealth Accommodation Costs Scholarship (\$4324) and the Indigenous Access Scholarship (DEEWR 2008). These scholarships are allocated to, and dispersed by, higher education providers. Between 8,500 and 12,000 such scholarships will be available per year to 2009.

4. The educational patterns of students from low SES backgrounds

Students from low socioeconomic backgrounds are significantly and persistently under-represented in Australian higher education. One quarter of the Australian population lives in postcode areas designated low socioeconomic status on the basis of the ABS Index of Education and Occupation, yet the percentage share in higher education from these postcodes falls well short of this figure. In 2006, students from postcodes designated as low SES constituted 15.56 per cent of the total domestic student population (Table 4.1)¹. This level of under-representation has remained virtually unchanged for the past decade despite the expansion in the total number of domestic students in higher education (James 2007). Conversely, students from high SES backgrounds, particularly those living in urban areas, are significantly over-represented in higher education (Table 4.1).

Table 4.1: Access Rates, National, 2001 to 2006 and national reference points (%) (DEST 2006)

Access Rate	2001	2002	2003	2004	2005	2006	Population Reference Point
Total low SES	15.86	15.54	15.36	15.2	15.23	15.56	25.0
Low SES and urban	8.63	8.49	8.43	8.35	8.66	9.02	
Low SES and regional	6.50	6.35	6.23	6.17	5.96	5.93	
Low SES and remote	0.73	0.70	0.70	0.68	0.61	0.61	
Total medium SES	45.62	45.22	45.24	45.07	45.86	46.12	50.0
Medium SES and urban	32.01	32.04	32.23	32.13	33.18	33.33	
Medium SES and regional	12.92	12.52	12.36	12.30	12.02	12.19	
Medium SES and remote	0.69	0.66	0.65	0.64	0.66	0.60	
Total high SES	37.33	37.31	38.05	38.53	37.92	37.46	25.0
High SES and urban	36.71	36.68	37.44	37.88	37.27	36.82	
High SES and regional/remote	0.62	0.63	0.61	0.65	0.65	0.64	

Figure 4.1 shows the inequitable distribution of higher education places across the three SES groupings and takes into account whether students are from an urban, regional or remote background. Regional and remote students are the most under-represented in each SES grouping, while urban students from high SES backgrounds are the only group that are over-represented. Indeed, the overrepresentation of urban, high SES students comes at the cost of both low SES and medium SES students. The under-representation of people from medium SES backgrounds, albeit only modest, is seldom recognised. However, the likelihood of

¹ This analysis of broad trends in access and participation in higher education by low SES people from urban, rural and remote backgrounds relies on a variety of studies and data sources. Much of the data used here is based on the postcode method of defining SES, the limitations of which are discussed elsewhere in the report. Notwithstanding these limitations, the trends in university access for people of low SES calculated on postcode of home address are consistent in broad terms with studies that use alternative ways of defining SES.

Australians from medium SES backgrounds attending university is only 56 per cent of that of high SES background Australians (James, 2007).

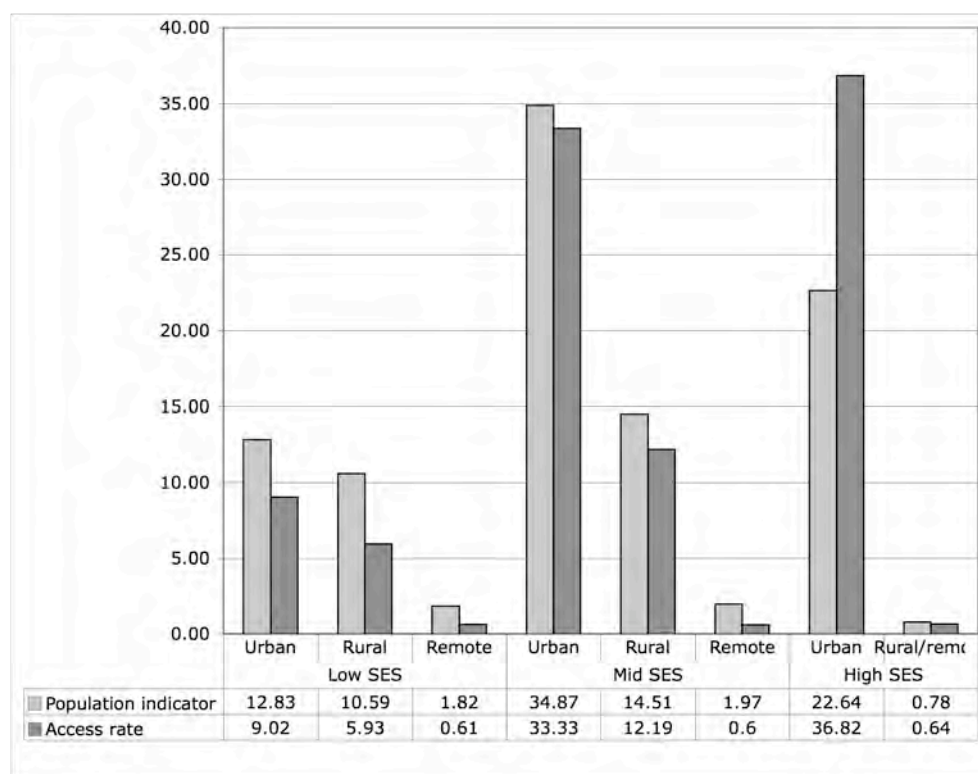


Figure 4.1: Access rates of SES groupings and localities as compared to population share 2006.

Notes: The population indicator was constructed by calculating the population for each Australian postcode using recent ABS census data, and then allocating each postcode a classification of Urban, Country or Distant, and Low, Mid or High SES, based on its SEIFA classification. This gave the population distribution of SES by area. The access rates for Urban, Country or Distant, and Low, Mid or High SES were provided by DEST (selected statistics). The method for calculating the population indicator was intended to mimic the DEST method for calculating access rates as closely as possible.

Under-representation of low SES students by institution and by course

The under-representation of low SES students is even more apparent in the universities and courses for which there is the most competitive entry. In terms of university type, the data show that medium and low SES students are most highly represented in regional universities, while high SES students are most highly represented in the Group of Eight universities (James *et al.* 2004). In the Group of Eight universities the participation share of people from low SES backgrounds is at about 11 per cent, well below the national mean for participation share of low SES students (Figure 4.2).

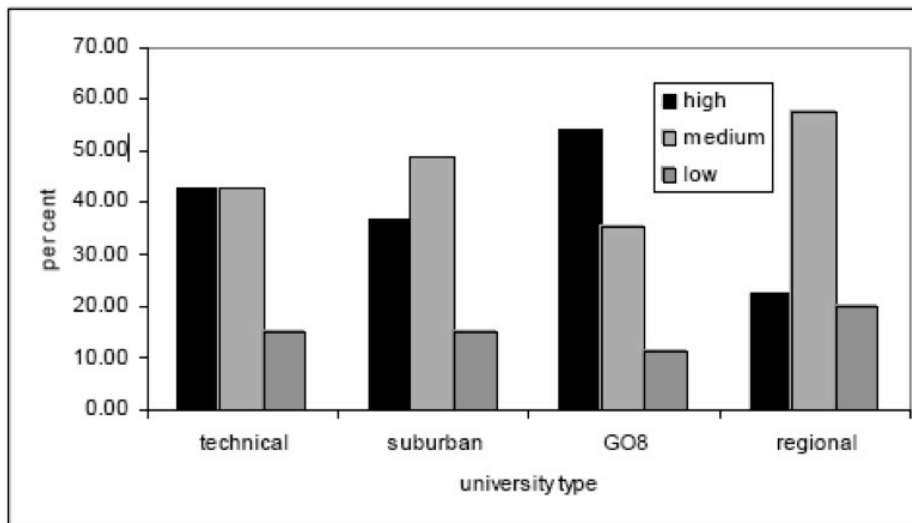


Figure 4.2: Participation share of SES groups by broad university type, 2002 (James *et al.*, 2004)

A similar pattern is apparent in the most prestigious courses. Consistent with international patterns, people from low SES backgrounds are particularly under-represented in medicine, law and architecture but are less under-represented in teacher education and agriculture (James *et al.*, 2004) (Figure 4.3).

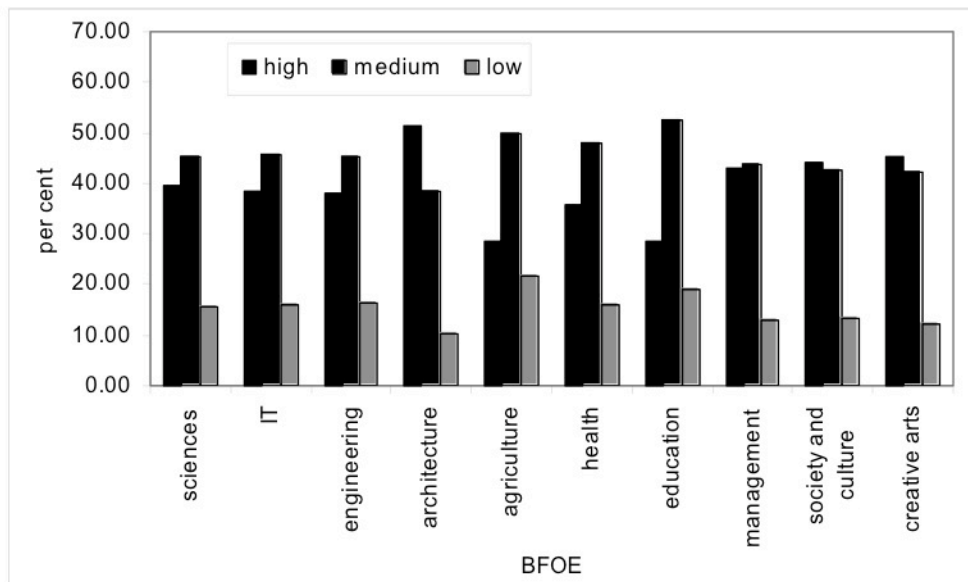


Figure 4.3: Participation share of socioeconomic groups by broad field of education, 2002 (per cent) (James *et al.*, 2004)

In terms of course level, students from high SES backgrounds consistently comprise the largest proportion of students at masters and doctorate level: of the total 2002 enrolment in higher degrees, students from low SES backgrounds comprised only 8.6 per cent (Figure 4.4).

Low SES students made up the largest proportion of students in enabling, non-award and bridging courses between 1992 and 2002 (James *et al.*, 2004).

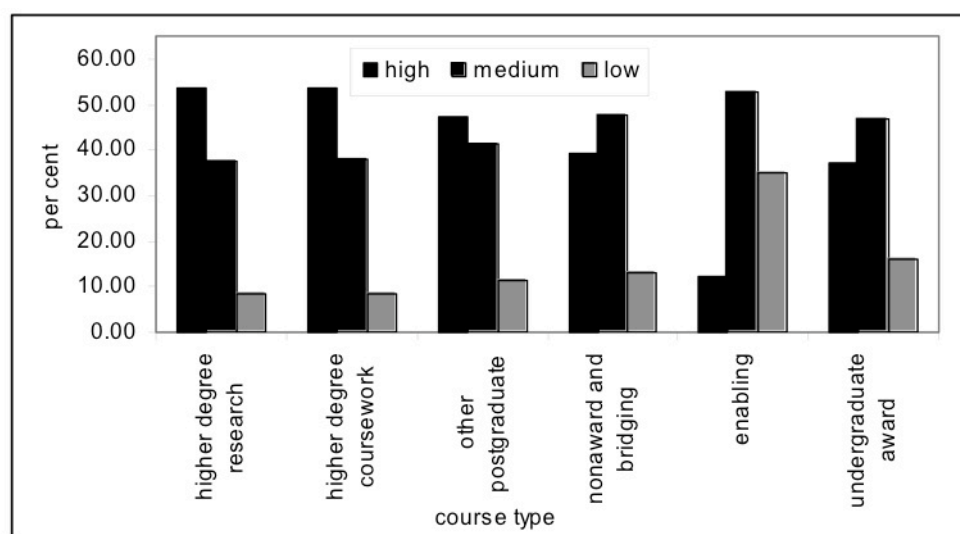


Figure 4.4: Participation share of socioeconomic groups by level of course, 2002 (per cent) (James *et al.*, 2004)

Factors affecting higher education participation

From an analysis of the available data, there appear to be two main factors underlying the low participation rate of students from low SES backgrounds in higher education: non-completion of secondary schooling — related to lower levels of academic achievement in school — and progression to the VET sector or to work rather than higher education.

Secondary school completion rates

Year 12 completion rates are significantly lower for low SES students than for students from middle and high SES backgrounds. The estimated completion rates compiled by DEST (Table 4.2) show that while 78 per cent of high SES students completed Year 12 in 2006, only 64 per cent of medium SES and 59 per cent of low SES students did so, a 19 percentage point difference between high and low SES groupings. The LSAY data broadly confirms these national figures (Rothman 2003).

Table 4.2: Yr 12 completion rates(a), by socioeconomic status(b) and sex, by State & Territory 2006

State	Low socioeconomic status deciles			Medium socioeconomic status deciles			High socioeconomic status deciles			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
AUS	52	66	59	57	71	64	75	83	78	60	73	67
NSW	57	69	63	57	69	63	76	81	79	62	72	67
VIC	50	66	58	53	72	63	76	86	81	61	76	68
QLD	54	69	62	60	73	67	73	76	74	60	73	66
SA	47	68	57	56	75	65	74	88	81	59	78	68
WA	45	58	51	57	70	63	70	81	75	58	70	64
TAS	41	59	50	53	63	58	65	82	73	49	64	56
NT	10	16	12	41	50	45	(c)	(c)	(c)	27	35	31
ACT	(c)	(c)	(c)	(c)	(c)	(c)	73	79	76	73	79	76

Source: DEST, derived from data supplied by State secondary accreditation authorities; ABS, Cat No. 4221.0, Schools Australia, 2006

Notes: (a) These figures are estimates only. They express the number of year 12 completions (year 12 certificates issued by State/Territory education authorities) as a proportion of the estimated population that could attend year 12 in that calendar year. It is important to note that there are variations in assessment, reporting and certification methods for year 12 across States and Territories.

(b) The ABS Index of Relative Socioeconomic Disadvantage has been used to calculate SES on the basis of postcode of students' home addresses. 'Low' SES is the average of the lowest three deciles, 'Medium' SES is the average of the middle four deciles and 'High' SES is the average of the top three deciles.

(c) The populations in the High SES deciles of the Northern Territory and the Low and Medium SES deciles of the Australian Capital Territory are too small to give meaningful results.

Rural and isolated students

Rural and isolated students have low levels of higher education participation compared with urban students and this also appears related to lower rates of school completion (Table 4.3). The large percentage point difference between the remote completion rate (52 per cent) and metropolitan rate (69 per cent) mirrors the gap between low and high SES students identified above.

Table 4.3: Year 12 completion rates(a), by locality (b), sex, State and Territory, 2006

State	Metropolitan zone			Provincial zone			Remote zone			Total		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
AUS	64	74	69	53	72	62	44	61	52	60	73	67
NSW	65	73	69	53	69	61	52	85	68	62	72	67
VIC	64	77	70	52	74	63	55	89	71	61	76	68
QLD	62	71	67	57	76	66	53	76	64	60	73	66
SA	62	77	69	52	78	64	53	86	68	59	78	68
WA	59	71	65	55	71	63	49	61	55	58	70	64
TAS	55	71	63	44	59	51	48	65	56	49	64	56
NT	(d)	(d)	(d)	35	47	41	19	23	21	27	35	31
ACT	73	79	76	(c)	(c)	(c)	(c)	(c)	(c)	73	79	76

Source: DEST, derived from data supplied by State secondary accreditation authorities; ABS, Cat No. 4221.0, Schools Australia, 2006

Notes: (a) These figures are estimates only. They express the number of Year 12 completions (year 12 certificates issued by State Education Authorities) as a proportion of the estimated population that could attend Year 12 in that calendar year. It is important to note that there are variations in assessment, reporting and certification methods for Year 12 across States and Territories.

Definitions of Capital City, Other Metropolitan, Provincial and Remote are based on the PMRT Classification developed by Jones (2000, 2003).

(b) Includes state capital city Statistical Divisions (SD), all of the ACT and other Statistical Districts of population 100,000 or more.

(c) Includes Darwin SD

The On Track project, which surveys a very large sample of school leavers in Victoria, found that early leavers were drawn “disproportionately from non-metropolitan locations: 41.9 per cent of early leavers were located in non-metropolitan regions, compared to 27.0 per cent of Year 12 completers” (Teese *et al.* 2007). This finding is consistent with previous On Track data and other research in the area (Fullarton *et al.* 2003; Polesel & Helme 2003; LSAY Briefings Number 5 2002; Teese 2001).

Entry into non-higher education pathways following school completion

A further reason why students from low SES and rural backgrounds do not progress to higher education is the likelihood of these students to enter a non-higher education pathway following Year 12 completion.

At present in Australia it is difficult to track students as they move within and between the secondary education sector, the VET sector and the higher education sector. The national higher education statistics collection, for example, does not allow the tracking of individuals between institutions and sectors. The pathways of high school students, including their progression to various forms of post-secondary education, are not tracked in a systematic way at the national level. In part this is due to the lack of consistency across state and federal jurisdictions for the various education sectors. As a result, analysis of post-school pathways is presently limited to state-based studies. The On Track study (also mentioned above) is an initiative of the Victorian Government which surveys the destinations of school leavers. The study surveys a very large sample: the 2006 report surveyed the destinations of 32,343 school leavers (a response rate of 66.5 per cent of all Year 12 or equivalent completers), and follows each cohort of students over a number of years. On Track data are used extensively in the discussion that follows.

Entry to VET

Regarding the decision to enter higher education, the 2006 On Track report found that students in the highest socioeconomic bracket were far more likely to enter university (60.2 per cent) than were those students in the lowest socioeconomic band (37.6 per cent) (Table 4.4). The converse was the case for participation in VET study, as participation in all VET award levels increased as SES decreased (Table 4.4; Figure 4.5). Despite the high level of participation in VET studies of low SES students, the report shows that “transition to entry-level VET and to apprenticeships and traineeships does not fully compensate for social inequalities in entry to tertiary education” (Teese *et al.*, 2007). The On Track report found that the likelihood of a student entering university decreased as the distance from urban areas increased (Figure 4.6).

Table 4.4: Destinations of Year 12 or equivalent completers, by SES and gender (%), 2006 (Teese et al., 2007)

	Quartiles of SES				
Destination	Lowest	Lower mid	Upper mid	Highest	Total
Males					
University	32.9	36.9	42.8	56.9	42.8
VET Certificate IV+	19.2	15.3	15.7	13.0	15.7
VET Entry-level	4.4	4.1	4.1	2.9	3.9
Apprentice/Trainee	14.0	16.2	13.5	8.4	12.9
Employed	22.0	22.7	20.1	15.8	20.0
Looking for work	7.6	4.8	3.9	3.1	4.7
Total	100.0	100.0	100.0	100.0	100.0
Females					
University	41.5	42.1	49.7	63.3	49.1
VET Certificate IV+	20.3	18.3	16.7	12.6	17.0
VET Entry-level	5.6	5.3	3.6	2.6	4.2
Apprentice/Trainee	6.5	7.8	5.8	3.8	6.0
Employed	20.8	22.5	21.2	15.7	20.1
Looking for work	5.4	4.0	3.1	2.0	3.6
Total	100.0	100.0	100.0	100.0	100.0
All					
University	37.6	39.7	46.5	60.2	46.2
VET Certificate IV+	19.8	16.9	16.2	12.8	16.4
VET Entry-level	5.0	4.7	3.8	2.7	4.1
Apprentice/Trainee	9.9	11.6	9.4	6.0	9.2
Employed	21.3	22.6	20.6	15.7	20.0
Looking for work	6.3	4.4	3.5	2.5	4.1
Total	100.0	100.0	100.0	100.0	100.0

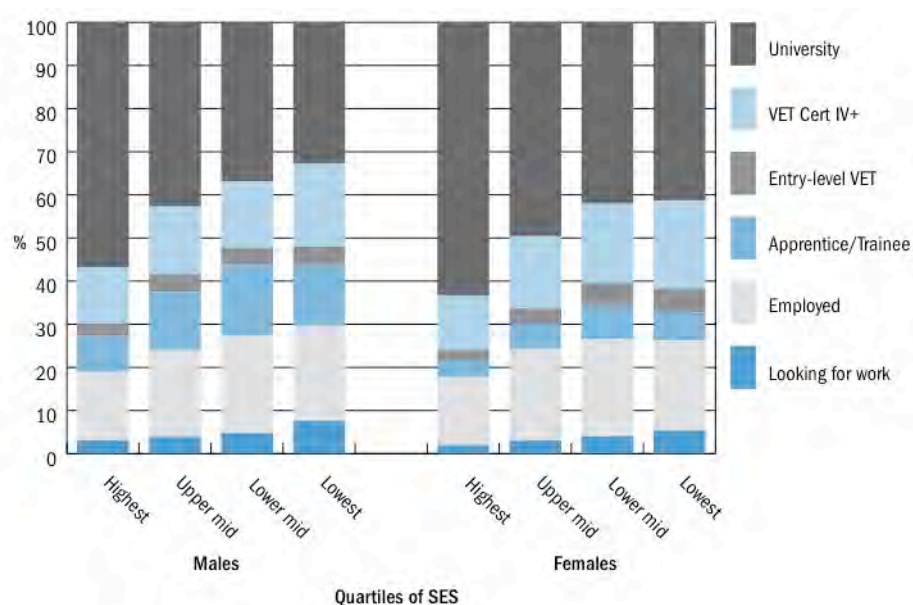


Figure 4.5: Destinations of Year 12 or equivalent completers, by SES and gender (%), 2006 (Teese et al., 2007)

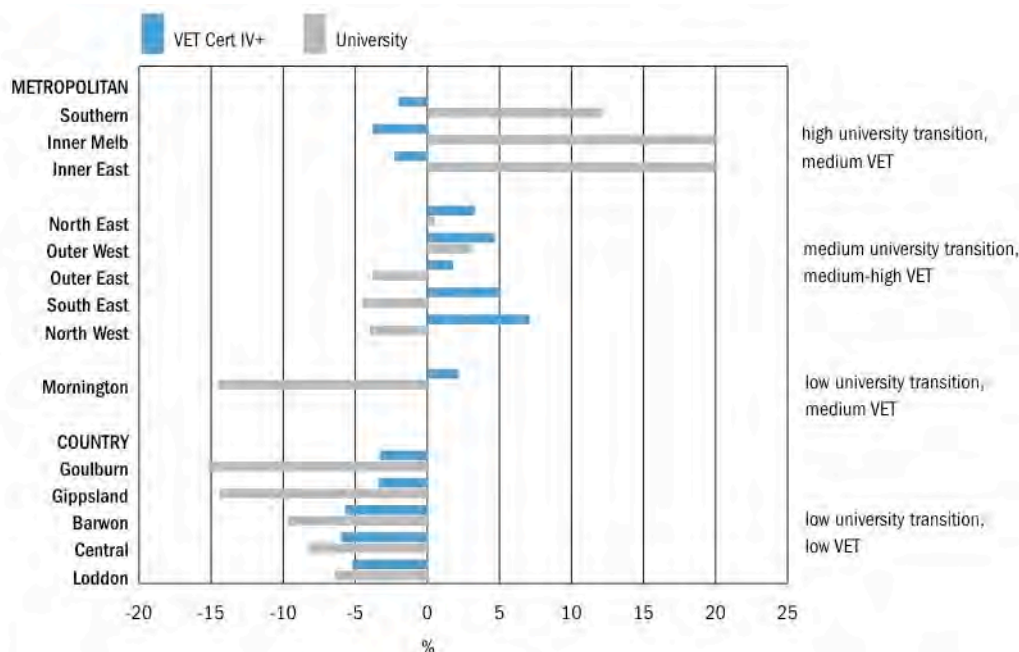


Figure 4.6: Differences in tertiary education transition, by labour force region, 2006 (Teese et al, 2007)

Entry to the workforce

The On Track data set also provides information about progression directly from secondary school to the work force. Rural areas have the highest proportions of students who have chosen to enter the workforce rather than continue education and training upon completion of Year 12 (Figure 4.7). In 2006, there was a 14.6 percentage point difference in the proportion of rural and urban students entering the labor market without undertaking any further education or training.

A national study of VET participation found that VET access patterns for low SES students and students from rural and regional backgrounds were somewhat the inverse of patterns in higher education. Foley (2007), using a variant of the postcode method of defining SES, found low SES students to be over-represented in the Australian VET sector, and further that the over-representation is to some degree an effect of high participation rates for students living outside of capital cities (Foley 2007). Foley also found that low SES VET students had ‘better than average’ academic achievement in VET, being awarded a slightly higher percentage of qualifications (30.5 per cent) than was representative of their enrolment share (which was 28.8 per cent).

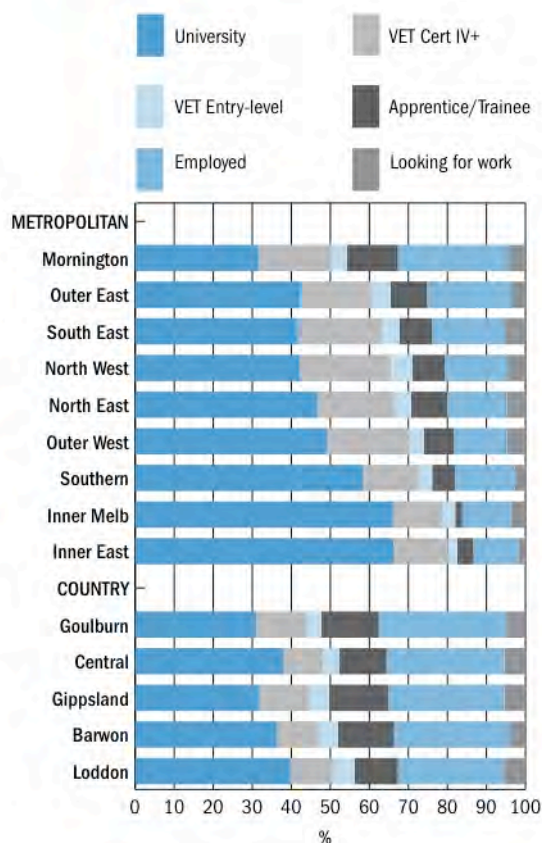


Figure 4.7: Education, training and workforce destinations post-Year 12, by region, 2006 (Teese et al., 2007)

A 2005 national telephone survey of 4013 young people and their parents conducted by DEST found a strong correlation between rurality and perceptions of and aspirations to university and VET (DEST 2005), mirroring the urban/rural differences in aspirations towards VET and higher education described above:

- Respondents from major cities were more likely to believe (64 per cent) that “university qualifications are more likely to be recognized than VET qualifications” than were those from regional areas (56 per cent) and remote areas (44 per cent).
- Young people from remote or rural areas were the most likely to anticipate going into VET or TAFE (27 per cent and 26.6 per cent respectively) than young people from urban areas (21 per cent). Young people from regional areas were less likely to anticipate going to university (46 per cent) than those from major cities (63 per cent).

Reasons for following non-higher education pathways

There are various reasons why school-leavers choose pathways other than higher education. These include factors such as low high school achievement, lack of aspiration to university, inhibitions about university study and a lack of encouragement to go to university from peers and family.

Low academic achievement

Low academic achievement contributes to the likelihood of early school leaving and also acts as a barrier to university entrance when students fail to achieve the academic results needed for competitive selection processes. The academic disadvantage of students from low SES and rural backgrounds is one focus of the 2006 PISA (Programme for International Student Assessment) Report. PISA, a triennial international assessment of the reading, mathematical and scientific literacy skills of 15 year olds, is conducted by the OECD. The 2006 report found that in scientific literacy students from the lowest SES quartile and students from remote schools were approximately twice as likely to perform below the proficiency baseline compared with all Australian students (23 per cent and 27 per cent respectively compared with 13 per cent) (Thomson & De Bortoli, 2008). Similar results were found in mathematical literacy (22 per cent and 28 per cent compared with 13 per cent) and reading literacy (23 per cent and 24 per cent compared with 14 per cent).

These findings are reflected in LSAY research and the 2006 On Track survey. Rothman (2003) analysed the 1995 and 1998 LSAY cohorts and found that low SES students had lower school achievement, as measured by test scores, than students in the higher SES groups. The On Track survey used results from the mid-year General Achievement Test (GAT) to measure Year 12 academic achievement. In 2006, the survey found that almost two-thirds of all low achievers in Year 12 (61.3 per cent) came from low to very low SES backgrounds. By contrast, two thirds of high achievers (65.7 per cent) are drawn from high to very high SES backgrounds (Figure 5.8).

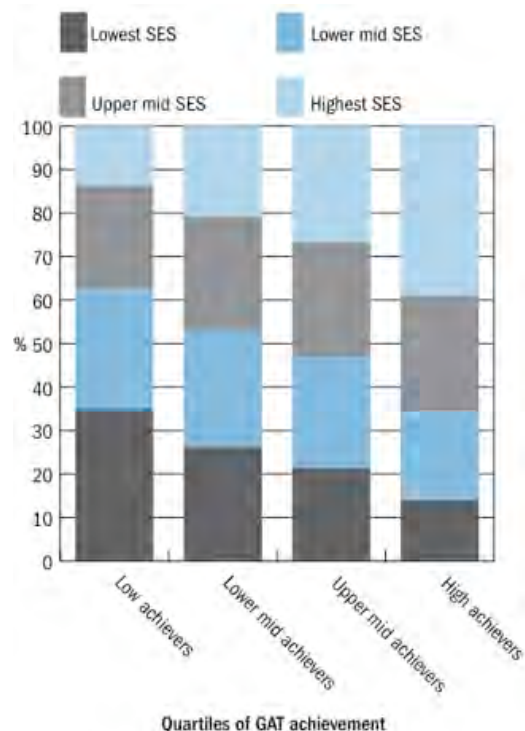


Figure 5.8: Social background of Year 12 or equivalent completers at or by quartiles of GAT achievement, 2006 (Teese et al., 2007)

The link between low academic achievement and the likelihood of dropping out of school has been established by numerous researchers (Lamb *et al.*, 2004; Teese *et al.*, 2007). In their reports on school retention, Lamb *et al.* conducted an extensive literature review and consultation with retention experts. A central conclusion of their report was that early leavers are drawn disproportionately from the ranks of low achievers (Lamb *et al.*, 2004). Similarly, the On Track report found that under-achievement and a lack of interest in schoolwork were key factors for males from lower socioeconomic backgrounds who constitute the majority of the early leavers at Year 10, 11 and 12 (Teese *et al.*, 2007). Even if students do not drop out of high school because of low grades, those with low grades are less likely to get into university. Marks (2005) analysed the characteristics of the LSAY Year 12 students in 2001 who applied for university places but did not receive offers. Marks found that membership of the 'Applied, no offer' group was strongly associated with achievement in literacy and numeracy in Year 9. Those students with the lowest Year 9 achievement scores were most likely to have applied but not received an offer. Predictably, there was an even closer relationship between Year 12 performance and the offer of a place: those who did not receive a university offer had much lower ENTER scores than those in the other university applicant groups.

Alternative aspirations and attitudes towards higher education

A common finding in the literature is that students from low SES and rural backgrounds are more likely than high SES students to aspire to non-higher education pathways. James *et al.* (1999, 2002) found that, of the 7000 Year 10-12 students surveyed, students from higher socioeconomic backgrounds had a much stronger preference for university study than did others. In terms of actual intention to enter higher education, James *et al.* found a 28 percentage point difference between high SES and low SES students (Table 4.5). While over two-thirds of students from high SES backgrounds planned to enrol in university, only 42 per cent of low SES students and 50 per cent of students from medium SES backgrounds planned to enrol (Table 4.5).

Table 4.5: Intentions Regarding Higher Education, by Socioeconomic Status (%), 2006 (James et al., 1999)

	<i>Lower SES</i>	<i>Medium SES</i>	<i>Higher SES</i>	<i>All</i>
Definitely planning to enrol in a university course	31.2	38.1	52.6	40.9
Planning to apply for a place but then defer for a year	10.9	12.0	16.9	13.0
Subtotal	42.1	50.1	69.5	53.9
Hoping to go to university but may not be able to	16.2	13.6	9.9	13.0
Don't want to go to university now, but may do so later in my life	8.1	9.5	6.4	8.2
Not planning to go to university	21.6	17.0	6.5	15.0
Very undecided	7.7	6.3	5.3	6.4
Haven't really thought about it	4.3	3.5	2.4	3.4
	100.0	100.0	100.0	100.0

Similarly, rural students differed markedly from urban students in terms of their aspirations for higher education (Table 4.6). There was a six percentage point difference between medium access rural students (those living within 100 km of a university campus) who intended to go to university (52.3 per cent) and urban students (58.4 per cent).

Table 4.6: Intentions Regarding Higher Education, by Location (%) (James et al., 1999)

	<i>RURAL</i>			<i>URBAN</i>	<i>All</i>
	<i>Low access</i>	<i>Medium access</i>	<i>High access / rural</i>	<i>High access / urban</i>	
Definitely planning to enrol in a university course	30.9	41.0	38.1	46.5	40.9
Planning to apply for a place but then defer for a year	14.7	11.3	15.5	11.9	13.0
Subtotal	45.6	52.3	53.6	58.4	53.9
Hoping to go to university but may not be able to	13.4	15.4	11.8	13.6	13.0
Don't want to go to university now, but may do so later in my life	10.1	5.2	9.5	7.0	8.2
Not planning to go to university	21.4	18.4	14.0	12.2	15.0
Very undecided	6.7	5.7	7.5	5.6	6.4
Haven't really thought about it	2.8	2.9	3.6	3.3	3.4
	100.0	100.0	100.0	100.0	100.0

Despite the rural/urban differences, it is important to note that James *et al.* (1999) concluded that on balance “rural and urban students differ less than different socioeconomic groups” and that the educational disadvantage of rural students is “primarily associated with socioeconomic factors rather than geographical location” (James *et al.*, 1999). It would appear from the data that rural disadvantage is “principally determined by family and community attributes, the principal determinant being the extent to which education is valued and promoted in the family and local community” (James *et al.*, 1999; see also Williams *et al.* 1993).

The alternative aspirations of low SES and rural students are likely to be the result of “the cumulative effect of the relative absence of encouraging factors and the presence of a stronger set of inhibiting factors” (James, 2002). For many such students, it is the combination of financial pressures and distance with a lack of positive attitudes to higher education that makes university “seem less attractive, less relevant and less attainable” (James *et al.*, 1999).

Inhibiting factors

The financial cost of studying at university, and the perceptions of the cost, may have significant influence on the post-schooling choices of students from low SES and rural backgrounds (James *et al.*, 1999; Teese *et al.*, 2007; Hillman, 2005). For low SES students, James (2002) found that the perceived cost of higher education was a ‘major deterrent’: low SES students are more likely than other students to believe the cost of university fees may stop them attending university (39 per cent, compared with 23 per cent of higher SES students).

Similarly, the deterrent effect of cost appears far greater for rural students than for urban students. James *et al.* (1999) found that rural students expressed more concern “on the inhibiting effect of university fees, on the capacity of their families to support them while studying, and on the affordability of suitable accommodation.” In On Track 2006 and Hillman’s study of LSAY students, students living in non-metropolitan and remote backgrounds were more likely to nominate the costs associated with study as their main cause of problems (Teese *et al.*, 2007; Hillman, 2005).

The distance to a university campus can be an additional inhibiting factor for rural students. On Track 2006 school completers who lived in non-metropolitan regions were more likely to identify the costs of travel, or the need to travel long distances in order to reach education institutions, as a reason for them no longer being in study or training (Teese *et al.*, 2007).

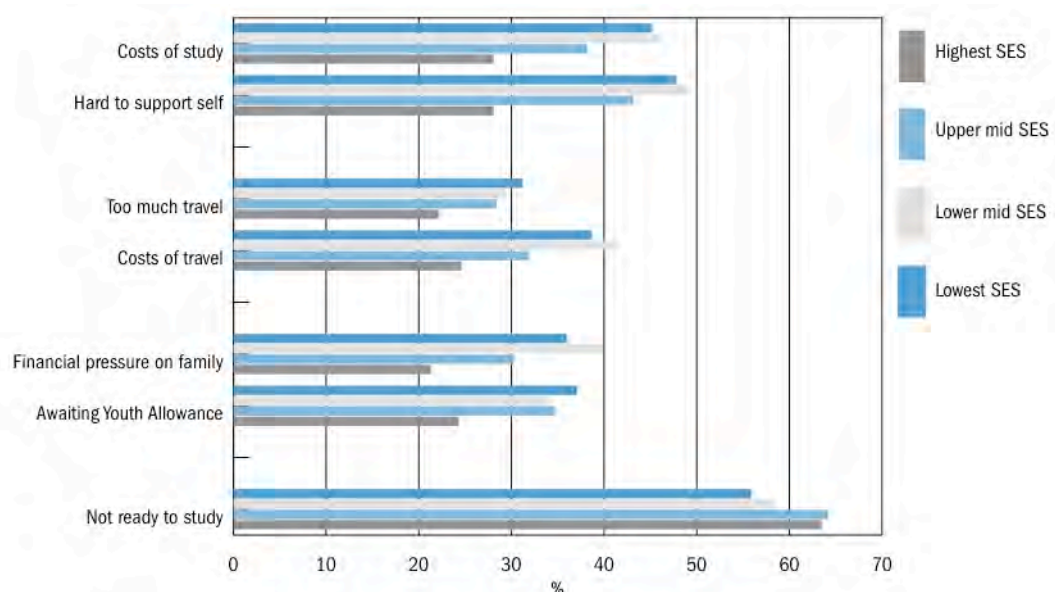


Figure 5.9: Reasons for not studying: highest achievement group (GAT quartile), by quartiles of SES, 2006 (Teese et al., 2007)

The absence of encouraging factors

While inhibitors and barriers such as cost and distance have a significant influence on students’ higher education choices it may be “a serious over-simplification to assume that imbalances in the higher education of rural and isolated people are principally due to distance from a university and the costs associated with relocation” (James *et al.*, 1999). James *et al.*

concluded that while external barriers clearly influence rural and low SES students' decisions about higher education, the dominant factor in students' attitudes to higher education is their "personal socioeconomic circumstances and individual community context."

A student's experience of encouraging factors, which support belief in the importance, attainability and relevance of high education, is closely related to a student's socioeconomic circumstances (James *et al.*, 1999). James *et al.* found that rural and low SES students were less likely to experience encouraging factors, while higher SES students benefitted from "a greater likelihood of believing that university will result in desirable career outcomes, and from stronger perceptions of parental and teacher encouragement" (Table 4.7).

Table 4.7: Student subgroups in most agreement with factors that potentially encourage higher education participation (James et al., 1999)

	SOCIOECONOMIC STATUS	LOCATION	
		ACCESS	COMMUNITY CONTEXT
	L = lower SES H = higher SES	LA = low access HA = high access	R = rural U = urban
A university degree would improve my chances of getting a job	H	HA	•
A university course would offer me the chance for an interesting and rewarding career	H	•	U
I am interested in the subjects I could study at university	H*	HA	•
I think I would have a good time at university	H*	•	R
Going to university would offer me the opportunity to become more independent	H	•	R
I'm considering university because there aren't any jobs around here	•	•	R
My parents want me to do a university course	H*	•	U*
Most of my friends will probably go to university	H*	•	•
My teachers have encouraged me to aim for university	H*	•	•

EXAMPLE • = no significant difference between subgroups in column
 U = urban subgroup in significantly more agreement than rural subgroup
 U* = urban subgroup in much more agreement than rural subgroup

Students from high SES backgrounds are more likely to believe a university course would be relevant and "offer them the chance of an interesting and rewarding career"; students from low SES backgrounds by contrast have a stronger belief that a TAFE course would be more useful to them than a university course (30 per cent compared with only 14 per cent) (James, 2002). Comparing urban and rural students, James *et al.* (1999) found pronounced

differences in students' assessment of the relevance of higher education: rural students were significantly less likely than urban students to believe that a university qualification is necessary for the jobs they want.

In terms of the attainability of higher education, James (2002) found that low SES students were less confident than high SES students that their academic results would be good enough for entry to courses that might interest them (38 per cent, compared with 25 per cent) and generally less confident that they would go to university than higher SES and medium SES students (42 per cent compared with nearly 70 per cent and 50 per cent respectively).

Regarding the extent to which students perceived they had the encouragement of their teachers and parents, James *et al.* (1999) found that socioeconomic background rather than urban-rural difference was the main influence. In analysis of student agreement with the statements 'My parents encourage me to do well at school' and 'I often discuss my school work with members of my family', the level of perceived encouragement and discussion increased according to the socioeconomic status; by contrast, student location created little variation in responses. Similarly, with regard to the perceived attitudes of teachers, there were few differences in the data relating to location; there was a significant difference, however, according to SES: lower SES students were much less likely to believe they were encouraged by teachers to aim for university (44 per cent of students) than higher SES students (58 per cent) (Table 4.8).

Table 4.8: Extent of agreement with 'My teachers have encouraged me to aim for university' (James et al., 1999)

Overall mean = 3.39 on scale 1 (strongly disagree) to 5 (strongly agree)

		<i>SOCIOECONOMIC STATUS</i>			
<i>LOCATION</i>		<i>Lower SES</i>	<i>Medium SES</i>	<i>Higher SES</i>	<i>All</i>
<i>Rural</i>	Low access	3.15	3.41	3.61	3.38
	Medium access	3.26	3.44	3.71	3.45
	High access/rural	3.13	3.25	3.63	3.34
<i>Urban</i>	High access/urban	3.27	3.32	3.63	3.42
<i>All</i>		3.19	3.32	3.63	

Underlining indicates the SES variable makes a significant contribution to explaining variation in this item. The contributions of gender and year level are also significant.

Retention, success and completion at university

While there are large differences between the university access rates of students from low and high SES backgrounds, the differences in success and retention rates once students reach university are far smaller.

The Higher Education Statistics Collection defines the rate of retention as the proportion of students who are retained in a course from the commencement of one academic year to the next (excluding completions). For the years 2001 to 2005, the data from the collection show that for students from urban areas, there is little difference in the rate of retention between the three socioeconomic groupings: only one percentage point separates low SES students (79.00 per cent) from high SES students (80.17 per cent) (Table 4.9). Likewise, for regional students, the retention rate for all three SES groups are similar. However, students from remote areas with low and medium SES backgrounds appear to experience some educational disadvantage at university: the rate of retention for remote students is between seven and ten percentage points lower than for students from urban backgrounds (Table 4.9).

Table 4.9: Retention rates, 2001 – 2005 (DEST, 2006)

Retention Rates	Year				
	2001	2002	2003	2004	2005
Low SES and urban	77.66	76.80	77.46	77.83	79.00
Low SES and regional	77.12	76.41	76.73	76.95	77.74
Low SES and remote	68.98	69.35	68.97	69.66	71.47
Medium SES and urban	77.94	77.19	78.02	78.42	79.56
Medium SES and regional	75.80	75.63	76.22	76.89	77.57
Medium SES and remote	67.30	66.50	65.35	66.56	67.98
High SES and urban	78.51	78.33	78.85	78.94	80.17
High SES and regional/remote	75.20	72.97	73.38	74.51	77.24

The data above are based on postcode method of defining SES, which is problematic for the reasons offered earlier in the report. However, studies using different definitions of SES had reached similar conclusions. For example, Marks (2007) has found no difference in university attrition rates according to parental occupation in the LSAY data, but has found some differences according to parental education. Nevertheless, Marks concludes that “once students from a lower socioeconomic background enter university, their background does not negatively affect their chances of completing the course” (Marks 2007). McMillan (2005), also using the LSAY data, found that students from small provincial cities have among the lowest rates of attrition from university, and that attrition rates for students from remote areas were not significantly different from the attrition rates of students from mainland state capital cities (although this second finding came from a small sample in McMillan’s study) (McMillan 2005: 27). With regards to SES, McMillan found attrition rates to be somewhat higher in students whose parents had not completed high school (19 per cent) than for students whose parents had a degree or a diploma (12 per cent), however she also found that family socioeconomic background as measured by parental occupation was not associated with attrition (*ibid.*). Using a combination of SES definitions, including parental education and occupation and students’ geographical background, a 2006 study on withdrawal and

attrition in the first year of study (Long *et al.* 2006) found some differences between attrition rates for low and high SES students. Long *et al.* found a rate of 16.8 per cent attrition in students from the bottom two SES quintiles, and 8.4 per cent for the top quintile. Their multivariate analysis, however, found the differences in attritions rates by SES were not statistically significant (Long *et al.* 2006). With regards to rurality, Long *et al.* found that attrition rates for students coming from very accessible areas (12.7 per cent) were lower than for students from accessible areas (16.5 per cent) or less accessible areas (18.4 per cent) (Long *et al.* 2006).

Similar patterns to those surrounding attrition rates are apparent in success rates, which are calculated on the proportion of units students pass in a year compared with the total number units in which they were enrolled (Table 4.10). Data from the Higher Education Statistics Collection show that urban and regional students, regardless of their SES background, tend to have higher success rates than remote students. The difference between regional students across SES categories are negligible. High SES urban students have slightly higher success rates than low SES urban students, usually in the vicinity of four or five percentage points (89.86 per cent compared with 85.24 per cent in 2006, for example).

Table 4.10: Success rates, 2001-2005

Success Rates	Year					
	2001	2002	2003	2004	2005	2006
Low SES and urban	83.80	84.17	84.72	85.29	85.22	85.24
Low SES and regional	86.01	86.24	87.04	87.23	87.47	87.71
Low SES and remote	79.24	80.81	80.41	80.85	82.98	80.53
Medium SES and urban	86.57	86.91	87.54	87.92	87.82	88.08
Medium SES and regional	85.89	86.56	87.33	87.66	87.85	87.73
Medium SES and remote	79.63	79.26	79.41	80.21	81.18	80.13
High SES and urban	88.38	88.66	89.38	89.71	89.58	89.86
High SES and regional/remote	87.11	87.04	88.02	88.63	88.48	88.18

Source: *Students, Selected Higher Education Statistics* (DEST 2006), RFI No.: 07-466.

The results of research conducted by Marks (2007) on the 1995 Yr 9 LSAY cohort support the conclusion that socioeconomic status has little influence on student's educational experience once they reach university. Marks found that there were some differences in the likelihood of university completion which correlated to parental educational level: students whose parents had not completed secondary school had the lowest expected completion rate for any course (72 per cent), and those whose parents had a highest qualification of Year 12 had a higher completion rate (87 per cent) than those whose parents held a degree or diploma (85 per cent). However, Marks concluded that:

Overall, these results indicate that a students' regional and socioeconomic background has little influence on their likelihood of completing university. Once students from a lower socioeconomic background enter university, their background does not negatively affect their chances of completing the course.

Overall, the research findings on the performance of people from low SES backgrounds compared with those from high SES backgrounds are mixed. Nonetheless, the evidence

points to socioeconomic background having only modest effects on performance at university. There appear to be some differences between low SES and high SES in success rates but smaller differences in retention rates. These differences are probably large enough to warrant consideration in the formulation of policies and programs but not large enough to suggest that efforts to broaden access would compromise future success and retention rates.

Socioeconomic status and university students reporting financial duress

The project team analysed the dataset from the national student finances study, *Australian university student finances 2006* (James *et al.* 2007), to explore the effects of socioeconomic status on students' financial circumstances. The findings to follow are based on a classification of low SES and high SES based on respondents' parental education and occupations. The project team also conducted an analysis using an SES classification based on the postcode index. This method yielded fewer discernable differences between subgroup and fewer differences that were statistically significant.

The analysis suggests low SES students experience more financial pressures than high SES students once they reach university. For example, 54.8 per cent of low SES full-time undergraduates reported difficulty affording textbooks compared with 43.4 per cent of high SES students. (Each of the differences shown in the following three tables is statistically significant at the 0.01 level.)

Table: . Financial situations of high and low SES full-time undergraduates (percentage in agreement with the proposition)

	High SES	Low SES
Have difficulty affording books	43.4	54.8
May cease study due to finances	2.4	5.7
Finance often a worry	50.0	66.7
Regularly miss class for paid work	20.1	24.5
Food or necessities unaffordable	11.1	18.8
Has had to defer studies in past for financial reasons	5.8	7.9

Low SES full-time undergraduates has higher annual incomes, on average, than high SES full-time undergraduates but were less likely to have savings that they could use in an emergency.

Table: . Average income (\$) and percentage who hold savings for an emergency, high and low SES full-time undergraduates.

	High SES	Low SES
Income (average \$ per annum)	12,112.1	12,980.0
Hold savings for use in emergency (%)	54.4	41.4

Low SES students were less likely to work during semester, but those who did work were working more hours per week on average.

Table: . Percentage of high and low SES full-time undergraduates who worked during semester; average hours worked per week during semester for those who worked

	High SES	Low SES
Those who work during semester (%)	88.9	81.9
Average hours worked per week (hrs)	13.9	15.3

5. Indigenous students

Indigenous students have been analysed independently because of the often distinctive family and other personal circumstances under which Indigenous students live and study and their significantly different patterns of participation and outcomes across all education sectors compared with non-Indigenous people.

Access and participation in higher education

Indigenous people are significantly under-represented in Australian higher education. As argued below, in broad terms Indigenous people participate in higher education at less than half the rate they would if parity with non-Indigenous people existed.

In 2006, the Indigenous population surpassed half a million, constituting 2.4 per cent of the Australian population (Table 5.1). The percentage share of Indigenous people in higher education fell well below this figure: as shown in Figure 5.1, Indigenous students comprised only 1.25 per cent of the commencing domestic student population in 2006. However, the comparison of the participation shares and populations figures for Indigenous and non-Indigenous people is problematic due to the different demography of the two groups, as discussed below.

Table 5.1: Population numbers by Indigenous status, 1991 – 2006, and Indigenous proportion of total population; Australia

		1991	1996	2001	2006
Indigenous population	ABS Census	265,371	352,970	410,003	455,016
	ABS estimates	366,943	414,390	458,520	517,174
Non-Indigenous population	ABS Census	16,506,329	17,539,453	18,359,426	18,266,834
	ABS estimates				20,184,314
Indigenous as % of total population	ABS Census	1.6%	2.0%	2.2%	2.4%
	ABS estimates				2.6%

Source: Background Data prepared for the 2007 IHEAC Conference [Table 1.1]
 ABS Census of Population and Housing, 2015.0 2001; ABS Experimental Estimates and Projections, Indigenous Australians, 3238.0, 1991 to 2009; ABS Population Distribution, Aboriginal and Torres Strait Islander Australians, 4705.0 2007

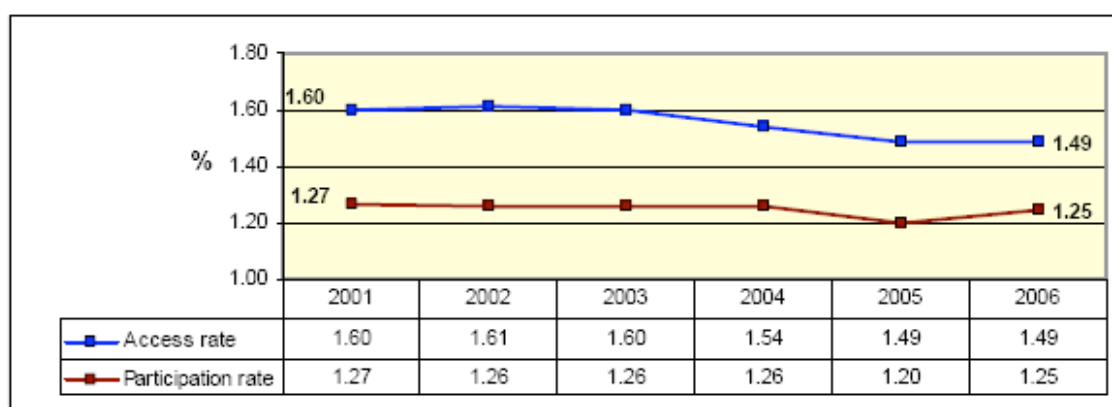


Figure 5.1: Indigenous higher education performance indicators – Access and participation Rates, 2001-2006; Australia

Notes: Access rate is the proportion (%) of Indigenous commencing students to commencing domestic students. Participation rate is the proportion (%) of all Indigenous students to all domestic students
Source: *Students, Selected Higher Education Statistics* (DEST 2006)

The participation share of Indigenous students has remained at a consistent level over the period 2001-2006. This static level of under-representation occurred during a period in which there were at least three factors that might have increased the rate of access: the increase in the Indigenous population overall; the increase in secondary school participation among Indigenous young people; and the higher proportion of young people in the Indigenous population than in the non-Indigenous population.

The first factor that might have increased Indigenous participation is the relative increase in the Indigenous population between 2001-2006. As shown in Table 5.1, the proportion of the Australian population constituted by Indigenous people increased from 2.1 per cent in 2001 to 2.4 per cent in 2006.

A second factor is the overall increase in Indigenous school participation between 2001-2006. The proportion of school students that were Indigenous increased from 3.5 per cent in 2001 to 4.2 per cent in 2006 (Table 5.2). This increase in school participation had no apparent influence on the proportion of Indigenous students in higher education.

Table 5.2: Indigenous students ('000), by education sector 1995, 2001-2006; and Indigenous proportion (%) of all students in the sector, 2001, 2006

SECTOR	1995	2001	2002	2003	2004	2005	2006	2001	2006
School	87.2	115.4	121.6	125.8	130.4	135.1	140.4	3.5%	4.2%
VET	26.1	56.1	59.7	58.0	56.6	62.7	67.8	3.3%	4.1%
Higher education	6.8	8.6	8.8	8.9	8.8	8.3	8.8	1.3%	1.3%

Source: Background Data prepared for the 2007 IHEAC Conference [Table 2.1]

ABS Schools, Australia, 2006 (cat. no. 4221.0); NCVER VET Provider Data Cubes; DEST Higher Education Student Statistics

The third factor that might have increased Indigenous participation is the higher proportion of younger people in the Indigenous population in comparison to the non-Indigenous population (Figure 5.2). Due to this concentration of younger people, a greater proportion of Indigenous people are of university attendance age: the median age for Indigenous people in 2006 was 20 years, some 17 years less than the median age for the non-Indigenous population. Consequently, equitable participation in higher education would require more than just parity between the Indigenous share of higher education enrolment and the proportion of the Australian population constituted by Indigenous people. In other words, an equitable higher education system would require Indigenous people to have a share of university enrolments somewhat higher than the 2.4 per cent population share might suggest.

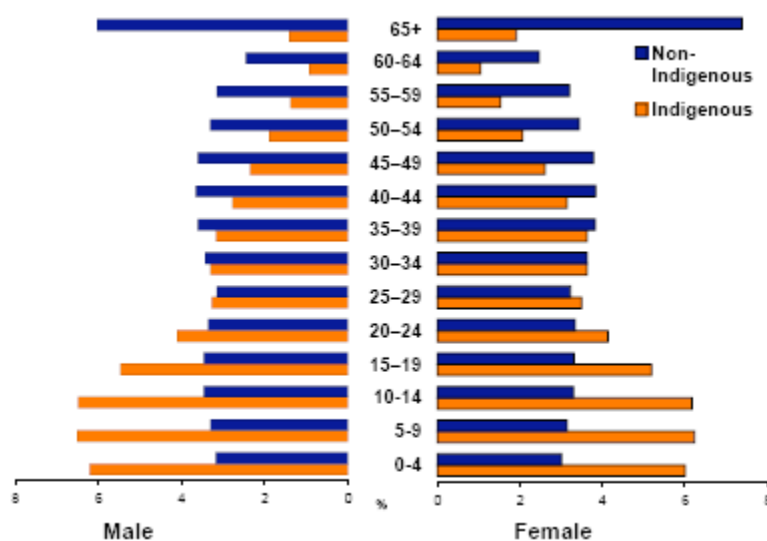


Figure 5.2: Australian population distribution, by age and sex, 30 June 2006

Source: Background Data for the 2007 IHEAC Conference [Figure 1.1]
DEST derived: ABS, 2006 Census of Population and Housing, 2068.0 2007

Factors that affect access to higher education

From analysis of the available data, it appears there are two main reasons why Indigenous students do not progress to higher education. The first is non-completion of secondary schooling and the second for those who have completed secondary school, is a relatively high rate of progression to the VET sector or work.

Figure 5.3 illustrates the relationship between the low retention rates for Indigenous students in senior secondary school and Indigenous participation in VET. As this data shows, the most significant drop in participation of Indigenous students occurs between Year 10 (15 years old) and Year 11 (16 years old). Of the 90 per cent of Indigenous students who are at school in Year 10, only some 60 per cent progress to Year 11, while a further 40 per cent progress to Year 12. The school attrition between Year 10 and Year 11 signals the period in which Indigenous VET participation increases the most rapidly; between the ages of 15 and 16, the proportion of Indigenous students participating in VET increases from approximately

25 per cent to 40 per cent. As a result, by age 17 school participation has dropped to 40 per cent and there are more Indigenous students enrolled in VET than in school.

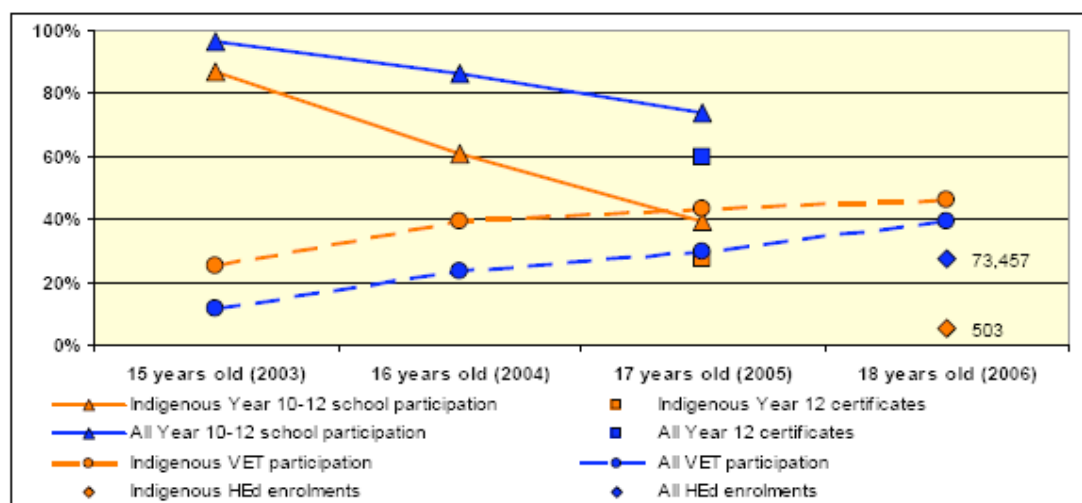


Figure 5.3: Transition of a cohort of students through secondary school and VET, completion of a Year 12 certificate and commencement of higher education, as a percentage of population

Source: Background Data prepared for the 2007 IHEAC Conference

Non-completion of secondary school

A major reason why Indigenous students are under-represented in higher education is that the rate of school retention from Year 10 to Year 12 is significantly lower for Indigenous students than for non-Indigenous students. Table 5.3 indicates that the difference in retention rates between Indigenous and non-Indigenous students increases as students progress through the senior years of secondary school. At Year 10 there is a 7.5 percentage point difference in the retention rates of Indigenous students (98.9 per cent) compared to non-Indigenous students (91.4 per cent); by Year 12 this gap has widened to a 35.8 percent point difference with far fewer Indigenous (40.1 per cent) than non-Indigenous students (75.9 per cent).

There was significant improvement in the retention of Indigenous students to Year 11 between 2001-2005, which is the first year of non-compulsory study; in that period the gap in retention rates between Indigenous and non-Indigenous students fell by 10.4 percentage points. This improvement was in contrast with the more modest change in relative retention rates to Year 12 during the same period, which narrowed by only three percentage points.

Table 5.3: Apparent retention rates and change, 2001-2006

		2001	2002	2003	2004	2005	2006	2001-06 Change (% pts)
To Year 9	Indigenous	96.5	97.8	96.8	97.2	99.2	98.4	1.9
	Non-Indigenous	99.9	99.8	99.9	99.9	99.9	100	0.1
	Difference (%pts)	3.4	2	3.1	2.7	0.7	1.6	-1.8
To Year 10	Indigenous	85.7	86.4	87.2	85.8	88.3	91.4	5.7
	Non-Indigenous	98.4	98.5	98.9	98.5	98.6	98.9	0.5
	Difference (%pts)	12.7	12.1	11.7	12.7	10.3	7.5	-5.2
To Year 11	Indigenous	56.1	58.9	61.4	61.1	62.3	67.7	11.6
	Non-Indigenous	87.6	88.7	89.5	89	88.3	88.8	1.2
	Difference (%pts)	31.5	29.8	28.1	27.9	26	21.1	-10.4
To Year 12	Indigenous	35.7	38	39.1	39.8	39.5	40.1	4.4
	Non-Indigenous	74.5	76.3	76.5	76.9	76.6	75.9	1.4
	Difference (%pts)	38.8	38.3	37.4	37.1	37.1	35.8	-3

Source: ABS Schools, Australia, 2006 (cat. no 4221.0)

Entry into non-higher education pathways

The second reason that Indigenous students are under-represented in higher education is that following school completion a higher proportion of Indigenous students decide to pursue a non-higher education pathway or are prevented from entering higher education due to academic or other challenges.

Of the 30 per cent of Indigenous students who achieve a Year 12 certificate, only around one sixth of these commence a higher education course by age 18 years (Figure 5.3). By contrast, closer to half of all Australians who complete a Year 12 certificate commence a higher education course by age 18 years. Although some Indigenous people enter higher education as mature-age students and thus tend to be older, on average, than non-Indigenous students, the number of mature-age Indigenous students is not sufficient to make up the gap between the numbers of Indigenous and non-Indigenous students commencing higher education as school-leavers.

Whether the decision to pursue a non-higher education pathway is made during school or following school completion, similar factors may influence the decision. In both cases, interrelated systemic challenges affect the entry of Indigenous students into higher education pathways. The key challenges that have been identified in the literature are low academic achievement, lower aspirations for higher education and lack of information about higher education opportunities.

Low academic achievement

The wide gap in literacy and numeracy between Australia's Indigenous and non-Indigenous students has consistently been reported in the OECD Programme for International Student Assessment (PISA) [2000, 2003, 2006]. In PISA 2006, Indigenous students, on average, scored 86 points lower than non-Indigenous students, a gap of approximately two and a half

years of formal schooling. The proportion of Indigenous students who performed below the OECD 'baseline' in mathematical and reading literacy was 39 per cent and 38 per cent respectively, compared with, in both cases, 12 per cent of non-Indigenous students (Thomson & De Bortoli, 2008).

Low academic achievement is a barrier both to completion of secondary school and to entry into higher education. In the case of students who do not stay at school until Year 12, low academic achievement is a common factor, and it often influences entry to VET before school completion (Lamb, Walstab, Teese, Vickers & Rumberger, 2004).

Similarly, in the case of students who do progress to Year 12, academic performance operates as a barrier to entry to higher education. As Figure 3 indicates, fewer than half of the Indigenous students who progress to Year 12 achieve a Year 12 certificate (or approximately 30 per cent of the age cohort). By contrast, for all Australian youth, over 85 per cent of students who progress to Year 12 achieve a Year 12 certificate (or approximately 60 per cent of the age cohort). The Indigenous Higher Education Advisory Council identified the English literacy level of many Indigenous students to be a significant hindrance to them considering higher education and having the preparedness to commence tertiary study (James & Devlin, 2006).

Lower aspirations for higher education

In comparison with non-Indigenous students, Indigenous students are less likely to aspire to higher education, seeking instead employment options that require minimal post-school training and education (Craven, Tucker, Munns, Hinkley, Marsh, and Simpson, 2005). A comparative study of the aspirations of Indigenous and non-Indigenous students by Craven *et al.* 2005 found that significantly more Indigenous students sought to leave school early and to participate in technical education, while significantly more non-Indigenous students aspired to go to university.

Craven *et al.* (2005) found that the low aspirations of Indigenous students should not be attributed to an undervaluing of education by Indigenous students and their families. The study found that Indigenous students' ratings of the importance of attending school and getting good grades were significantly higher than the ratings of non-Indigenous students.

Craven *et al.* (2005) explained the lower aspirations of Indigenous students in terms of their lack of confidence in their academic ability (see also James & Devlin, 2006). As a result of the educational disadvantage experienced, many Indigenous students have 'low academic self-concepts'. Consequently, Indigenous students often lack the adaptive and striving behaviour associated with higher academic self-concepts that enables individuals to try harder when confronted with the possibility of not achieving their goals (Craven *et al.*, 2005). Anecdotal evidence that teachers have low expectations of the academic potential and education prospects of Indigenous students, perhaps unconsciously, compounds the low aspirations and decision not to pursue higher education (Craven *et al.* 2005; Ferrari 2006)

Limited knowledge of career pathways

Indigenous students often do not have sufficient information about pathways to higher education due to the nature of the career counselling they receive at school, the inability of

their families to provide advice if no member of the family has previously attended university and the absence of Indigenous role models who have been to university (Craven *et al.*, 2005; Lamb *et al.*, 2004; James & Devlin, 2006). Part of the problem may be associated with the career education strategies used by schools, which sometimes rely on students approaching the career advisor for advice. In addition, Indigenous families often do not have the educational capital to inform their children about the options and possibilities, despite having high aspirations and wanting the best for their children (Craven *et al.*, 2005).

Retention, success and completion in higher education

The Indigenous students who reach higher education have low completion rates. As Figure 5.4 illustrates, for each year in the period 2001-2006, around 4000 Indigenous students commenced higher education studies but only 1000-1200 completed a higher education course each year in the same time period.

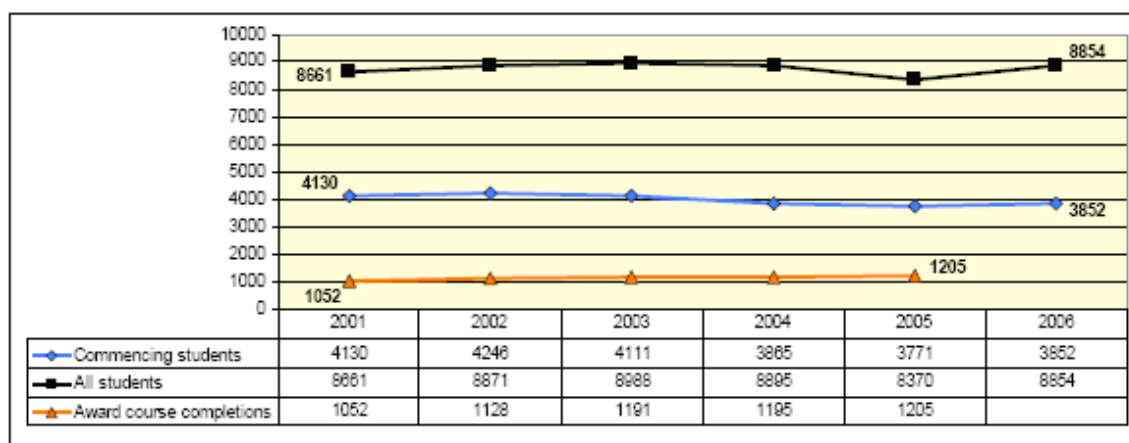


Figure 5.4: Number of Indigenous commencing and all students, 2001-2006, and course completions by Indigenous students, 2001-2005*

*2006 completion data are not yet available

Source: *Students, Selected Higher Education Statistics* (DEST 2005)

The low completion rate for Indigenous students is influenced by a higher rate of attrition in early years and a higher failure rate of individual subjects (that is, lower success rates).

Attrition is particularly severe for Indigenous students in the first year of study. Across 2000-2003, first year attrition rates for Indigenous higher education students were typically around 35-39 per cent, with the comparable figures for domestic higher education students overall being 22-23 per cent (James & Devlin, 2006).

The retention rate, which is the proportion of students who are retained in a course from the commencement of one academic year to the next (excluding completions), is markedly lower for Indigenous than for non-Indigenous students. Figure 5.5 shows the retention ratio and success ratio for Indigenous and non-Indigenous students. A retention ratio of 1.0 would indicate comparable retention for Indigenous students and non-Indigenous students, the retention ratio in 2005 was 0.81.

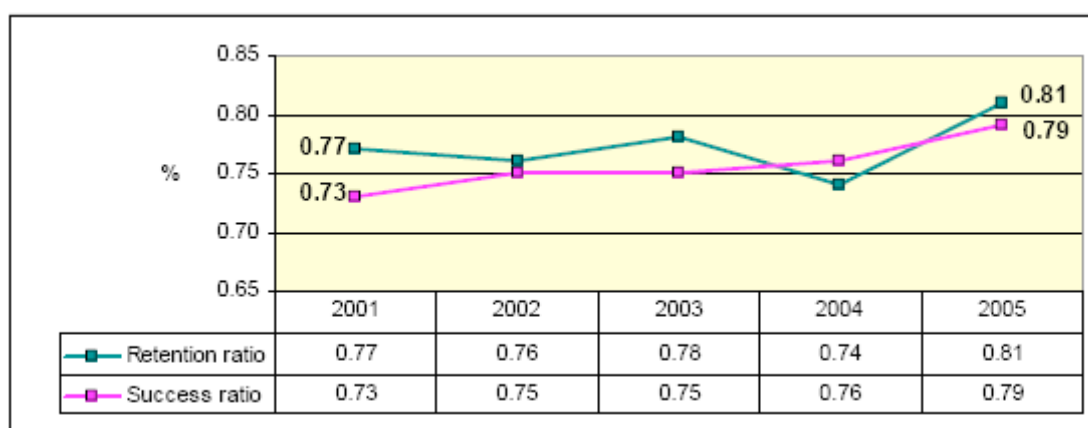


Figure 5.5: Indigenous higher education performance indicators – Retention and Success Ratios, 2001-2005

Notes: The retention ratio compares the apparent retention rates (ARR) of Indigenous and non-Indigenous students as a ratio, where the ARR is the proportion of students who are retained in a course from the commencement of one academic year to the next (excluding completions). The success ratio compares the student progress rates (SPR) for Indigenous and non-Indigenous students as a ratio, the SPR is the proportion of units students passed in a year compared with total units the students were enrolled in.

Source: *Students, Selected Higher Education Statistics* (DEST 2005)

The success rate, which measures the proportion of units that students passed in a year compared with total units in which the students were enrolled, is also lower for Indigenous students compared with non-Indigenous students. Where a success ratio of 1.0 would indicate equity for Indigenous students with non-Indigenous students, in 2005 the success ratio was 0.79. Data from DEST captures the disparity more clearly: Indigenous students successfully complete 68 per cent of subjects undertaken compared with 87 per cent for non-Indigenous students (DEST 2002).

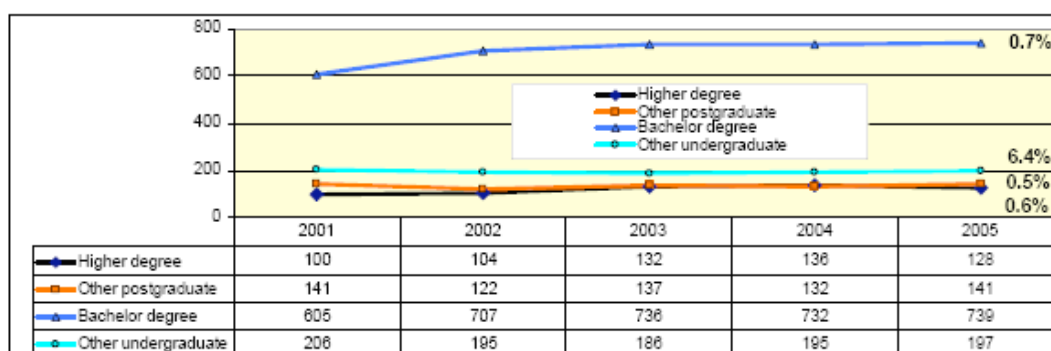


Figure 5.6: Number of award course completions by Indigenous students by level, 2001-2005, and percentage of Indigenous to domestic completions, 2005

Source: *Students, Selected Higher Education Statistics* (DEST 2005)

In the period 2001-2005, Indigenous retention and success increase marginally relative to non-Indigenous retention and success (Figure 5.5). Similarly while the completion rate

remains very low, Figure 5.6 illustrates that over the period 2001-2005, there was an overall increase in the number of award completions by Indigenous students. This possible sign of improvement in the number of completions of higher education courses was most evident in higher degrees and Bachelor degrees.

The underlying problems in retention and success in higher education

For Indigenous students there is often a convergence of factors that contribute to their low levels of retention and completion of higher education. Some challenges are particularly associated with the demographic characteristics of Indigenous people who enrol in higher education which include age, location, type and mode of study (James & Devlin, 2005). Other challenges represent more systemic disadvantage associated with lower socioeconomic background and cultural isolation and include: educational disadvantage; rural and regional disadvantage; low SES disadvantage and cultural isolation and prejudice.

The effects of the demographic characteristics of Indigenous students in higher education

As indicated in Figure 5.7, Indigenous students when commencing higher education courses are older on average than other Australian students (29 years old compared with 22 years old). Indigenous students are therefore more likely than non-Indigenous students to have to balance study commitments with the pressures of child-raising and other family responsibilities (James & Devlin, 2005). Hillman's report on the First Year experience using LSAY data found that Indigenous students reported conflict between study and caring for children or other family members more often than non-Indigenous students (Hillman, 2005). Similarly, the 2006 survey of Student Finances found that, of the respondents, a higher percentage of Indigenous students had dependent children (30.2 per cent) compared with non-Indigenous students (16.6 per cent) (James *et al.*, 2007).

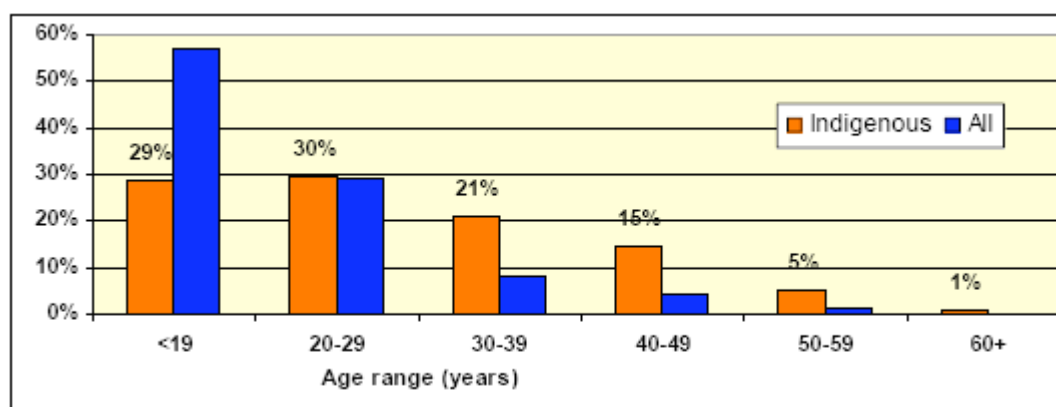


Figure 5.7: Proportion of Indigenous and all domestic students at commencement of a higher education undergraduate course by age, 2006

Source: *Students, Selected Higher Education Statistics* (DEST 2006)

Rural and regional disadvantage

Rurality operates to exacerbate both the financial pressures of Indigenous students and feelings of cultural isolation. In 2006, only 31 per cent of Indigenous Australians lived in major cities while the rest of the Indigenous population was distributed across inner regional (22 per cent), outer regional (23 per cent) and remote/very remote areas of Australia (24 per cent) (ABS Population Distribution, Aboriginal and Torres Strait Islander Australians, 4705.0 2007). Of Indigenous students in higher education in 2001, approximately 30 per cent were from rural areas, with an additional 15 per cent from isolated areas (DEST 2002). Indigenous students are therefore more likely than non-Indigenous students to have moved away from home in order to study. As a result, Indigenous students are removed from the financial and emotional support they would otherwise receive were they studying closer to their families and communities. This conclusion is supported by the findings of the 2006 Student Finances survey that showed a higher percentage of undergraduate Indigenous students were not financially dependent on others (65 per cent) compared with undergraduate non-Indigenous students (44 per cent) (James *et al.*, 2007).

Financial disadvantage

Financial pressures have a significant impact on Indigenous students' choices about higher education and their capacity to study successfully. The recent nationwide survey of Student Finances revealed marked differences in the financial circumstances of Indigenous students compared with non-Indigenous students (James *et al.*, 2007). While the typical Australian student in 2006 had to study under considerable financial pressure, the survey found that Indigenous students were more likely to miss classes to attend employment (31.3 per cent) than were non-Indigenous students (25.8 per cent), and a much higher proportion of Indigenous students (25.4 per cent) indicated that they regularly went without food or other necessities because they could not afford them than did non-Indigenous students (12.8 per cent). The difficulties of balancing study commitments with paid employment and often family commitments appears to be key contributors to the low success and retention rate of Indigenous students in higher education.

Lower levels of educational attainment on entry

Prior educational disadvantage has been identified as a factor in the lower rates of success for Indigenous students in higher education (DEST 2002). Indigenous students are much more likely to enter university on the basis of special entry schemes and less likely to be admitted on the basis of past higher education or school education (Encel, 2000). In 2001, 45.4 per cent of domestic students entered higher education institutions to undertake studies at bachelor level or below on the basis of satisfactory completion of the final year of secondary school as compared with only 11.3 per cent of Indigenous students (DEST 2002). Consequently, Indigenous students are less likely than other students to have prior qualifications. This makes the academic demands of study more onerous for Indigenous students, reducing the likelihood of success and retention at university (James & Devlin, 2006).

Cultural isolation and prejudice

A number of reports have linked the low levels of Indigenous people's participation in higher education with fears of cultural isolation and experiences of racism on campus (DEST 2002;

James & Devlin, 2006). Providing administrative, academic and counselling support services for Indigenous students is an integral part of university's responsibilities for Indigenous students. An awareness of the values that are implicit and explicit on university campuses and that subtly permeate the education provided is necessary to enable universities to counter prejudice where it occurs (DEST 2002).

6. Findings from the project's survey of universities' low SES student recruitment and support strategies

As part of this project, questionnaires were sent via Universities Australia and Vice-Chancellors to the heads of student equity in every university. The questions posed are listed below. Respondents were assured that their responses would be treated confidentially and reported anonymously. The survey responses of twenty-four universities are summarised below. The project team expresses its gratitude to the many staff members involved in equity activities who responded to the survey, providing thoughtful and comprehensive information about their institution's programs.

All universities appear to have valuable support programs for the student community at large. Examples of these programs are: school information sessions, transition programs, peer mentor schemes and the monitoring of students at risk. While these programs undoubtedly support the three groups addressed in this survey, the particular programs highlighted in this report are programs that specifically target people from low SES backgrounds and Indigenous students. We also note that a large number of institutions are implementing programs aimed at refugee groups, who might be regarded as a particular subset of people from low SES backgrounds.

The questions posed to institutions were:

1. Does your university have any programs that specifically target the following groups:
Low SES students from rural or remote Australia
Low SES students from metropolitan areas, or
Indigenous students?
If so, please describe them briefly.
2. Do you have evidence that any programs for low SES urban, low SES rural or Indigenous students are working particularly well? Are you planning to modify these programs in future? If so, how and why? We would be grateful if you would provide evaluation data if it is available.
3. Have you faced any particular challenges in any of your programs for low SES urban, low SES rural or Indigenous students? What programs have you tried that haven't worked well? Have you modified these programs? If so, how and what was the result?

Findings

Overview of institutional evaluations

The survey reveals show the numerous new programs for low SES and Indigenous students have been put in place by universities in the past four to five years, often with regular evaluation strategies built into their structure.

It is very difficult to compare the effectiveness of universities' equity programs, given that the success of a program is directly related to the university's particular student demography and catchment area. Further, individual universities themselves reported difficulties in evaluating their equity programs due to the flawed geographical classification of SES in widespread use across the sector. To counter this many universities have chosen to focus their equity programs directly on under-represented schools or schools that have been classed as disadvantaged by the State Department of Education.

In the survey responses most universities provided substantial informal evaluation of their initiatives. There was, however, little quantitative assessment available. Some universities reported that their programs were "under continual review" and, rather than being formally assessed, were regularly fine tuned in response to feedback. Others commented that the impact of some of their programs, for instance their work with school communities in a disadvantaged areas, were expected to produce results in the long term and short term evaluation was not appropriate. Finally, for some universities, it was simply too soon to evaluate their new programs.

In the absence of evaluative data, we have provided a detailed overview of the range of equity programs currently in operation and, where possible, have selected case studies of programs that have been quantitatively evaluated or display innovative equity policy.

Below, we report the institutional survey findings for Indigenous students, low SES students, and rural and isolated students. We have divided the findings for each group into four sections: programs that target students when they are at school; programs that facilitate entry to university; programs that target students when they are at university; and programs that target students in transition from university to employment.

Programs for Indigenous students

School outreach programs

Many institutions reported that they run outreach programs at secondary schools with significant numbers of Indigenous students that are designed to encourage Indigenous students to consider a university education. Most programs aim to give students an insight into university life through overnight camps or tours of university, talks from students and sometimes talks from lecturers. A number of programs link up Indigenous school students with current Indigenous and non-Indigenous university students. One such example is the Indigenous Mentor Project run by one university, which involves a joint camp for Indigenous secondary school students and commencing Indigenous students from the university. Another similar program has been selected as a case study below:

CASE STUDY: PEER MENTORING PROGRAM FOR INDIGENOUS STUDENTS

An outreach program that appears to be thriving is a peer mentoring program designed to encourage Indigenous young people in primary and secondary schools to complete their schooling and consider further education, including attending university. The program, which was launched in 2006 with the involvement of staff from the university's Indigenous Research Centre, involves partnerships between the university, as represented by student mentors, and 40 partner organizations. Individual mentor projects are negotiated between the university and the school/partner organization and each project is promoted to students at the university who are enrolled in disciplines that match the project area. Most mentors participate for 2 hours per week during semester.

The program receives funding until 2009 under a grant from the Commonwealth Department of Families, Community Services and Indigenous Affairs.

While most of the outreach programs are designed to lift students' aspirations, one university runs a program that is specifically intended to enhance the literacy levels of young students in remote indigenous communities.

CASE STUDY: LITERACY PROGRAMS FOR INDIGENOUS STUDENTS

The program, which has been running for a decade, involves the university's pre-service student teachers in delivering programs to enhance literacy in primary schools. The program is aimed "at directly strengthening those students' capacity to complete schooling and be eligible for post school education and training". The university considers the success of the program to be demonstrated by the numbers of students involved in the program who continue into secondary school.

University access schemes

Scholarships and special admission schemes

All the universities reported that they offer scholarships and have alternative entry schemes for Indigenous students. Many universities provided specific support to assist Indigenous students with the application process: one university reported that it covers the university entry fees for all Indigenous students; another provides individual, in-person assistance to Indigenous students to ensure students complete scholarship and other application forms.

The nature of the special admission schemes differs between universities. Two models are highlighted below:

CASE STUDIES: SPECIAL ACCESS FOR INDIGENOUS STUDENTS

- Applicants apply directly to the university and must include an autobiographical statement and a short description of their interest in undertaking university studies. The criteria for assessment differs between universities but it commonly includes evidence of preparation for tertiary study, maturity, capacity for self-directed study, interpersonal and communication skills, previous achievements, knowledge and other skills. Applications are assessed by the staff of the university's Indigenous centre or by a panel of staff such as the program selection officer, Indigenous Centre manager, an Indigenous professor and the Equity Manager.

- The Indigenous Centre at one university conducts a two day admission program in which participants sit literacy, numeracy and learning comprehension skills assessments, followed by an interview with the relevant faculty. For students applying for degrees such as Accountancy, Economics, Engineering and Science, they must also sit an advanced mathematics test.

Bridging courses

The vast majority of the universities who responded reported that they run foundation or bridging programs for Indigenous people. These programs provide alternative pathways into university education and commonly seek to address gaps in student knowledge before formal courses begin, rather than during the course of study.

The two case studies chosen reflect the type of the bridging courses provided: most universities provide a general university preparation course, while a few provide specific course preparation, particularly for professional degrees such as Medicine and Law.

CASE STUDY: DIPLOMA IN UNIVERSITY STUDIES

A one-year program equips Indigenous students with the skills to undertake a university course. Students take units in writing and computing in the context of enhancing Aboriginal and Torres Strait Islander identity. Students also take electives from areas such as Social Sciences, Legal Studies, Education, Media and Aboriginal Culture.

CASE STUDY: COURSE-SPECIFIC PREPARATION

A four-week full time enabling course to prepares students with the skills for Nursing, Law, Media or a Sustainability Development major. The courses include study skills, field work and research and writing skills. The class intake is small: in Law, for example, approximately ten students participate in the program each year.

Support programs at University

Academic support and enrichment

In addition to organising bridging courses, nearly all universities reported that they provide ongoing academic support to Indigenous students through Aboriginal Education Centres on campus. The Centres run Indigenous tutorial schemes specifically for Indigenous students and many of them are staffed by Indigenous tutors. A number of universities also offered targeted courses for Indigenous students in Indigenous Community Relations, Aboriginal Education, Languages, Veterinary Studies and IT.

CASE STUDY: INDIGENOUS LAW PROGRAM

One university runs a multi-faceted Indigenous Law Program which includes an Indigenous Pre-Law Orientation Program, direct student support, teaching and staff development and research supervision. As part of the Program, the university offers community-based clinical legal education opportunities for Indigenous students with partner organisations such as the Queensland Bar Association.

The outcomes from the Program are monitored and evaluated by the university, and the following positive results have been reported: Indigenous law student numbers grew from nine students (2000) to forty-four students (2005), with an additional twenty-five students enrolling in 2006. Retention rates have also increased since 2000, exceeding those for Indigenous students generally, as well as those for non-Indigenous Law students.

To make courses more accessible to Indigenous students several universities provide a flexible delivery of the courses at smaller regional centres.

CASE STUDIES: FLEXIBLE COURSE DELIVERY

- Queensland's Remote Area Teacher Education program delivers teacher training to remote Indigenous students, and students go on to teach in remote schools. The program is delivered on-line and via distance studies, and will later incorporate an away-from-base element. The program has strong employment outcomes.
- One university has been running dedicated block release programs in Education and Business for 20 years and 10 years respectively. It reports that the program has played an important part in making higher education accessible and relevant to Indigenous students living and working in their home communities. The university attributes the success of the program to its levels of employment of Indigenous general and academic staff, and the focus on practice-based education that is relevant to work in communities.

Student support services

Universities offer a wide variety of student support services, ranging from conventional pastoral care to Indigenous cultural initiatives such as:

- case management to support individual Indigenous students
- special activities for Indigenous students such as hosting *Flightpath*, a Cape York Institute initiative encouraging student aspirations and pathways to study
- cultural enrichment through engagement with Elders and involvement in NAIDOC programs, and
- provision of household items for Indigenous students from remote areas.

Post-university transition preparation

For some universities, support for Indigenous students extends beyond the university to students' subsequent employment in the community.

CASE STUDY: NATIONAL INDIGENOUS CADETSHIP PROGRAM (NICP)

This program, which is coordinated by the Department of Employment and Workplace Relations, is administered at its host university through Student Services. The university has placed 104 cadets during the period 2003-2007. It is very positive about the program and cites formal evaluation through student surveys and direct feedback from students and employers. Employers participating in the program have gone on to offer many future placements based on their initial placement experience.

Programs for Low SES students

School based programs

The vast majority of universities surveyed have outreach programs in urban and regional schools in low SES areas, particularly in schools that are under-represented in university access rates. Most commonly programs involve university recruitment staff, academic staff and sometimes former students travelling to schools to run information sessions and encourage students to consider applying for a place at university. In addition, many universities run programs that see school students coming to university for single days, multiple days, or residential programs.

Other programs that seek to build pathways between school and university include:

- training school students to be ambassadors who promote the university in their schools
- tutoring or mentoring by university students free of charge – this may also provide subject credits for the university students
- exam preparation lectures
- pre-Year 12 summer school
- awards to school students in low SES category schools
- giving financial advice about living as a student
- running community activities, and
- careers markets.

The school-university connection may be continued for all students through informative websites, often with details of equity scholarships, as well as blogs about university life

The outreach programs generally target Year 11 and 12 students, but a number of universities have programs for students from Year 8 and 9. Indeed, one university has extended its outreach program to year 8 students (it was previously run for Year 10-12 students) after discussions with the schools in the university's catchment area about the program's efficacy, which it was thought could be further enhanced by earlier contact.

CASE STUDY: PARTNERSHIP WITH THE SMITH FAMILY'S LEARNING FOR LIFE PROGRAM

The aim of this university's partnership is to ensure that students from disadvantaged backgrounds remain in education by providing them and their families with financial, personal and mentoring support. Through this partnership, the university:

- funds 166 scholarships to students in Years 7-12;
- provides a worker to assist students and their families; and
- coordinates events to support the program's aims

The annual events that support the program include:

- A university experience program for Year 10 students from disadvantaged local high schools where students come to the university for a series of presentations and activities in science.
- A program run by the Museum of Contemporary Art and the College of the Arts, with funding from a commercial law firm, which brings a group of Learning for Life students talented in art to a four-day workshop at the MCA.

- A six week program run by the university's Conservatorium of Music, the Matana Foundation for Young People and the Smith Family in which students form an instrumental ensemble. The project culminates in a visit to the Conservatorium for a day of activities and a special concert.

One university runs a school-based program that specifically targets the academic disadvantage of low SES students.

CASE STUDY: ACADEMIC ASSISTANCE IN SCHOOLS

The university, through its Education Faculty, runs long-term projects in disadvantaged schools which aim to develop the literacy, numeracy and information skills needed for participation in vocational and higher education. The goal of the program is to strengthen students' "capacity to apply for university and vocational education without needing special access programs".

Another program that has a similar focus on senior school students' academic development operates on the university campus and involves lecturers and university students.

CASE STUDY: ACADEMIC ENRICHMENT AND UNIVERSITY ORIENTATION

The program is available to year 11 students from all secondary schools in the region. It involves a term of weekly on-campus visits where students are introduced to a range of disciplines including teaching, health, science, technology and business. Sessions are taught by university staff from these discipline areas and supported by services staff, including learning advisers, counsellors and librarians. The program is also supported by peer tutors who run follow-up tutorials, both on campus and at the school site, and who assist students with the assessment requirements, including a discipline-based project and presentation.

Evaluation of school-based programs: other issues

When universities have evaluated their programs in low SES schools and communities, many have found that there has been a positive response in terms of university applications and enrolments. One university that runs a scheme in which university students give free tutoring to students from schools in low SES areas reports that it is particularly popular, with unmet demand. However, a university that offers prizes to students in low SES schools has sometimes encountered difficulties, such as the absence of school awards ceremonies or the lack of a school hall to hold an award ceremony. Some universities report that feedback from school students about their visits to universities has been overwhelmingly positive and students say such programs have raised their interest in a university education. A targeted examination preparation lecture received such good evaluation from students that the program was expanded to a pre-Year 12 summer school.

TAFE institutes also market their courses to students in low SES areas. One university found that the strong promotion of VET courses and apprenticeships in one community detracted from the students having aspirations to go to university.

University access programs

Scholarships

As well as administering scholarships allocated through the Commonwealth Scholarships Programme, most universities reported that they provide their own scholarships to students who are disadvantaged due to their socioeconomic status and award admissions bonuses to disadvantaged students (in NSW and Canberra these schemes are accessed by students through the Universities Admissions Centre, and in Victorian through the Victorian Tertiary Admissions Centre). Many universities are exploring different strategies for attracting low SES students and other disadvantaged students. A number of universities offer scholarships to Year 12 students in selected schools, including schools in low SES areas and schools whose Year 12 cohort has had less than 50 per cent of students proceeding to university in the previous two years.

The value of, and criteria for, institutional scholarships differs greatly between institutions, making comparison difficult. Several universities, however, provided some quantitative analysis of their scholarship programs that has been included below. The comment of one university regarding its evaluation of scholarships is pertinent to the overall question of evaluation: “It is difficult to measure the effectiveness of equity scholarship availability as an access tool, as [TER] entry scores and individual aspiration to apply for university are likely to have more impact.”

CASE STUDY: SCHOLARSHIPS

- One university monitors its scholarship program to assess its impact on retention and success. Data indicates that scholarships targeting low SES students have a positive impact on retention: in 2006 Equity Scholarship recipients had a 90.5% retention rate compared to 84.4% for non-scholarship students. Success rates for both cohorts of students in 2006 were on par.
- Another university analysed the results of its past scholarship holders and concluded that, “[g]enerally, providing scholarship support to equity groups (rural/remote, financial need, medical disadvantage, indigenous) gives measurable academic success outcomes: higher Annual Average Marks, more likely completion of all units attempted, higher retention rates, more likely progression to higher degrees.”
- A review by another university found that the offer of a scholarship had influenced 47% of recipients to attend university; furthermore, 60% of respondents were the first in their family to attend university and 39% said that their scholarship was “essential” for them to remain at university.

Evaluation of scholarships schemes: other issues

Several universities expressed concern about the number and value of the scholarships available. A few highlighted that the number of Commonwealth scholarships has been reduced in recent years (they will be increased from January 2008 in keeping with 2007-08 federal budget commitments: DEEWR 2008). A review by one university found that only 18% of students applying for equity scholarships were successful even though most of the unsuccessful students had also demonstrated financial disadvantage. There was also concern about the value of the living away from home level of Youth Allowance, which was seen as insufficient for students living in capital cities who may face large rent rises. Universities are

also disturbed that university equity merit scholarships and equity financial assistance is not tax exempt, further disadvantaging low SES students. Inconsistencies in Centrelink's determinations of income support were also cause for concern.

The task of selecting eligible students for low SES university scholarships or special entry schemes was also identified as a problem by several universities. It was noted that students often do not identify themselves as being in a low SES group and so universities are unable to identify the students who could benefit from scholarships and special entry schemes. In addition, some secondary schools do not promote the scholarships available for low SES students because they do not wish to identify themselves as being a low SES school or in a low SES catchment area. A number of universities reported that the current postcode-based classification of SES did not enable targeted SES selection. To counter this, some universities have set up partnerships with organizations such as The Smith Family who work with low SES groups in order to promote low SES students' entry to university. Others have devised their own criteria for eligibility, using sliding scales on a number of dimensions.

A further problem arises even once places and scholarships are awarded, as students can defer their university place. One university expressed concern that the number of low SES students who defer and then fail to take up their university place is increasing.

Special admission schemes

Many universities have in place alternative entry methods for students from disadvantaged socioeconomic backgrounds. A large number of the respondents reported that they lower the course threshold entry mark or give 'bonus' Tertiary Entrance Rank (TER) points to students who have been identified as low SES. One university allocates bonus points on a sliding scale, with automatic allocation to all applicants from the most disadvantaged schools, including rural schools, and then a lesser number of points allocated to students who are able to demonstrate individual low SES status but who are attending less disadvantaged schools. Another university reported very positive results for its approach to boosted TER entry for low SES students: "Once students gain entry they have a high rate of retention and in most cases perform as well or better than other school leavers, despite the sometimes significant adjustments to their entry scores." This accords with national success data, as we show elsewhere in this report. Many institutions also select students using non-TER entry procedures that take into account prospective students' technical and work experience and readiness for university.

CASE STUDY: TEACHER RECOMMENDATION SYSTEM

Several universities have adopted a system of selection that is based on teacher recommendation. One such program operates for certain secondary schools with low rates of participation in higher education. The selection of schools to participate in the program is based on the number of students from the school who go on to post-compulsory education and training, and family income considerations (family in receipt of Centrelink benefits). One of the universities using this alternative entry system reported that it has resulted in a significant increase in its percentage of low-socio economic students; an increase of approximately four per cent since 2002. Contrary to the assumption that broadening access lowers academic standards, the preliminary analysis from the university's comparative study of the performance of the special entrance students and the mainstream student cohort indicates that the two groups' performance is comparable.

CASE STUDY: PORTFOLIO ENTRY

In 2004, one university introduced an alternative method of entry for Year 12 students from 13 targeted low SES schools. The scheme is based on the assessment of a student's potential to succeed at university and students prepare a portfolio of evidence to support claims of achievement, which is assessed against a set of six 'entry qualities'. The qualities are: body of knowledge (as specified by the University Program for which the student is applying); information literacy; problem solving; working with others; working alone; and communication. Entry into the scheme is limited to 20 students and to four program areas: Nursing, Visual Communications, Environmental Studies and a range of Business options.

The university conducted an evaluation of the initial trials of the program at the end of 2004 and 2005, and reported that "the results of the evaluation were overwhelmingly positive, with all stakeholders agreeing that [the trials] had been extremely successful." In terms of quantifiable change observed in the schools, the university reported that "It is too early to determine the full impact of Portfolio Entry on university participation rates for these schools. In 2005, however, it appears that the schools which participated most enthusiastically in Portfolio Entry did experience an increase in both university applications and enrolments. The interest generated in Portfolio Entry appears to have had a 'spin-off' effect on other students at the school." For one school, the only students admitted to any university in 2005 were through Portfolio Entry.

Bridging courses

Many of the universities surveyed provide bridging studies to prepare students for university. Commonly, participants in foundation or bridging courses are able to apply for admission to degree courses on the basis of academic potential demonstrated in the course. Some bridging courses cover the general skills required to undertake a university course, such as computer literacy and organisational skills.

CASE STUDY: GENERAL BRIDGING COURSES

One university runs a free, 12 week program that consists of 3 modules and addresses issues of university culture, reading, writing skills, numeracy, information technology, tertiary oriented research and library proficiencies. Students attend 3 days per week full time and those students requiring ESL extension attend an extra day per week. Successful completion of the program leads to an offer into an undergraduate course.

This program was developed following a review of enabling programs in 2005 which found that the retention rates in undergraduate courses overall for foundation students were below that of other general entry students. Consequently, the new program is longer and has more well-defined areas of development.

Others courses offered at institutions are designed to prepare students for specific courses or areas of study:

- Foundation Studies, a one-year full-time program available on- or off-campus offering different study strands which prepare students for entry into specific undergraduate programs. This university reported that although the program is not targeted solely at low SES students, around 40% of the students fall within the definition of low SES, 23% are rural and 60% come from one or more of the DEST equity groups.
- Women in Science and Technology (WIST), a self-paced modularised program aimed at commencing undergraduate women, providing preparatory studies to up-skill in science and technology prior to enrolment.

One university pointed out that the demography of participants in bridging programs is changing. Whereas these programs used to be taken up mainly by low SES women who had left school early, recently there has been an increase in younger students from non-English speaking backgrounds and refugee backgrounds, particularly males, who are very keen to go to university but need a lot of help with organisational skills.

Another university reviewed the outcomes of its short bridging programs and found that enrolments had increased but course retention had not. Subsequently, it has introduced a longer, free, twelve-week program to try to overcome the problem.

Partnerships with TAFE/VET institutions

Several universities also facilitate specific pathways with VET/TAFE institutes. Many conduct Open Days and information sessions that are targeted at adult entry and TAFE students.

CASE STUDY: CREATING PATHWAYS FROM TAFE TO UNIVERSITY

This university recognises TAFE/VET qualifications (Certificate 3 and above) as an entry qualification and allows holders of selected TAFE/VET awards (Certificate 4 and above) to receive substantial credit for their work if they are accepted into a related university course. In addition, it also sets aside places in most of its courses specifically for entrants from TAFE/VET.

Support programs at University

Having promoted pathways to university for low SES students, many universities have designed specific strategies to support these students once they reach university, including transition programs and financial assistance.

Transition programs

Transition programs typically include programs such as the following:

- a variety of mentoring schemes and peer support schemes;
- education programs designed for parents of students who are the first in their family to enter Higher Education, and for rural and isolated community members generally. These programs aim to demystify the university and welcome students and their parents by providing information in writing and at dedicated sessions about careers, education, preference change information, alternative entry and return to study options;

- The appointment of student equity and diversity liaison officers within faculties; and
- Programs on independent living for first year low SES students.

CASE STUDY: YEAR-LONG TRANSITION PROGRAM

A comprehensive transition and academic support program open to all students from DEST-designated equity groups which has been running for many years at one university. The program consists of:

- An optional two-day orientation, prior to the standard orientation program, where students can stay overnight in a University College.
- A program of weekly social events and skills workshops aimed at providing and developing support networks.
- a peer-assisted study group for any unit, led by a senior student to provide academic support.

The university has conducted in-depth evaluation of this program. A study comparing the program students with a standard cohort of first year students from 1990-1999 showed that although program students had lower Tertiary Entry Ranks in all years, their retention and success rates were similar. In fact, in several cohorts, the program students had a higher retention rate. In addition, the program students were more likely to have completed a postgraduate qualification. Anecdotal feedback from the students also highlights the benefits of study groups formed and friends made as a result of the program.

CASE STUDY: STUDENT PEER MENTORING

All new students from under-represented schools are invited to participate in this program, in which students are matched with a continuing university student, who attended the same school as they did, for their first month at university. The mentors organise activities with their group of students and act as a source of guidance for the first year students. In 2006, 60 first year students were matched with 10 mentors to form their transition mentoring groups.

While little evaluation of the transition programs was reported, one university who runs a transition program exclusively for rural students, students from low SES backgrounds and those from schools with lower participation rates in higher education has reported very positive results from its program. In semester 2, 2007, the university conducted a comparative analysis of the retention rates of the 96 program participants with the 684 non program students. The attrition rate for the participants was five per cent whilst the attrition rate for others was 18 per cent.

Financial assistance:

Financial assistance programs included:

- subsidised accommodation for students with financial or special needs
- second-hand textbook services and vouchers for text books
- equity computer schemes
- financial advice and education
- student loan funds
- grants for professional placements, for example to cover accommodation and travel to hospital and work placements, and

- “blocked” timetables to assist students with travel expenses

Survey respondents emphasised that even with support programs many low SES students still struggled with the ongoing costs of courses and the challenge of balancing work and study demands. An internal review of early leavers conducted by one university showed that students who dropped out of university faced more complicated issues than financial disadvantage – particularly personal issues.

Post-university transition preparation

A few universities had programs targeting the employment experience of low SES students. One university reported that it had created a position – the Graduate Transition Consultant – which is aimed specifically at improving the employment outcomes for graduates from low socioeconomic backgrounds in urban areas. The Consultant oversees the graduate induction programs, student/employer networks, a mentor program, and employability workshops.

Programs specifically for Rural and Remote students

School based programs

Many universities make great efforts to attract students from rural and remote areas. The programs developed specifically for this group of potential students include:

- outreach programs, such as activities and classes, in rural schools to encourage enrolment in University programs;
- enrichment activities for rural students:
 - For example, a program run by a faculty of science provides science experiments and exposure to technical equipment to schools where science resources are unaffordable or unavailable. The program has been incorporated into the curriculum of 54 participating schools.
- open days and campus tours for rural students and/or parents with travel costs paid;
- help-line available to prospective students from rural and remote areas to call the university free of charge to obtain course advice. The university reported that during the peak period in 2006 the Helpline received 19% of its calls from rural and regional areas.
- careers markets in rural areas;
- awards to high achieving students from under-represented schools, which include rural schools;
- website advertisements of scholarships for rural students; and
- special information pages on the university website for regional students.

In assessing their programs, the cost and logistical difficulty of visiting remote schools, or alternatively of organising student visits to university, was considered problematic by some universities.

CASE STUDY: LIVE-IN UNIVERSITY CAMP

This programs consists of a five-day live-in camp in which high school students participate in a number of academic hands-on workshops and a variety of recreational and sporting activities. It aims to provide students with the opportunity to experience different aspects of university life through participation in academic, sporting, recreational and social activities on campus, and to try the independence of living away from home staying in one of the residential colleges. The university offers scholarships to cover the cost of the camp for rural students who would otherwise not be able to attend without financial assistance.

University access schemes

Scholarships and special admission schemes

Many of the scholarships and special entry schemes described above for low SES students are also available for students from rural areas. One university noted that the introduction of Commonwealth Learning – Accommodation Scholarships has supported an increase in the access rate of rural students at their institution. Many universities have their own scholarships designed for rural students.

Some university faculties have facilitated entry for rural students in courses such as physiotherapy, pharmacy and medicine. The programs include:

- scholarships for first year rural students enrolling in agricultural science programs
- scholarships for rural and regional students to study in computer science and computer engineering courses
- scholarships for rural and regional students to attend a residential college
- a number of regional scholarships with industry partners
- business and law grants for rural and isolated students, and
- a program to train rural students to be rural teachers.

One university's Rural, Interstate and Student Support Co-ordinator conducts extensive school visits in rural and remote areas to encourage students to apply for entry to the Bachelor of Medicine and Bachelor of Surgery, and the Bachelor of Dentistry. Up to 25% of the places within the Bachelor of Medicine and Bachelor of Surgery, and up to 10% within the Bachelor of Dental Science are reserved for rural students and this target was met in 2007.

Support programs at University

Once accepted at university, rural students can, in theory, access government means-tested assistance with accommodation. However there were several reports from universities that rural students had difficulties in obtaining Youth Allowance. Many rural students experience financial and other stress while they are at university due to the high cost of relocating to cities as well as the difficulty of balancing study and work commitments. Similar anecdotal evidence can be found in Godden (2007).

Several universities have developed programs specifically for students from rural and remote areas, such as those listed below:

Student support services:

- assistance in finding accommodation;
- program on independent living for first year rural students;
- transition programs to support school leavers from rural and isolated backgrounds;
- peer mentor scheme – peers keep in touch with rural students throughout semester one; and
- club/activities for rural students and their friends.

Financial assistance:

- preferential access to metropolitan residential colleges for students;
- subsidised accommodation for rural students; and
- travel bursaries for Honours Year students from regional campuses who have compulsory lectures at the metropolitan campus to assist with accommodation and transport costs.

Providing distance education, delivered in flexi-mode, is another way that some universities make their courses available to rural and regional students.

CASE STUDY: AWAY FROM CAMPUS STUDY CENTRE

As part of a joint venture with a secondary school, one university has established a study centre designed for current university students who may be unable to access the main campus, especially after hours, due to work or family commitments, or through lack of affordable transport. The centre provides 25 PCs, a colour printer and two large format LCD screens for interactive teaching with fast access to the university's network. Online teaching resources are also available. The university emphasizes the importance of the Centre in highlighting the university's commitment to and "tangible presence" in this disadvantaged area.

7. International issues and trends

There has been growth worldwide in higher education participation in the last 50 years, including in most developing nations. In a number of nations the expansion of higher education systems from elite to mass access has placed renewed attention on the demographic composition of the student population. Despite the expansion in participation, demographic imbalances in the people going on to university continue to be striking in most nations.

To some extent, the level of overall participation defines the characteristics of the equity considerations. Though equity is often depicted in terms of individual social justice, one of the most common measures of educational advantage and disadvantage has been the patterns of representation of subgroups in national populations. The social and demographic factors associated with subgroup under-representation vary across nations and cultures. In some countries, women are still very under-represented while in others they are clearly in the majority, though not necessarily in all fields of study or at all levels of awards. Ethnic minorities are highly under-represented generally, though not always. But the most widespread source of disadvantage in access to higher education is low social class or low socioeconomic status.

Internationally, social class is a reliable predictor of the likelihood that individuals will participate in higher education at some stage in their lives. This is particularly true in developing countries, where poorer students have little chance of gaining entry into higher education, but it is also true in the most developed countries, where the people from low SES backgrounds who do reach higher education are less likely to find places in the most prestigious institutions and fields of study.

Thus the persistent inequity of access to higher education for people from low socioeconomic backgrounds is a strong theme in the international literature surveyed for this project. This pattern is evident across different cultures, political systems, economies and educational systems. Skilbeck's (2000) survey of access to higher education provides numerous examples of low access for low SES groups in a variety of national settings:

- In Germany, the differentiated secondary education system appears to stream low SES students away from the standard paths to higher education. A 1996 study (Schnitzer *et al.* 1999) found that while 33 of the 100 low SES students in the study reached upper secondary school, only 8 were able to access higher education; yet of the 100 high SES students in the study, 84 reached upper secondary school and 72 entered higher education — a nine-fold difference in the entry rate to higher education (Skilbeck 2000).
- Denmark's access rate for low SES students has remained stable over a 40 year period despite its access and equity policies and egalitarian traditions (*ibid.*, citing Nexelmann, 1999).
- The French *diplome d'études universitaires generales* (diploma for the first two years at university) involves a high level of screening at the end of the first year, which is believed to disadvantage low SES students (*ibid.*).
- In the UK, as in most of the countries surveyed, students from low SES backgrounds tend to be concentrated in the least prestigious institutions and the lowest status courses. In the

US, too, low SES students are over-represented in community colleges and under represented in universities (*ibid.*).

- A pattern of inherited educational advantage is also apparent in Eastern-bloc countries. Skilbeck cites research showing that in these systems various forms of cultural capital, such as party membership, simply supplant the pre-existing forms of economic capital/ownership held by those who attend university (*ibid.* citing Djilas 1983, among others).

Citing the UK's Dearing report (1997), Skilbeck concludes that the equity literature across countries is threaded through with the view that "access is distorted, favouring those who enjoy relative advantage: 'to him (and her) that hath' " (*ibid.*).

It is quite difficult to make direct quantitative comparisons of national patterns of access to tertiary education on the basis of socioeconomic status. First, the idea of social class is not only highly intangible and contested but it is also firmly grounded in national social, cultural and economic systems. Thus when SES is measured it is done so on quite different indicators and scales. Second, higher education systems also differ significantly and what is classified as higher education differs between countries. As a result of these two factors little comparative data is available. The OECD, for example, in *Education at a Glance* (2006a) reports higher education participation only in aggregate figures, by gender and for people with disabilities.

The under-representation in higher education of people from low SES backgrounds is partly because school completion rates and school achievement levels are closely correlated with social class. Many nations have had equity policies to address this problem but the effects of these are not at all clear. Certainly at an aggregate level, these policies appear to have done little to reduce the persistent, proportional under-representation of low SES people. In fact, within the most expanded higher education systems there is evidence of a polarisation of the socioeconomic profile of the student body across different universities. Competition is heightened for the places in the most prestigious universities: students compete for entry to what are perceived to be the best universities, while in turn the more prestigious universities compete for the students with the highest level of school achievement.

Thus growth in overall participation in higher education almost invariably leads to institutional stratification. There are strong social forces for this. Part of the private benefit of higher education is in the social differentiation it provides. This hinges on exclusivity: the value of higher education as a private good is relative to the 'other'; that is, the people without higher education. The more people who enter higher education, the less positional value it has. As overall access to higher education expands, the desire for social differentiation is therefore increasingly sought in choice of institution, course and higher degree studies. The expansion of participation leads to overtly tiered systems and elite universities can be expected to do very well in mass higher education systems, which they do, but equally they tend to become highly socially polarised.

United Kingdom

Low SES data and trends in the UK

The present social imbalances in UK higher education participation are sizeable. Around half of the population in England is defined as belonging to lower socioeconomic groups but these people represent only a little over one quarter of young, full-time entrants to first degree courses. The Higher Education Funding Council for England (HEFCE) (2006, 2007) has reported that young people from the most prosperous areas are five to six times more likely to go to university than young working class people in particular areas of disadvantage. In Ireland, the tertiary education system has expanded greatly, however the students who have benefited have been drawn disproportionately from managerial and professional classes (OECD 2006b).

The UK has adopted an ambitious equity agenda under the rubric of ‘widening participation’ with strategies that include the removal of upfront fees, funding incentives to universities and the encouragement of part-time attendance. The widely touted Tony Blair goal is for 50 per cent of 18 – 30 year olds to participate in higher education by 2010, to be achieved from the present base of 43 per cent.

The most recent participation figures (for 2005-6) from the UK’s Higher Education Statistics Agency, which has been publishing low SES indicators for eight years, showed that young, full-time, first degree entrants from low SES groups comprised 29.1 per cent of enrolments (a rise of one per cent of the previous year). This rate can be loosely considered against the national figure for low SES groups of about 50 per cent, but note that it does not include part-time and mature age students. Further findings are listed below.

- Some Russell Group universities enrolled far fewer low SES students than the UK mean, with Oxford at 11.4 per cent and St Andrews at 15.2 per cent. (These figures were to some extent contested by the universities concerned — St Andrews argued that it had the lowest dropout rate in Scotland and that the figures do not take such factors into consideration; Oxford claimed the findings were out of date and internal reviews said the university was doing better.)
- Some small specialist institutions also did poorly, including the Art Institute at Bournemouth, the Central School for Speech and Drama, the Royal Academy of Music and Edinburgh College of Art.
- Harper Adams University College had the highest low SES enrolment at 57.8 per cent. Its Academic Registrar attributed the College’s success to programs such as its £1,000 per year non-repayable grant for low SES students, as well as a focus on specialism and land-based courses. The College also has a 98 per cent employment outcome rate.
- Wolverhampton had a 50.4 per cent low SES access rate. Its Vice-Chancellor attributed this to strong local links with schools and colleges. Departments at the university undertake out-reach work with schools and colleges including curriculum development and the development of courses aimed at providing vocational routes into higher education. The university also closely linked with local industry. The Vice-Chancellor also noted the disadvantages faced by the university’s students, such as weak A-level grades, low income and little or no family history of attending university, which may

contribute to high drop-out rates of 10-12 per cent compared with the national rate is 8.8 per cent. (Times Higher, 20/7/2007: 6-7)

The Higher Education Funding Council for England (HEFCE) collated a vast array of student characteristic data resulting in the 2005 report *Young Participation in Higher Education*, which covers patterns of participation across England over the 1994-2000 period. The founding contention of the paper is that “there are broad and deep divisions in the chances of going into higher education according to where you live” (HEFCE 2005: 10).

Key findings of the report:

- Despite growth in the participation of low-SES students being more rapid than that of high-SES students, the small base for low-SES students means the ‘advantage gap’ is widening rather than narrowing. The highest proportional growth in participation (over the 1994-2000 period) is in the more disadvantaged areas, yet the more advantaged areas showed the highest absolute percentage point increases in participation, *widening* the gap between rich and poor participation. Consequently, according to HECFE, “most of the new places in higher education have gone to those from already advantaged areas” (HEFCE 2005: 11).
- While a disadvantaged-area background was a key explanatory factor in low participation at degree-course level, it had negligible effect on progression to postgraduate study (HEFCE 2005: 12, 139).
- Lower income students were most likely to study at a local university, while those from independent schools were 21 per cent less likely to study at a local university. The trend could exacerbate social divides between institutions (Times Higher reporting on an unpublished paper commissioned by the Sutton Trust, Times Higher, 9/11/07: 9).

Measurement of SES in the UK

The UK member countries’ higher education funding councils have been monitoring access for disadvantaged groups since 1998 using performance indicators. Until 2003 these indicators were published by HEFCE on behalf of the four funding bodies, but since 2003 this role has been taken over by the Higher Education Statistics Agency.

The performance indicators show access rates separately for young, mature-age, full- and part-time students, recognising the distinctive characteristics of these cohorts (HEFCE 2003). Various measures of social groupings are used. The access indicators for young full-time students show for each institution:

- the percentage who attended a state school;
- the percentage whose parents’ occupation falls under Social Classes IIIM, IV and V (skilled, semi-skilled and unskilled) for the Standard Occupation Classification 1990; and
- the percentage who come from a postcode area known to have a low proportion of 18-19 year olds in higher education (HEFCE 2003).

Access rates are in turn measured against institution-specific benchmarks; the benchmarks are calculated with reference to common qualifications on entry, main subjects of study, and average age on entry for each institution. (The benchmarking process is complicated, but is aimed at increasing access within a highly differentiated education sector. The technical procedure for deriving the benchmarks is included as an appendix of this report, as are selected definitions used in the performance indicators.)

HEFCE in its 2005 report *Young Participation in Higher Education* analysed the area-based element of the performance indicators, which provides a useful contrast to the Australian approach to the use of postcodes. The Australian postcode-based measurement of SES uses occupation and educational classification for each postcode to infer class advantage/disadvantage, and then measures the participation rate of students from disadvantaged (low class) areas. The UK system takes a related but different approach. It measures the proportion of young entrants to university in a particular area, thus it uses educational participation as a direct measure of educational advantage and disadvantage that does not require the creation of social class groupings. This approach does not involve obtaining parental occupation and education data from students. It is similar to the Australian approach insofar as individual level data are not involved, but ultimately both approaches are based on area measures. As the Chief Executive of HEFCE explains in the Foreword to the report:

As detailed data do not exist for characteristics such as occupation or income, these area-based classifications are the only basis for accurate measures of the participation of advantaged or disadvantaged groups currently available. Some will view them as proxies for other classifications, but they also have values in their own right, particularly for developing policy (HEFCE 2005: 3).

The HEFCE study concluded that the types of areas used for participation measures needed to be quite small, for example neighbourhood level geographies, census wards and parliamentary constituencies. The authors tested a number of area-types to find the best ‘fit’ for describing relative educational advantage. Regions and local education authorities were found to be too large, so that “the average participation rate for the unit does not well describe the chances of participation for all the people within it” (HEFCE 2005: 17). The authors found they needed a “unit nearer in size to that of ‘real’ participation neighbourhoods (which, for young participation, it transpires that wards work well)” (HEFCE 2005: 17). The authors found that “as the geographical units used to examine young participation become progressively smaller, previously unremarkable areas reveal marked inequalities” (HEFCE 2005: 44). However, a caveat is necessary—one of the reasons the study focused on young participation was that youth participation is more suitable for area-based measurement: “young participation rates calculated for small areas have a straightforward interpretation and are valid in that they describe the chances of going into higher education for children growing up in that small area” (HEFCE 2005: 14).

Areas with low youth participation rates shared many other characteristics (note that the authors provide these as descriptive, rather than causal, characteristics), including (HEFCE 2005: 102-110):

- low voter turnout;

- high likelihood of household renting from a local authority;
- low rate of children living in a detached household;
- low average household occupational class;
- high likelihood of household having no car; and
- low rate of adults with higher education qualifications.

In the report, these characteristics are tracked quantitatively and each (reported in charts) bears a linear correlation to higher education participation.

UK policy initiatives

The higher education system in the UK is primarily overseen by the Department for Innovation, Universities and Skills, which distributes funding for the UK's member countries to their respective Higher Education Funding Councils. Until 2005, the HEFC for England required universities to submit participation strategies outlining the ways in which they were working to increase access for students from low SES backgrounds. In 2005, the UK government instituted variable, repayable (income-contingent) fees for English universities, and set up the Office for Fair Access (OFFA) to ensure that English universities charging variable fees met access requirements, and requiring institutions to submit access agreements from 2006. From 2006, participation strategies no longer needed to be submitted to HEFCE, although some institutions still produce them internally. (The system in Scotland and Wales is more difficult to track, but Northern Ireland has a similar requirement for access agreements via its Department for Employment and Learning.) One of the aims of the OFFA is to identify and disseminate good practice and advice on access to higher education to its universities (good practice reports which are available on the OFFA website <http://www.offa.org.uk/about/publications/research-good-practice>, as is guidance to institutions at <http://www.offa.org.uk/access-agreements/guidance-notes>) (Private correspondence with OFFA).

In 2003, the Blair government introduced a raft of policy commitments aimed at widening participation in higher education. Aims and measures include (from DfES 2006):

1. Raising educational attainment:
 - increasing parents' involvement through Home School Agreements, the establishment Parent Support Advisors, introducing integrated early years children centres for all children under five;
 - Introducing frameworks to improve students' early foundation in reading, writing and numeracy including the introduction of a national curriculum;
 - Raising standards in primary and secondary schools;
 - Increasing people to continue schooling past 16 through maintenance allowances for low income families; introducing a diploma for young people which can provide a new pathway into HE (from 2013 all people aged between 14-19 will be able to access one of fourteen diplomas).
2. Raising aspirations:
 - the 'Aim Higher' program which forms partnerships between universities, colleges and schools offering activities including class visits to universities, mentoring schemes, summer schools and master classes. After 18 months of Aim Higher, the

proportion of year 11 students from participating schools was 3.9 per cent higher than in non-participating schools. The government has also introduced school-university partnerships to work with gifted 11-19 year olds from disadvantaged backgrounds.

3. Communicating the benefits of higher education:
 - Compelling local authorities to provide ‘positive activities’ for young people as well as giving young people influence over the provision of local facilities through a £115 million capital fund;
 - Improved guidance and advice for young people and their parents;
 - Better assistance for young people in care, of whom only 11 per cent achieved five GCSEs at A-C grade in 2005 compared with 56 per cent of all children. Assistance includes allowing young people to live with foster carers until the age of 21, and a £2000 bursary for those going to university.
4. Improved applications and admissions:
 - This measure includes a HECS-like deferred fee scheme.
5. Measuring performance:
 - The government stated that there was a “lack of robust data” enabling comparison of the student population and the general population. A Performance Indicators Steering Group was formed to advise on improvements, such as being able to find the proportion of low SES people who are students, not just the proportion of students who are low SES.

There have also been a number of more recent changes to the funding and student support system in the UK which will affect student participation from the 2006/7 academic year. These include:

- From 2006, variable deferred (income contingent) tuition fees of up to £3,070 have replaced up-front fees.
- Low SES students are able to access means tested maintenance grants.
- Deferred (income contingent) loans for maintenance were introduced, with the amount determined by parental income.
- The government has set a target of 50 per cent participation by young people for 2010, which will necessitate increasing participation from members of disadvantaged groups.

Concerns about these changes include:

- Repayable grants represent a shift of the financial burden onto students (previous grants were non-repayable), and the deferred fee is larger than the prior up-front fee, raising concerns that the changes may in fact deter the debt averse, and have a contrary effect to that envisioned by policy.
- The Director of the Office for Fair Access suggested the bursary funding would be better directed toward targeting children from families with no previous higher education experience if policy objectives are to be achieved.
- Others have criticised the £350 million means-tested bursary system as too hard for students to navigate, and likely to deter low SES students. Further, the fact that different institutions offer different bursary ‘packages’ will most significantly affect low SES students, who are the least likely to move to attend university (see below) (Times Higher 9/11/07: 9).

United States

The US system of higher education is extremely diverse. With the exception of military colleges and Tribal Colleges and Universities, universities and colleges are run by the states, and may be public, private (non-profit) or private (for-profit). The most prestigious—and most selective—are the private, doctorate-granting (or ‘four-year’) institutions (including the ‘Ivy League’ institutions), followed by public, doctorate granting, research-led institutions. At the least prestigious end of the spectrum are state-run ‘two year’ community colleges that are open to all comers and offer courses ranging from short certificate programs to two-year associate programs. Many such colleges have agreements with, or are arms of, universities, and offer transition programs from the college to the university.

The student socioeconomic demographic composition of institutions is closely tied to institutional prestige, as the figure below shows.

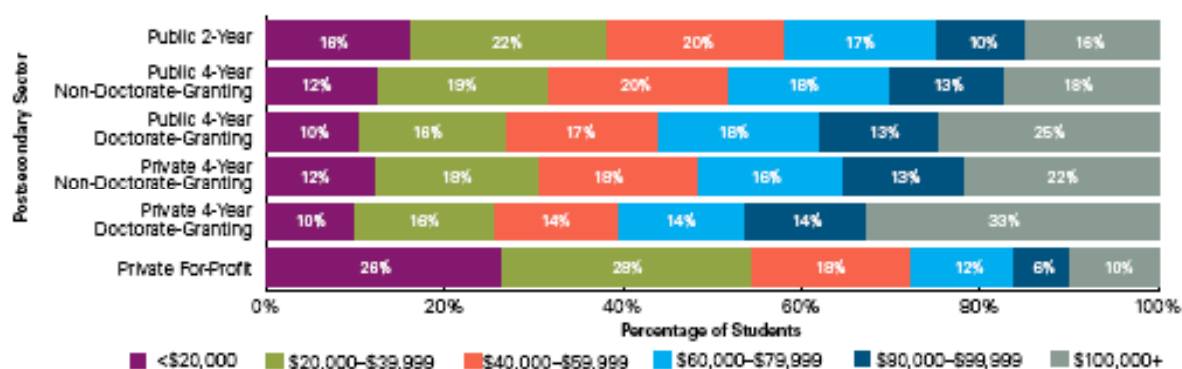


Figure 7.1: Family Income Distribution of Dependent Students Within Postsecondary Sectors, 2003-04. Taken from Baum and Ma 2007: 34.

Approaches to socioeconomic equity in the US are in flux. It appears from a review of the literature that economic equity is coming to take centre stage in the educational psyche, replacing to some extent the centrality of race as the main focus of the equity debate (and indeed socioeconomic inequities underlie racial inequities to a very large extent). However, at the same time as socioeconomic inequity is being recognised as the main issue in higher education, there is a rising tide of claims that socioeconomic inequity is increasing in US higher education. Below, we review the bases for some of these claims.

In the US, there are many universities with aggressive and effective equity programs, sometimes enshrined in state legislation that specifies admissions targets. But the US is also renowned for some of the most socially privileged institutions in the world in which family influence and ‘cheque-book’ admissions prevail. A powerful account of this phenomenon has been provided by Daniel Golden in *The Price of Admissions* (2006). Overall, however, the US has a tradition, if uneven, of open access and equity that has focused on the participation of minority groups, particularly after President Lyndon Johnson’s legislation for affirmative action to redress the legacy of racial discrimination, which opened the doors to

universities for African-Americans. Significantly, though, affirmative action is still under sustained attack and in the past decade affirmative action programs in the United States have been successfully challenged in legal cases with significant ramifications for public and institutional policies for staff and student recruitment alike (Allen 2005, Douglass 2007).

The key messages from the US experience are that: race is an important aspect of educational inequity; race and SES are independent but closely related; that the most prestigious institutions are also the least equitable, and that the most equitable institutions, the community colleges, are the least prestigious; and that aspiration, high-school retention, and high school success are the main barriers to equitable representation of low SES students in tertiary education.

Low SES data and trends in the USA

As is the case in the UK, enrolments in US higher education over the past two decades have increased most rapidly for students from the lower SES groups (see figure below), although in recent years it is the middle class whose enrolment rate has increased the most sharply. Yet the high starting position of the most wealthy students has meant that they remain the main beneficiaries of higher education (Baum and Ma 2007²).

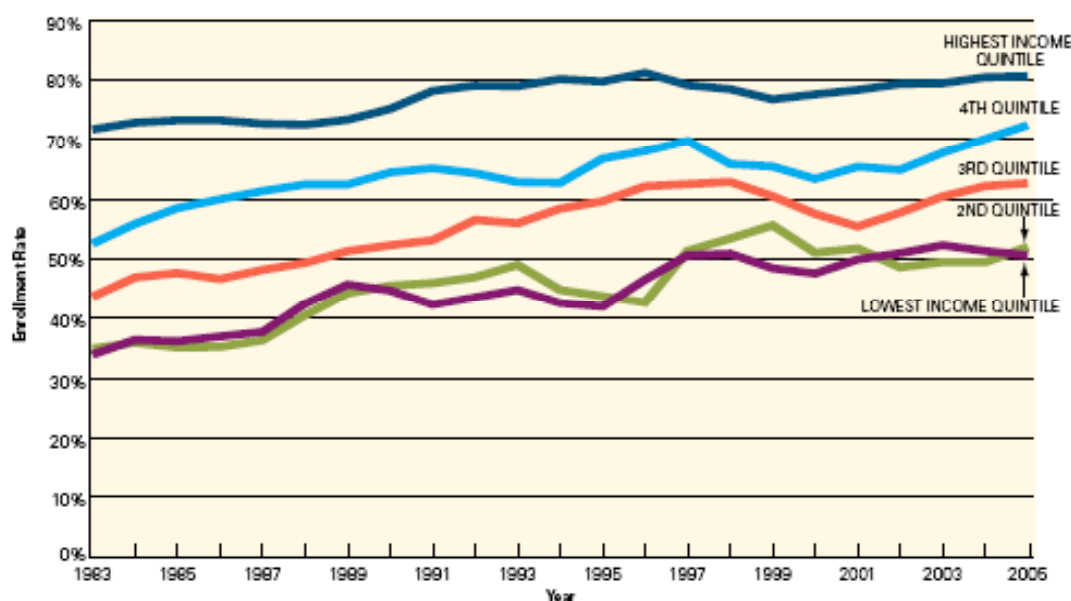


Figure 7.2: Postsecondary College Enrolment Rates of Recent High School Graduates by Family Income, 1983-2005. Taken from Baum and Ma 2007.

Notes: Based on enrolment in college within 12 months of high school graduation. Income quintiles are defined in terms of all households. In 2005, the upper income limits of the quintiles were: lowest, \$16,799; 2nd, \$31,998; 3rd, \$50,380; and 4th, \$80,662. High school graduates are not evenly distributed among income quintiles. In 2005, 13 percent of high school graduates were in the lowest income quintile, 15 percent were in the 2nd, 16 percent were in the 3rd, 24 percent were in the 4th, and 31 percent were in the highest income quintile. Source: NCES, unpublished tabulation using data from the Current

² *Education Pays: The Benefits of Higher Education for Individuals and Society*, by Sandy Baum and Jennifer Ma, is the 2007 report by the College Board. College Board is the US not-for-profit association which manages standardised tests, such as the SAT, used to select students for entrance to higher education from high school.

As in many other countries, including Australia, a key feature of inequity within the US higher education system is the comparative paucity of students from low SES backgrounds at the most prestigious institutions. Astin and Oseguera (2004) have provided a damning account of growing inequality at the top end of the US higher education sector (see Figure x) following an analysis of three decades of data. They show that while two decades of increases in the percentage enrolment of high SES students at the most selective institutions has come largely at the expense of middle-class enrolments, enrolment levels of low SES students have hardly shifted at all in the same period, hovering between 10 and 15 per cent. They conclude that the data reveals

... substantial socioeconomic inequities in who gains access to the most selective colleges and universities in the United States. Further, these inequities have increased during recent decades, despite the expansion of remedial efforts such as student financial aid, affirmative action, and outreach programs. American higher education, in other words, is more socioeconomically stratified today than at any time during the past three decades. Although the underlying reasons for these trends are not clear, it may well be that they are at least partially attributable to the increasing competitiveness among prospective college students for admission to the country's most selective colleges and universities (Astin and Oseguera 2004: 338).

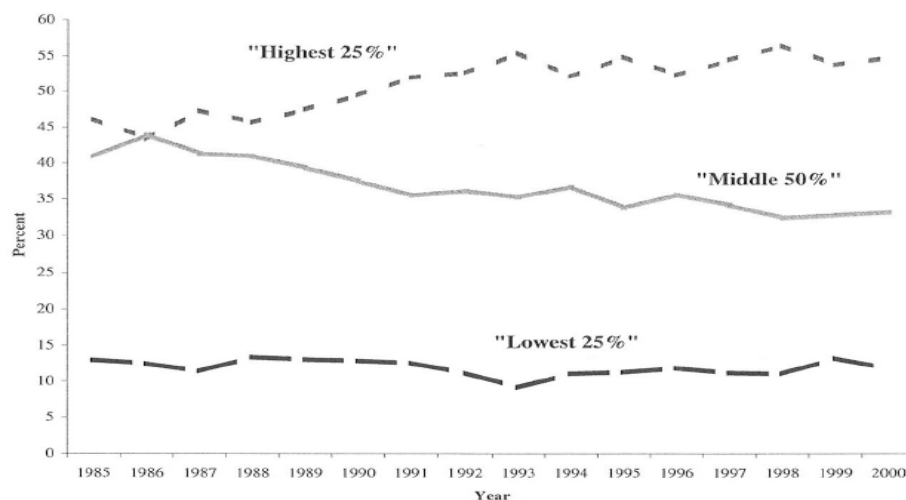


Figure 7.3: Trends in the parental income distributions of freshman entering the most selective (top 10%) institutions, 1985-2000 (Astin & Oseguera 2004)

In the US, educational and other forms of disadvantage tend to be characterised primarily in terms of race rather than social class, and, indeed, racial background does have a marked effect on educational outcomes. For example, while those from low income families are slowly gaining ground on those from high income families in higher education enrolments (as shown above), the gap between white and Asian enrolment rates, and black and Hispanic rates, is not closing. In the late 1990s, the gap between white and black students' college

enrolment rates immediately on completing high school was 8 per cent, and in 2005 it was 12 per cent (Baum and Ma 2007).

Social class, racial background and parental educational levels play an *interrelated* role in determining educational outcomes. There is a strong correlation between race and economic status in the US. For example, in the 2004 census, 24.6 per cent of black households were in poverty, as were 24.4 per cent of American Indian and Alaskan Native household, 22.2 per cent of households Hispanic households, 10.8 per cent of Asian households and 8.4 per cent of white households (DeNavas-Walt and Proctor 2005). Similarly, median household income distributions are aligned to race: the average household income for black households was US\$30,355; for Hispanic households US\$34,299; for white households US\$49,101 and for Asian households US\$56,664. It is important to bear these figures in mind when considering the impact of race on educational attainment, as it is often correlated to SES.

In the US, college degrees are concentrated among those with college-educated parents, who are white or Asian, and who are affluent. Black and Hispanic people, those whose parents did not attend college, and the comparatively poor, are the least likely to attain college degrees, and those who do are more likely to be enrolled in two year public college courses than in the four year public and private colleges dominated by students from affluent backgrounds. In two year public college courses, 38 per cent of students come from the lowest two income quintiles (those whose family income was below US\$39,999), and 26 per cent from the top two quintiles (family income above US\$80,000). At selective doctorate granting colleges, students from the lowest two income quintiles make up 26 per cent of enrolments in four year degree courses, while students from the top two quintiles comprise 47 per cent (Baum and Ma 2007). At the most selective colleges the situation is yet more extreme.

Private four-year colleges can be extremely expensive: in early 2007 George Washington University became the first school in the country to charge fees of more than US\$50,000 a year to undergraduates (Hong 2007). Over the past five years, average tuition and fees at private four-year institutions have risen by 35 per cent—yet prices are ‘soft,’ and few students pay the full fee. At George Washington, less than half of the student body pays the full fee with about 40 per cent receiving need-based aid. Critics argue that there is a marketing element here. For example, another 20 per cent of students at George Washington received merit scholarships, which can be used to make a particular institution look more attractive on the basis of offering a somewhat spurious ‘discount’ (ibid.).

Selective college admissions to the 146 most selective colleges are skewed more heavily by SES than by race or ethnicity. The fourth, or wealthiest, SES quartile of students is over-represented at every level of tertiary institution as measured by selectivity. In their important and influential 2003 study, Carnevale and Rose analyse the relationship between SES and admission to the top selective schools in the US.³ Around 1.2 million high school graduates

³ Analysis based on two sets of longitudinal data from the National Centre for Educational Statistics, (one using 25,000 individuals and one using 30,000 individuals) which included high school grades, college entrance exams and socioeconomic background information, as well as survey data of students, their parents, teachers and principal indicating expectation, home and classroom practices, academic progress and high school environment. Both studies used calculated SES using reported parental income and parental education and occupation. The study uses the high school class of 1995.

enrol each year in one of 1400 four-year colleges. 15 per cent enrol in a top-tier institution, 20 per cent in a second tier institution, 40 per cent in the third tier and 25 per cent in the fourth tier (using Baron's Definition of Competitive Colleges) (Carnevale and Rose 2003). The following table shows the distribution of students from each SES quartile in higher education institutions of each tier:

Table 7.1: Socioeconomic Status of Entering Classes. SES quartile and college selectivity tier. Source: Carnevale and Rose 2003: 69.

Socioeconomic Status of Entering Classes					
	SES Quartiles				
	First	Second	Third	Fourth	Total
Tier 1	3%	6%	17%	74%	100%
Tier 2	7%	18%	29%	46%	100%
Tier 3	10%	19%	36%	35%	100%
Tier 4	16%	21%	28%	35%	100%
Community Colleges	21%	30%	27%	22%	100%

Low SES students face significant obstacles in the path to educational success: only 7 per cent of bottom quartile SES students scored in the top quartile of NELS (aptitude test) examinees, while 50 per cent of top quartile SES students did. Conversely, 39 per cent of bottom quartile SES students scored in the bottom exam quartile as did only 8 per cent of top SES quartile students, and the case is similar for the SAT. Thus SES is a significant barrier to entry into the most selective institutions. The following table shows the distribution of the highest SAT scores among the SES quartiles:

Table 7.2: High Scoring Students by Score and SES Quartile. Source: Carnevale and Rose 2003: 76.

High-Scoring Students Are from the Highest SES Quartile								
				SAT Scores				
SES Quartiles		All	Non-Taker	<1000	1000 to 1100	1100 to 1200	1200 to 1300	>1300
	First	25	37	21	8	6	4	3
	Second	26	30	25	24	17	14	10
	Third	26	22	30	32	29	23	22
	Fourth	23	10	24	36	47	58	66

Nor can test scores be attributed solely to the affluence of the high school attended. "American high schools vary widely in terms of qualifications of teachers, feelings of personal safety, amount of homework, and access to technology as well as family, peer, and community support, and expectations, comment Carnevale and Rose (2003). Yet they show

that at affluent high schools, only 36 per cent of low SES students score in the top half of the NELS test, compared with 77 per cent of high SES students at the same schools:

Table 7.3: High School Performance by Type of High School and SES Quartile. Source: Carnevale and Rose 2003: 69.

Effect of High School Attendance on Scholastic Performance		
Student SES Quartile	Type of High School	Share in Top Half of NELS Test
Lowest Quartile	High Income*	36
	Medium Income*	28
	Low Income*	24
Second Quartile	High Income*	49
	Medium Income*	44
	Low Income*	42
Third Quartile	High Income*	64
	Medium Income*	58
	Low Income*	53
Highest Quartile	High Income*	77
	Medium Income*	68
	Low Income*	70
*High income = less than 10 percent received subsidized lunch; Medium income = between 10 and 30 percent receiving subsidies; Low income = greater than 30 percent subsidized.		

Differences in high school academic achievement are compounded by social class in the chances of acquiring a tertiary education: a low achieving student from a wealthy background has about the same chance of attaining a bachelors degree as a high achieving student from a poor background. A comparison of eighth grade maths test results (taken in 1988) of students who were scheduled to graduate from high school in 1992 with their subsequent educational outcomes shows that the chance of having earned a bachelors degree in 2000 depended more on class background than ability (as measured by the maths test). Seventy-four per cent of high SES students (top SES quartile) who scored highly on the test had completed a bachelors degree in 2000, compared with only 29 per cent of low SES students (bottom SES quartile) who had scored highly. Significantly, 30 per cent of high SES students who scored poorly had completed a bachelors degree, compared with a mere 3 per cent of low SES students who scored poorly. While 11 per cent of low SES students who scored highly did not finish high school, the comparable figure for high SES students was one per cent (Baum and Ma 2007).

This trend is exacerbated by the exceptionally high test scored needed to enter the most prestigious colleges. Many 'Ivy League' colleges claim to be 'need-blind.' By this they mean that if an applicant has the requisite intellectual ability to be accepted, their study will be supported financially, by scholarships or loans. The principle of need-blind admissions is based on the notion that those of merit will somehow rise to the top. An obvious criticism of such claims is that, if students from disadvantaged backgrounds are more likely to fail to finish high school, or are less likely to achieve the grades of their privileged peers, they will never even make the applicant pool.

SES affects aspiration, and aspiration, in turn, affects the likelihood of sitting a college entrance exam. Carnevale and Rose cite a study (Sanderson *et al.* 1996) showing a strong relationship between students' educational expectations and family SES: 42 per cent of surveyed eighth graders from low SES families aspired to bachelor's degrees, as did 64 per cent of mid-SES students and 89 per cent of high SES students. Using their own data, the authors found that children of families with high educational expectations were very likely (76 per cent) to sit the SAT or ACT college entrance test, and that 50 per cent of these children scored highly (a score of over 1000). Conversely, only 28 per cent of children from families with low educational expectations took entrance exams, and of these only 9 per cent scored highly. They argue that a 'virtuous circle' of advantage leads to continued, intergenerational affluence:

...parental education increases parental income, which in turn tends to increase time and resource investments in children and educational expectations. All of these factors lead to higher rates of high school completion and readiness for college. Those who are most ready are more likely to enroll, persist, and graduate. Those who graduate tend to get good jobs with long-term earnings potential. Their children are raised in households with both high earnings and high levels of parental education, continuing the virtuous circle of education and income into the next generation (Carnevale and Rose 2003: 32-33).

Low aspiration among low SES students is another contributor to low SES students' comparative failure to apply to the top colleges, again undermining the rhetoric that being need-blind is an adequate response to economic equity. As Delbanco puts it, "If most applicants come from places like Greenwich and Grosse Point, a college can be "need-blind" without having to dispense much aid" (Delbanco 2007).

There is some evidence that having at least one parent with a bachelors degree is advantageous for US students. This effect is greatest among students of middling ability, and is not strongly correlated to class background. Students in four year bachelor degrees who had scored in the third SAT quartile were much more likely to complete their degree if a parent also had such a degree, with the effect ranging from a 10 percentage point difference for students from the bottom and top income levels, to a 23 point difference for those of middle income. For students who had scored in the two lowest and in the highest SAT quartiles, the effect of having a university-educated parent was less than 4 percentage points (Baum and Ma 2007).

There is some evidence of multiple, or compounded, disadvantage in terms of racial background and social class. SES, then, operates independently of race, and has differing effects on members of different racial backgrounds. For example, in four year degree courses, 48 per cent of Hispanic students from low and middle SES backgrounds completed their degrees, as did 74 per cent of Hispanic students from high SES backgrounds, a 26 point difference. For black students the range was between 55 per cent for low SES students and 65 per cent for high SES students (a 20 point difference); for white students 61 per cent against 80 per cent (19 points), and for Asian/Pacific Islander students a one point difference between low and high SES students (73 and 74 per cent respectively) with those from Asian middle income backgrounds having the highest completion rate of any group at 82 per cent (Baum and Ma 2007).

Students from metropolitan areas were more likely to complete a bachelors degree than those from non-metropolitan areas, and this effect also varied according to racial background. The most likely group to have completed a bachelors degree were metropolitan Asian students (50 per cent), followed by non-metropolitan Asian students (36 per cent) and metropolitan white students (34 per cent). Those least likely to complete a bachelors degree were non-metropolitan Hispanic students (6 per cent), followed by non-metropolitan black students (9 per cent), metropolitan black students (13 per cent), and non-metropolitan white students (19 per cent) (Baum and Ma 2007).

Measurement and indicators of SES in the USA

Because of the decentralised and deregulated nature of the US higher education system there is no one indicator used to measure the socioeconomic status of students. States, private institutions and associations such as the College Board, as well as independent contributions to the academic literature, all use different measures depending on equity goals or demographic characteristics of interest. The most common measure of educational disadvantage is racial background, which, as we show above, is closely associated with socioeconomic status. More direct indicators of SES include household income and the education level of the parents of school leavers. Some studies combine these measures, as can be seen in some of the data reported above.

Policy initiatives in the USA: National

Again, the decentralised nature of the sector means equity initiatives are in the main administrated at state, community or institution level rather than the national level. The US Department of Education does, however, administer various financial aid packages for students, such as grants (including programs for low-income students), loans and work and study programs.

The SAT and selection for college

Historically, tertiary education in the US was the preserve of the wealthy. Throughout the 20th Century, much has been done to open tertiary education up to the broader community, especially through the community college system, which takes all comers and provide a path to bachelor-level education for the academically talented. Yet disadvantage persists, especially with regard to access to the most prestigious colleges as discussed above. An example that illustrates both the desire to open up the most prestigious levels of the education system to the talented, regardless of their socioeconomic background, as well as the persistence of inequality at these same levels, can be found in the philosophy behind the SAT and its practical outcomes.

The SAT, a multiple choice test, is the standard tool used to select graduating high school students for university entrance. The SAT was instituted by Harvard president James Bryant Conant in the 1930s with the intention of measuring students' aptitude and replacing the pseudo-aristocratic student profile of Harvard with a meritocratic one, following Jefferson's dream of a 'natural aristocracy' of gifted students from all social backgrounds (Toch 2008). Conant chose the SAT on the basis that he believed it to measure 'innate intelligence' and therefore to be superior to achievement tests which favour the rich, and those who have had the benefit of private high school educations (ibid). After the Second World War, the other

Ivy League colleges also took on the SAT as the standard admissions test and it has since become the common entrance tool across the selective college system.

However, well before the SAT had become the standard assessment tool for university entrance, its developer, Carl Brigham, had doubts. In an unpublished manuscript he noted that: “The test scores very definitely are a composite including schooling, family background, familiarity with English, and everything else, relevant and irrelevant” (Toch 2008, citing Lemann 1999). The equity of the test has been the focus of sustained criticism ever since.

There have been some attempts to rescale the test so that scores reflect students’ abilities by taking into consideration their background, a move embraced by colleges but rejected by the Educational Testing Service, which administers the SAT on the behalf of the College Board. Lemann asks, “Imagine the hell that would break loose if ... every lawyer’s and doctor’s kid in America got an envelope in the mail containing a score that had been adjusted down to account for the parents’ high socioeconomic status” (ibid.).

There is also evidence that high school teaching has become preoccupied with preparing students for the SAT, rather than with learning (ibid.). One commentator, Thomas Toch, recommends the replacement of the SAT with tests that “educate rather than sort,” such as the French Baccalaureate and the German Abitur. Arguably, more nuanced approaches to selection such as pathways approaches (in the US, community colleges) are better placed to provide access for students with less academic experience—yet these approaches place the greatest funding needs in the poorest colleges.

Policy initiatives in the USA: Institutional / local

Community colleges

Two and four-year community colleges must usually accept all applicants under state legislation and therefore have a far higher level of low SES students and those with minimal education experience than selective institutions. A key challenge for community colleges is retaining students after enrolment. Bailey and Alfonso (2005) have researched the literature on ‘persistence’ program effectiveness (programs aimed at raising the retention of underprivileged groups) at community colleges in the US and cite four main practices common at community colleges: advising, counselling, mentoring and orientation programs; learning communities; developmental education programs for academically under-prepared students; and college-wide reform projects (Bailey and Alfonso 2005).

Bailey and Alfonso found that such programs are often not grounded in research and that purported success is only anecdotal. They also note that students with the most motivation are the most likely to take part in voluntary programs so that success rates do not capture a causal relation between the program and student retention. They report that the successful programs best backed by evidence-based research tend to be ‘learning community’ programs. Such programs focus on ‘themes’ and students go through as a single cohort. Other programs which increase student interaction, such as peer tutoring, have also been shown to be effective in increasing retention. However, the authors warn that interactive programs work best when led by an experienced academic, and that such staff are unlikely to be available for evening classes. Consequently, students who need to study part-time due to work or other

responsibilities—most commonly the students who are also in greatest need of such programs—are the least likely to be able to benefit (Bailey and Alfonso 2005).

Four-year colleges

Carnevale and Rose (2003) overview some of the key recruitment targets of US higher education institutions. Over the period 1992-2000, there was a decrease in the number of institutions actively recruiting disadvantaged students and minorities. In the same period, low SES students were also less likely to be targeted for financial assistance by institutions than any other group, except veterans and disabled students. As the table below shows, over the 1992-2000 period, financial aid offers to ‘no-need’ students increased from 51 to 61 per cent of colleges, to racial and ethnic minorities from 26 to 32 percent, and for economically disadvantaged students from 22 to 29 per cent. Financial aid offers to athletes fell substantially—from 51 to 32 per cent—leaving offers to athletes proportionately equal to those made to economically disadvantaged students. There is anecdotal evidence that students on athletic scholarships come disproportionately from low SES backgrounds.

Table 7.4: Special Recruiting Activities by Student Subgroup and Type of Activity, 1992 and 2000. Source: Carnevale and Rose 2003: 71.

Group	Two-Year Public		Two-Year Private		Four-Year Public		Four-Year Private		All Institutions	
	1992	2000	1992	2000	1992	2000	1992	2000	1992	2000
Racial/ethnic minorities	66	49	36	21	91	66	65	54	67	51
Disadvantaged (as distinct from racial/ethnic minorities)	45	47	24	16	44	37	24	24	35	33
Students with disabilities	35	31	15	12	21	12	12	10	22	17
Students with special talents in art, music, etc.	36	33	30	18	71	54	59	57	51	46
Adults seeking career change	65	63	63	58	59	43	55	41	60	52
Adults improving tech skills	▲	62	▲	50	▲	▲	▲	▲	▲	▲
Adults maintain currency in job	▲	60	▲	46	▲	▲	▲	▲	▲	▲
Out-of-state/district	28	31	40	31	55	57	59	52	46	45
Part-time students	45	48	40	33	25	21	29	21	35	32
Veterans	32	27	29	28	24	15	13	8	23	17
Number of Institutions Responding to Questionnaire	705	505	169	177	366	305	784	657	2,024	1,644

A common reason cited by selective colleges for their failure to enrol representative levels of low SES students, according to Carnevale and Rose, is that they are less likely to be academically prepared. However, the authors argue that students who attain a similar SAT score are equally likely to succeed regardless of SES background, so that if admission policies allowed true representation for the bottom two SES quartiles and raised their admission rates of these students to 38 per cent, completion rates would remain at around 90 per cent at the best colleges (Carnevale and Rose 2003: 55).

Despite this, former Harvard President Derek Bok has said that Harvard's poor record of economic diversity can be justified by low SES students not being 'adequately prepared' to study at college: "I don't think any of us would applaud if we said, 'Gee, we made a big move to bring in low-income students to add diversity,' and then the next year say half or three-quarters of them have flunked out" (Kahlenberg 2003). The claim that such high numbers of low SES students would 'flunk out' is unsubstantiated. Graduation rates are affected by SES, but Carnevale and Rose assert that much of the negative effect of SES on graduation rates, evident in the horizontal measures in the table below, is determined by factors prior to enrolment, such as high school grades etc. Importantly, there is a strong intra-college effect on completion rates (the vertical measure), with the result that students from all SES backgrounds do better at the most selective colleges.

Table 7.5: Graduation rates by Selectivity Tier and SES Quartile. Source: Carnevale and Rose 2003: 69.

SES Quartiles	Graduation Rates by Selectivity Tier				
	All	First	Second	Third	Fourth
All	65%	86%	71%	61%	54%
Lowest Quartile	55%	76%	61%	60%	40%
Second Quartile	63%	85%	63%	58%	63%
Third Quartile	63%	80%	71%	59%	55%
Highest Quartile	73%	90%	79%	66%	58%

Carnevale and Rose show that of students who scored highly on the NELS aptitude test, 31 percent did not go on to attend any postsecondary institution. The authors comment that these students "are the low hanging fruit in any policy strategy to increase SES diversity in four-year colleges, including selective colleges" (Carnevale and Rose 2003: 39).

Drawing together many of the findings from their 2003 study, Carnevale and Rose discuss and dismiss a potential strategy for increasing low SES participation which has been mooted in the Australian sector: class ranking, or making offers to the highest achieving students at individual disadvantaged schools. Because school success, even at disadvantaged schools, is closely related to high SES, taking the best performers at a given school is likely to take the most socioeconomically advantaged students by default. In the US, even the poorest high schools have, on average, 32 per cent of students coming from the top two economic quartiles, and those scoring on the top 10 per cent at such schools are predominantly wealthy students. "As a result," the authors argue, "approaches that focus on class rank, high school quality, or low-income neighborhoods will tend to favor the higher SES within the pool. In other words, class-rank and other approaches that include a minimum qualification reward the highest SES students in low-SES schools and neighborhoods."

Carnevale and Rose make four policy recommendations on the basis of their findings: class-rank plans are fraught with difficulty; economic affirmative action should be widely adopted; race based affirmative action should be maintained; and financial aid policies must be reoriented toward need (Carnevale and Rose 2003: 56). However, the authors caution that "[t]he view that students ought to be selected based on their ability to benefit or their ability to contribute in the broader society turns the traditional admissions model on its head. It

focuses on the value added by the college to the student rather than the value added by the student to the institution” (Carnevale and Rose 2003: 23-5).

A variety of top selective colleges have begun moving towards economic equity at the institutional level using a variety of policy and practical initiatives. These include:

- an amnesty in fee increases at Princeton
- recruitment from schools in poor neighborhoods and transfers for outstanding candidates from community colleges at Amherst
- a call for affirmative action for low-SES students by a former Princeton president
- the termination of early admission programs at some colleges (these tend to favor students from affluent schools), and the replacement of loans with grants for low-income students (Delbanco 2007)

Activities by state universities include:

- the use of comprehensive review at the University of California (which examines students’ academic credentials in the light of family SES, first generation at college, and social and education environmental background)
- contextual achievement measures at the University of Washington (which considers achievement in the context of family income, the number of children in a family, parents’ education and the number of students at the applicant’s school who receive free lunch)
- the State University of Florida’s “Profile Assessment program (which considers family education, SES, special talents and high school geographic location) (Kahlenberg 2004)

Indigenous people in the USA

American Indians provide another example of the convergence of issues of race and SES in the US. The poverty rate for American Indians was 24.4 per cent in 2004, compared to 12.4 per cent for the general population (DeNavas-Walt and Proctor 2005).

While there are various forms of support for American Indians such as institution-specific scholarships and courses at traditional universities, as well as professional academic associations, Tribal Colleges and Universities are the key educational bodies geared to the needs of American Indians. The first college was created by the Navajo Nation in 1968, and there are now more than 30 colleges across 12 states, each controlled and defined by their tribal nation. Tribal Colleges and Universities support American Indians through providing postsecondary education at associate degree and certificate level, as well as, in some cases, bachelors and masters degrees. Mostly operating on Indian reservations, Tribal Colleges are fully accredited and subject to the same standards as similar non-Indigenous institutions, but place cultural knowledge at the centre of educational programs. For example, a student may study a traditional biology course alongside a course in Indian languages (American Indian College Fund 2006). 30,000 students from 250 American Indian Nations study at Tribal Colleges, often from poor rural areas with high rates of unemployment, including reservations.

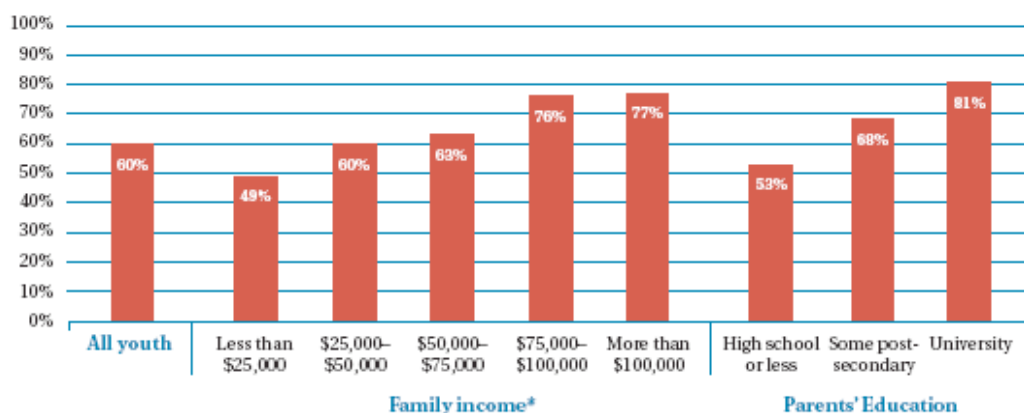
Tribal colleges are supported by the US Government through an Executive Order administered by the Office of the White House Initiative on Tribal Colleges and Universities

(WHITCU). The Order is aimed at increasing recognition of Tribal Colleges and ensuring that they have full access to federal higher education programs (American Indian College Fund 2006; US Department of Education 2007). The American Indian College Fund was established by Tribal College presidents in 1989 to raise private sector funding; it provides scholarships to around 5,000 American Indian students annually, as well as funding for capital works and cultural preservation activities (American Indian College Fund 2006). Colleges are represented by the American Indian Higher Education Consortium (AIHEC, founded in 1972), which lobbies the Government directly to obtain and increase funding, since most colleges are located on federal territories and are not eligible for state or local funding (AIHEC 2004).

Canada

Canada has no single education system, but rather a set of education systems, with each province and territory having exclusive control over all levels of education offered within it. This federalized system creates diversity in terms of programs and courses of study at primary and secondary schools and at colleges and universities. Generally, college education results in the award of a certificate or diploma.⁴ Universities offer the bachelors degree as the first degree, and these can take from three to five years equivalent full time study to complete depending on the province. Universities may have their own assessment and entry criteria, as educational standards and funding are also the responsibility of the province (CICIC 2008). Post-secondary institutions may be public or private, and may be recognized by government or completely unregulated. While most funding usually comes from the province or territory government, institutions may also receive funding from fees, research grants, contracts and donations.

Canada has a notably high participation rate in post-secondary education. However, post-secondary education is still dominated by students from wealthy backgrounds. Over 75 per cent of young people from families with an income over \$75,000 participate in post-secondary education, compared to 49 per cent of young people with a family income of less than \$25,000. Similarly, 81 per cent of students from a family in which one parent has a university education are participants in post-secondary education, compared to 53 per cent come from a family in which parental education level is high school education or lower (Berger *et al.* 2007):



* Participation rates by family income have been calculated only among youth living with at least one parent.
Source: Drolet, 2005.

Figure 7.4: Participation in Post-Secondary Education among 18-24 year olds in 2001.
Source: Berger *et al.* 2007, p. 9.

Due to the already high base participation rate, growth in post-secondary education participation in Canada is slow. Between 1995 and 2002, Canada recorded only a four per cent increase in post-secondary students, compared to an OECD average increase of 49 per

⁴ In Québec, most students attend a *Collège d'enseignement général et professionnel* for their final years of study, undertaking either a three year vocational course or a two year pre-university course.

cent. The Canadian government statistics agency is less pessimistic, however, calculating a 21% increase between 1999–2000 and 2004–05 (Berger *et al.* 2007). Although Canada has a lower rate of growth, it still has the highest rate of post-secondary educational attainment in the OECD: in 2004, 53% of Canadians between the ages of 25 and 34 had completed a post-secondary program (27 per cent held a university degree and 26 per cent held a college credential) (Berger *et al.* 2007, citing OECD, 2006).

Low SES data and trends in Canada

In Canada, as in other countries, those from wealthy backgrounds comprise the largest cohort of university students, while poorer students and those whose parents have lower levels of education are more likely to be in college.

Table 7.6: Post-Secondary Participation by Family Income and Parental Education.
Source: Berger *et al.* 2007, p. 17.

Before-Tax Parental Income Range	University Participation Rate	College Participation Rate	Total Participation Rate
Less than \$25,000	20%	29%	49%
\$25,000–\$50,000	23%	37%	60%
\$50,001–\$75,000	25%	38%	63%
\$75,001–\$100,000	38%	38%	76%
More than \$100,000	46%	32%	77%

Highest Level of Parental Education	University Participation Rate	College Participation Rate	Total Participation Rate
University	50%	32%	81%
Post-Secondary Certificate or Diploma	28%	40%	68%
High School or less	17%	36%	53%

Source: Drolet, 2005. In some cases, figures have been rounded up.

Increasingly, participation in post-secondary education in Canada is seen as a matter of economic importance, and not merely as an equity issue. There is a growing recognition that future prosperity lies in building up a knowledge economy (Corak *et al.* 2003). A problem that faces the education sector, however, is the fact that the number of young adults in the population—the traditional recruitment ground for knowledge workers—is expected to decline after the next 10 years. Canadian government research undertaken in 2004 indicates that almost two in three jobs created in the 2004–8 quadrennium will require a post-secondary education. (Berger *et al.* 2007, citing Bergeron *et al.*, 2004).

However, as the participation rate for better-off students (those whose parents earn above-average incomes or have a college or university education themselves) is high, the most obvious pool from which to recruit future professionals is that of non-traditional learners, including low SES students and members of the First Nations (Berger *et al.* 2007). Increasing low-SES participation in post-secondary education is, then, a necessity which reaches beyond ethical grounds.

Barriers to participation in Canada

Recent studies provide compelling evidence that financial constraints are a comparatively relative minor cause of the under-representation of low SES students in post-secondary education in Canada. Frenette (2007) has subjected the Youth in Transition data (see our section on measurement, below) to fine-grade statistical analysis, looking at students' PISA scores at 15, family income, student and parental expectations and many other factors. He reports that the gap between low SES and high SES participation in post-secondary education is almost completely explained by the data, and that only 15 per cent of the difference can be attribute to financial constraints. Frenette defines a financially constrained student as one who did not attend university despite wanting to do so and cited who finances as one reason why he or she did not attend:

The result of [the statistical] exercise is unequivocal: I find that 96% of the total gap in university attendance between youth from the top and bottom income quartiles can be accounted for by differences in observable characteristics. Differences in long-term factors such as standardized test scores in reading obtained at age 15, school marks reported at age 15, parental influences, and high-school quality account for 84% of the gap. In contrast, only 12% of the gap is related to financial constraints... I argue that the findings suggest that the evidence on the existence of widespread credit constraints is quite weak, and as a result, our focus should now shift towards trying to further understand why students from lower-income families tend to perform more poorly on standardized and scholastic tests than students from higher-income families (Frenette 2007).

As Frenette recognizes, the policy implications of his findings are important: it is a commonly held assumption that financial constraints are the main cause of the low participation rates of low SES students. As a result, policy makers often believe that the best policy response is to provide more scholarships and lower tuition fees (Frenette 2007). As Frenette shows, other responses are needed.

The main goal of Frenette's research is to identify the factors that contribute to low university participation by low SES students, rather than to investigate the causal mechanisms underlying these factors. The research is, however, suggestive of directions for further analysis. Frenette suggests some lifestyle patterns which may contribute to observable differences in test scores and other barriers:

...differences in academic performance across the income distribution may themselves be the result of differences in family income. Families with more financial resources may spend more money on books for children, take their children to museums, spend more on daycare in the early years, locate in neighborhoods with better schools, etc. These actions may result in higher performance on standardized and scholastic tests, and thus, in a higher probability of attending university in the future. Second, upon deciding to attend university, students may be faced with another barrier that is related to their family's financial position: credit constraints. However, the evidence presented in this study casts some doubt on the *widespread* existence of credit constraints in Canada. (Frenette 2007).

Evidence from other studies accords with Frenette's hypothesis that low levels of parental education and low family income impact upon students at high school level in complicated and interrelated ways, as we show below.

High levels of parental education are strongly associated with high grades at the senior high school level, meaning that those with the least educated parents are the least likely to achieve the scores necessary to access university. Across the disciplines, and especially in languages, those with university educated parents are the most likely to receive 'A' grades in grade 12.

Fewer students with college educated parents receive 'A' grades, and fewer again of students whose parents have no post-secondary education, as the figure below shows.

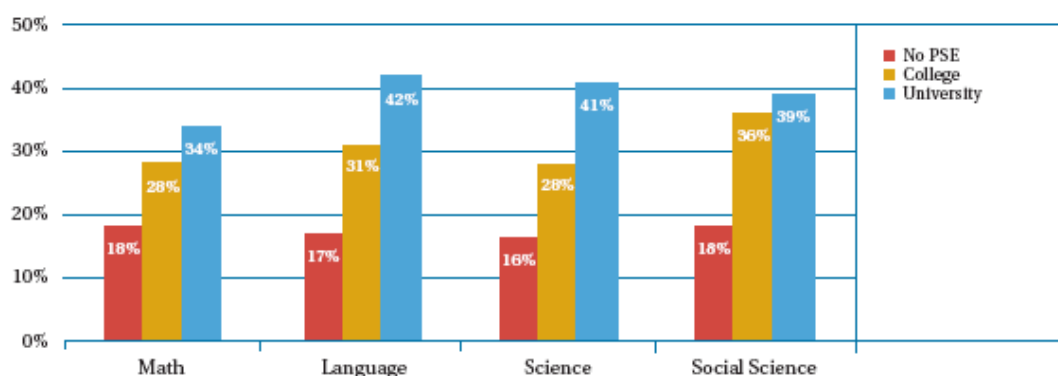


Figure 7.5: High School Seniors With "A" Grades in Various Subjects, by Parental Education. Source: Berger et al. 2007 citing Prairie Research Associates, 2005.

Parental aspiration for their children's education is high across income levels. Over 80 per cent of parents hope that their children will undertake post-secondary education, including those earning the lowest incomes (Corak *et al.* 2003). However, less than 20 per cent of low income families are saving for their children's post-secondary education, compared to more than 60 per cent of high income families (Corak *et al.* 2003). Further, the extent to which young high school students will discuss with their parents how they plan to pay for a post-secondary education is directly related to students' SES. Among university applicants, only 23 per cent of students from families with an income of less than \$30,000 had discussed financing a post-secondary education with their parents when they were in grade 10. Of those from families earning over \$120,000, 43 per cent had discussed financing their later education (Berger *et al.* 2007).

Misunderstandings about the cost of university are most widespread among poorer families. A national poll has found that Canadians tend to overestimate the cost of undergraduate tuition fees, and to underestimate the wage advantage accruing to graduates compared to non-graduates (Broucker 2005, citing a conference presentation by Alex Usher in 2003). Low income families had an even less realistic view of the cost of university education (*ibid.*).

As students progress through high school, those from families in which neither parent has any post-secondary education become increasingly more likely to prefer to work immediately after high school, and study later. In grade 12, 33 per cent of students whose parents have no

post-secondary education would like to work straight after school. The increase is smaller among those with college educated parents, and remains flat and at around 10 per cent for those with university educated parents.

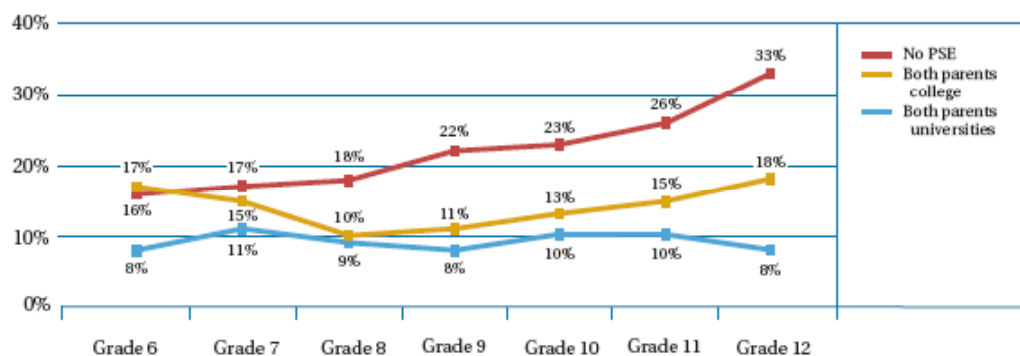


Figure 7.6: High School Students Who Plan to Work Immediately After High School and Study Later, by Students' Grade Level & Parental Education Source: Berger et al. 2007 citing Prairie Research Associates, 2005.

In Canada, as in many other countries, parental education is a very strong indicator of a students' likely participation in higher education. Some studies (for example Knighton and Mirza 2002) find that the correlation between family income level and university access diminishes when parental education level is considered (Broucker 2005). Parental higher education is also correlated with the choice of university over college, even among low SES students. Drolet (2005) found that students with similarly educated parents, but different family incomes, had similar rates of university access, and that when parents had different levels of education but similar family income, participation differences were large (Broucker 2005).

Like Frenette, Broucker (2005) argues that fee levels cannot be regarded as important barriers to participation, given that provinces within Canada with differing tuition rates, and even countries with different tuition types, do not necessarily differ radically on PISA participation scales. Indeed, in Austria and France, where there are no tuition fees, enrolment rates for low SES youth are still very low (Broucker 2005). Despite this, Broucker finds some evidence that fee levels may influence student choice between courses. For example, when medical studies fees rose in Ontario, the proportion of low SES students undertaking the course decreased (ibid.).

The effects of rurality in Canada

Distance from a university or college impacts upon the chances of students attending post-secondary education, and low SES students are more greatly affected than wealthier students. In Canada, 19 per cent of high school students live more than 80 kilometers from a university; these students are only 58 per cent as likely to go to university as those living less than 40 kilometers from a university. For those who live within 40 kilometers of a university, students from high income families are 1.9 times more likely to attend university; for those who live more than 80 kilometers from a university, upper income students are 5.6 times

more likely to attend university (Frenette 2002).

Yet over all participation rates for post-secondary education (including university and college) are the same for low SES students regardless of whether both a university and college, or only a college are located nearby the student's permanent home address. This is because the drop in participation in university is cancelled out by the increased uptake of colleges which are situated in locations in which only a college campus is available (Frenette 2003).

Low SES students are less likely than high SES students to attend university if no university is located nearby. However, rates of university participation for high SES students who do not live near a university are only fractionally lower than for high SES students who do live near a university. If there is a college but not a university nearby, low SES students are far more likely to chose to attend a college than they are if both a college and a university are nearby. High SES students are no more likely to choose college if only college is available nearby than they are if both a college and university are nearby (Frenette 2003), as the table below shows:

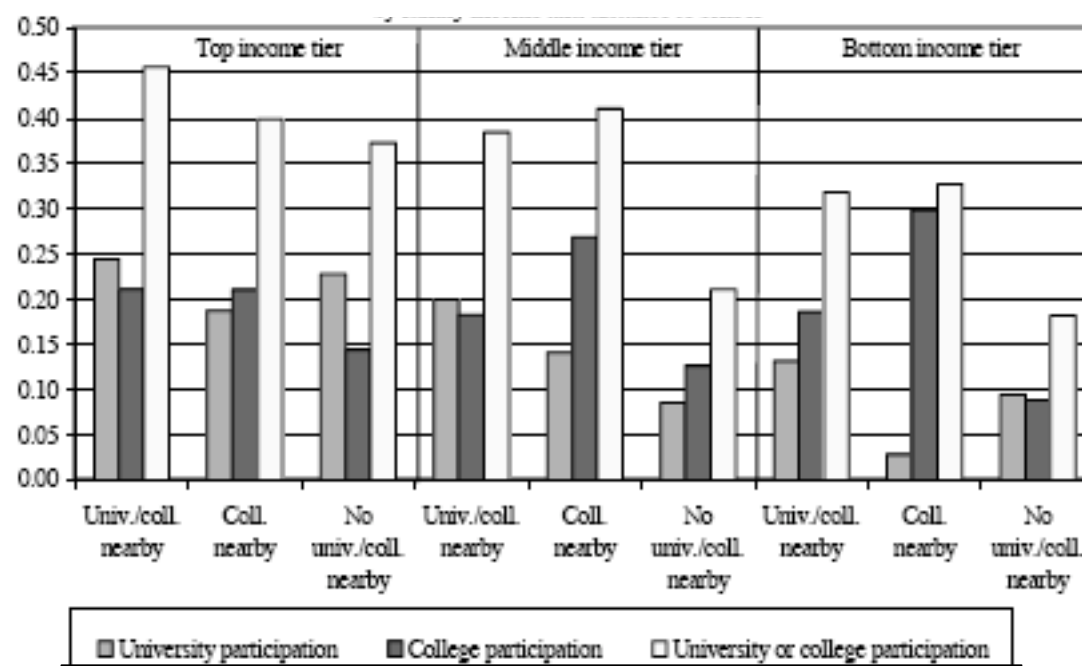


Figure 7.7: Predicted post-secondary participation rates by family income and distance to school. Source: Frenette 2003: 16.

The measurement of SES in Canada

Historically, Canada has not gathered large-scale data adequate to a detailed understanding of patterns in participation. In 2000, however, the Canadian government began collecting detailed student information for the longitudinal study Youth in Transition. The initial cohorts included a stratified sample of 38,000 15 year olds and a separate group of 18-20 year olds. The third cycle of the original 15 year old group (Cohort A) has relatively recently

become available, and provides information on participants' post high school experiences, including university and college participation. This can then be correlated against students' high school scores on the PISA tests (which were taken at the same time as the initial survey) as well as results from standardized tests, high-school marks, feeling control (or mastery) over one's life, self-esteem, parental income, parental education, parental expectations, peer influences, high school attended, and financial constraints (Frenette 2007; Statistics Canada 2008). Students' parents were also surveyed in 2000 about their income in 1999, the presence of parents in the home, parental education levels and parental expectations for their child's education (ibid.). The Youth in transition survey provides a valuable source of information on contemporary issues in youth participation in post-secondary education, relied on by a number of recent studies we discuss in this report (most importantly Frenette 2007, above).

The Youth in Transition data is relatively new, and many studies rely on smaller sample pools and broader data sets (such as censuses). Because education and SES are so strongly correlated, some studies use parental education as a proxy for SES, especially when household income is unavailable within data sets (Broucker 2005).

Policy initiatives in Canada

The reduction of financial hurdles on entry to higher education—through scholarships, loans and bursaries—is the most common response in the Canadian literature to low levels of low SES participation in Canadian higher education. It seems that this response is slowly changing, however, with a growing recognition that the most important barriers to participation are formed long before students reach university age. Still, student assistance, which is provided centrally, remains the most widespread way of addressing educational disadvantage. The Canada Student Loans Program operates in ten of the thirteen jurisdictions (provinces and territories). It is underpinned by a single national legislative framework. There are separate loans programs for full- and part-time students, and assistance comes in the form of need-based, income-based or universal grants, as well as remissions in some provinces. The system of loans and grants is broken up into numerous kinds and over 100 different combinations are available (Junor and Usher 2004).

After a wide survey of the literature on low SES and post-secondary access, Broucker argues, like Frenette, that policy initiatives which focus solely on financial support at point of entry are misguided. Of low SES low participation she concludes:

...it's not an issue that arises only when a young person finishes high school and must choose whether to go to college or university, and its impact is not independent of other influences. Family income and other, often associated characteristics, such as parents' education and aspirations for their children and single parenthood have an impact very early, even before children enter school, because they affect readiness to learn and the child's aspirations and performance. We may not have done well enough in creating policy to deal with such issues. Governments focus on financial support for students attending college or university; but help in paying won't overcome the disadvantages that keep some young people from achieving the marks they need to access post-secondary education in the first place. (Broucker 2005)

Broucker's recommendations are that policies should focus on: 1) Early Intervention programs aimed at raising educational aspirations (she notes a program by the Millennium Scholarships Foundations which sought to address low aspiration through enhancing academic preparation

and increasing knowledge of post-secondary courses and costs); 2) diversity of pathways; 3) information and counseling, and, finally, 4) financial aid. In terms of financial aid, however, the Broucker warns against the increasing tendency for the Canadian government to give such aid in the form of tax credits. Such measures disproportionately benefit the wealthy (Broucker 2005).

There is, however, evidence that increased fees have a disproportionately negative impact on low-SES students, especially in terms of the choice between courses. For example, the correlation between parental income and university attendance became stronger as university fees increased over the 1990s, especially among middle income families, but became weaker after changes in the Canada Student Loans Program raised the maximum amount students could borrow. There was also an increase in low SES participation at around this time (Corak *et al.* 2003). Fee increases in Canada over the 1990s were large. Funding per students was \$11,000 at the end of the 1990s, half of what it was 25 years before. Examples of average fee increases include those for Arts, which were \$1,866 in 1990 (in 2001 dollar terms) and \$3,456 in 2000. In the six years from 1995, average Dentistry fees doubled to \$8,491 and average Medicine fees increased from \$3,207 to \$6,654. These increases are not uniform across provinces, however. At the University of Toronto, the Dentistry fees increased from \$3,235 in 1994/95 to \$13,230 in 2001/02. Conversely, at the University of British Columbia Medicine fees fell from \$4,399 to \$3,740 over the same period (Corak *et al.* 2003).

Indigenous people in Canada

As is the case in the US, the average income of Aboriginal Canadians (Métis, North American Indians, and Inuit) is substantially lower than that of non-Aboriginal Canadians. Income is lowest for those living on reserves, who earn, on average, 49 per cent of the average income of the total population (Mendelson 2006).

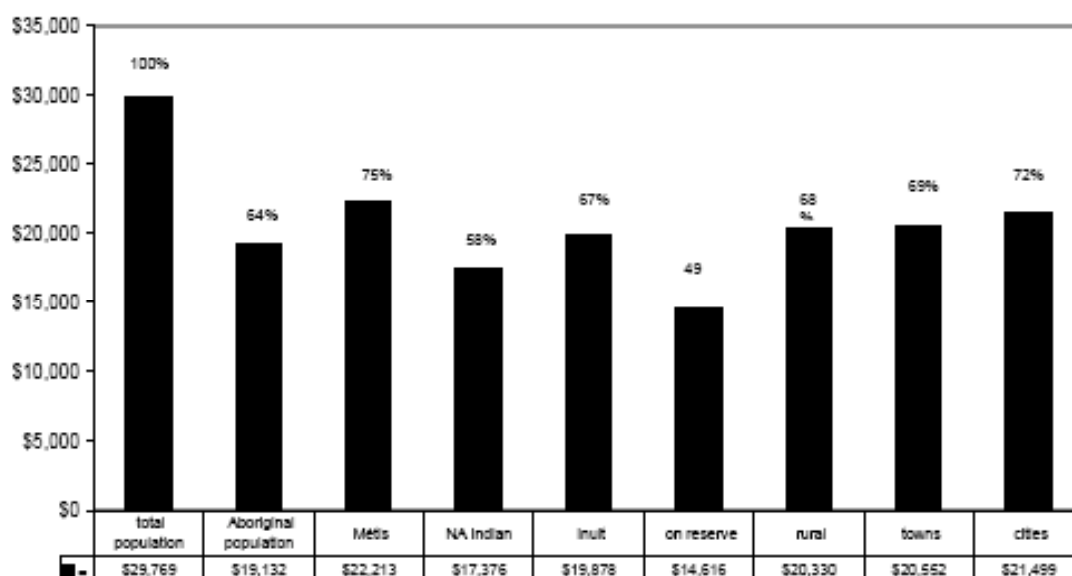


Figure 7.8: Average Canadian Aboriginal income and as percentage of average total income, by area of residence and Aboriginal identity group, 2001 Census. Source: Mendelson 2006.

At around age 20, 60 per cent of non-Aboriginal young people are in, or have completed, post-secondary education, compared to 28 per cent of First Nations youth (Berger *et al.* 2007). Put another way, at the age of 20, 72 per cent of First Nations youth did not finish high school, or did not access post-secondary education. It has been estimated that 58 per cent of First Nations people aged 20-24 and living on reservations did not complete high school. These people are, then, not qualified to enter high education (Berger *et al.* 2007, citing Mendelson, 2006).

There is evidence that the equity gap has widened, and that family income has become a strong predictor of post-secondary education participation. Participation rates of males from families with parents at the lowest levels of educational attainment are in particular decline (Berger *et al.* 2007, citing Finnie *et al.*).

The key cause of the low participation rate for First Nations people is lack of high school qualification. When only youth who had completed high school are considered, the gap in participation between Aboriginal and non-Aboriginal youth shrinks to a 65 per cent rate for First Nations students and 80 per cent for non-Aboriginal students (Berger *et al.* 2007).

As with low-SES non-Aboriginal youth, the most frequent policy response to low participation by First Nations youth has been student financial aid. Non-repayable grants for First Nations and Inuit students, covering the cost of education (tuition, travel and living expense), are delivered by the Department of Indian and Northern Affairs Canada (INAC) in the form of the Post Secondary Student Support Program (PSSSP) (Sinclair 2006). The PSSSP covers all levels of post-secondary study (Sinclair 2006).

However, there have been a number of problems with the PSSP scheme. The Assembly of First Nations (AFN) has estimated that 9,465 applicants could not access the grant in 2004. Further, a 2002 evaluation of the program found that 22 per cent of applications were put on a waiting list and that up to 20 per cent of enrolled and graduated students had had their funding deferred while studying: lack of funding was the reason given to half of the students whose funding was deferred (Sinclair 2006). Further, the level of funding is argued by some to be inadequate to meet students' costs, as the table below shows:

Table 7.7: Government grants compared to student expenditure. Source: Sinclair 2006: 7.

Government Grant 2002		Student Expenditure 2002	
INAC Expenditure PSSSP	\$256,995,200	Academic fees	\$ 4,443
Post secondary enrolment	25,075	Books	\$ 720
		Living Expenses	\$12,100
Funding available per student	\$ 10,249	Student Cost	\$ 17,263
Less Administration Fees 15%	\$ 1,537		
Funding per student	\$8,712		
Government funding as a % of student expenditure = 50%			

First Nations University

Canada has one university created to meet the needs of First Nations students (similar in function to the US Tribal Universities). The First Nations' University of Canada, located in Saskatchewan, was created in 1976 by the Federation of Saskatchewan Indian Nations through a federation agreement with the University of Regina (it was called the Saskatchewan Indian Federated College until 2003). It is the only university which is independently administered by First Nations, with a mission "to serve the academic, cultural and spiritual needs of First Nations' students" (FNUC 2007).

The University enrolls over 1200 students with one quarter coming from outside Saskatchewan, from every province and territory (*ibid.*). Institutionally, it has the largest concentration of Aboriginal faculty in the world. The University offers undergraduate and graduate degrees including: Indigenous studies; Indian languages, literature and linguistics; Indian education; Indian communication arts; public and business administration; social work; nursing; dental therapy; Indian fine arts; and sciences (AUCC 2008).

APPENDIX

Means of variables by parental income quartile in PISA reading sample.

Source: Frenette, Marc (2007). *Why Are Youth from Lower-income Families Less Likely to Attend University? Evidence from Academic Abilities, Parental Influences, and Financial Constraints*. Analytical Studies Branch Research Paper Series, Statistics Canada. Data drawn from: Youth In Transition Survey, Canada.

	Parental income quartile			
	1st	2nd	3rd	4th
University participation	0.310	0.335	0.434	0.502
Reading score<P5	0.074	0.045	0.051	0.029
P5≤Reading score<P10	0.064	0.055	0.044	0.037
P10≤Reading score<P25	0.184	0.159	0.122	0.122
P25≤Reading score<P50	0.266	0.260	0.244	0.225
P50≤Reading score<P75	0.232	0.250	0.262	0.258
P75≤Reading score<P90	0.114	0.143	0.162	0.187
P90≤Reading score<P95	0.036	0.045	0.051	0.069
Reading score≥P95	0.029	0.042	0.064	0.072
Overall mark<60%	0.056	0.049	0.046	0.041
60%≤Overall mark<69%	0.167	0.161	0.135	0.143
70%≤Overall mark<79%	0.352	0.332	0.337	0.301
80%≤Overall mark<89%	0.301	0.339	0.357	0.383
Overall mark≥90%	0.064	0.074	0.092	0.106
Mastery/self-esteem<P5	0.058	0.058	0.043	0.041
P5≤Mastery/self-esteem<P10	0.061	0.053	0.043	0.043
P10≤Mastery/self-esteem<P25	0.166	0.142	0.146	0.147
P25≤Mastery/self-esteem<P50	0.220	0.229	0.232	0.224
P50≤Mastery/self-esteem<P75	0.276	0.270	0.276	0.273
P75≤Mastery/self-esteem<P90	0.132	0.154	0.159	0.155
P90≤Mastery/self-esteem<P95	0.045	0.046	0.050	0.058
Mastery/self-esteem≥P95	0.043	0.049	0.051	0.057
One parent	0.303	0.148	0.082	0.050
Two parents, one or none being a birth parent	0.097	0.107	0.119	0.119
Two birth parents	0.600	0.745	0.799	0.831
Parents have no postsecondary certificate	0.469	0.350	0.246	0.175
Parents have a non-university postsecondary certificate	0.355	0.434	0.379	0.313
Parents have an undergraduate degree	0.118	0.149	0.242	0.296
Parents have a graduate or professional degree	0.045	0.058	0.127	0.210
Parents expect university degree	0.620	0.652	0.729	0.794
Very low perception of returns to schooling	0.017	0.016	0.017	0.016
Low perception of returns to schooling	0.067	0.067	0.061	0.064
High perception of returns to schooling	0.499	0.496	0.504	0.485
Very high perception of returns to schooling	0.417	0.421	0.419	0.436
Few or no friends plan to further education after high school	0.205	0.194	0.150	0.140
Most friends plan to further education after high school	0.505	0.485	0.515	0.485
All friends plan to further education after high school	0.290	0.321	0.335	0.375
Atlantic provinces	0.123	0.096	0.060	0.052
Quebec	0.177	0.185	0.156	0.150
Ontario	0.361	0.384	0.443	0.483
Manitoba–Saskatchewan	0.097	0.089	0.078	0.058
Alberta	0.087	0.097	0.113	0.125
British Columbia	0.156	0.150	0.150	0.132
Female	0.549	0.529	0.523	0.501
High-school quality<P5	0.054	0.057	0.045	0.040
P5≤High-school quality<P10	0.045	0.046	0.055	0.055
P10≤High-school quality<P25	0.146	0.174	0.140	0.135
P25≤High-school quality<P50	0.247	0.270	0.258	0.234
P50≤High-school quality<P75	0.262	0.230	0.256	0.251
P75≤High-school quality<P90	0.142	0.129	0.150	0.174
P90≤High-school quality<P95	0.058	0.046	0.047	0.052
High-school quality≥P95	0.046	0.048	0.049	0.058
Financially constrained	0.134	0.109	0.079	0.059
Sample size	4,327	3,930	3,298	3,147

Note: Percentiles are denoted by 'P.'

Source: Statistics Canada, Youth in Transition Survey, Cohort A.

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APPENDIX I

University attendance by socioeconomic status: Census data

Office of the Vice-Chancellor
University of Melbourne
February 2008

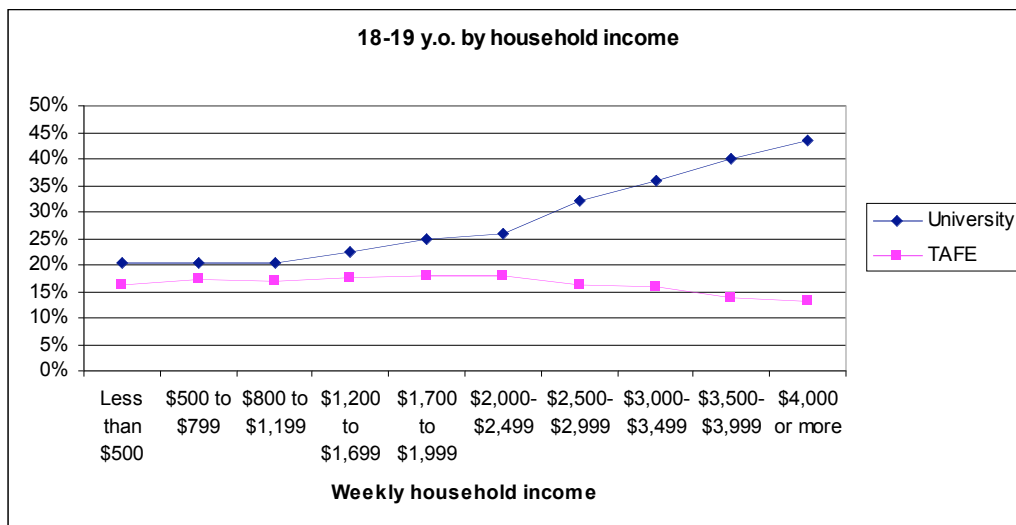
Equitable access to higher education regardless of socioeconomic background is a long-term goal of both governments and universities. However, the most commonly used indicator of access, the proportion of low socioeconomic status (SES) students of all Australian enrolments, shows no progress since the statistics started being collected in 1991. Every year, around 15% of students have a home postcode in the lowest 25% of postcodes by SES.

However, this indicator has two problems. The first is that postcode is a rough measure of socioeconomic status. The second is that it can conceal progress for low SES groups. Because its comparison point is all Australian enrolments, increasing university attendance by low SES groups will not show in the statistics unless their attendance rates grow more quickly than the rates of other groups. A partial way around this problem is to use census data on 18 and 19 year old university and TAFE students living at home. Though this captures a smaller share of the total university population than the postcode data, because many teenage students still live with their parents we can use census data to analyse university and TAFE attendance by parental occupation and household income.

Post-school education and family income

As figure 1 shows, the chance of a young person in this age group attending university is more than twice as high in the highest income households (\$4,000 a week or more) as it is in the lower income groups. Attendance rates are flat at around 20% for all households with incomes at and below what a full-time worker on average weekly earnings would bring home. TAFE attendance varies much less across the income categories, though it goes into decline as household income rises above \$100,000 a year.

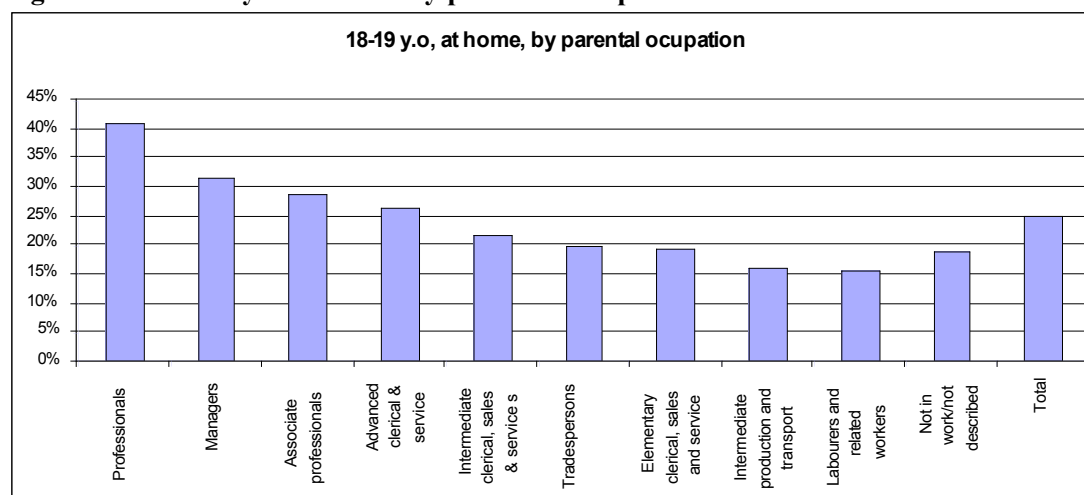
Figure 1: TAFE and university enrolment by weekly household income



Post-school education by parental occupation

As figure 2 shows, in 2006 the late-teen children of professionals were far more likely to be at university than their contemporaries with parents in any other occupation. 41% of the 18 and 19 year old live-at-home children of professionals were at university, compared to only 16% of labourers' children. The gap is larger for upper-status professionals such as doctors, lawyers, dentists, vets and academics. 58% of their late-teen children are at university. A clear white collar/blue collar divide exists, though tradespersons' children are slightly more likely to attend university than those of elementary clerical, sales and service workers.

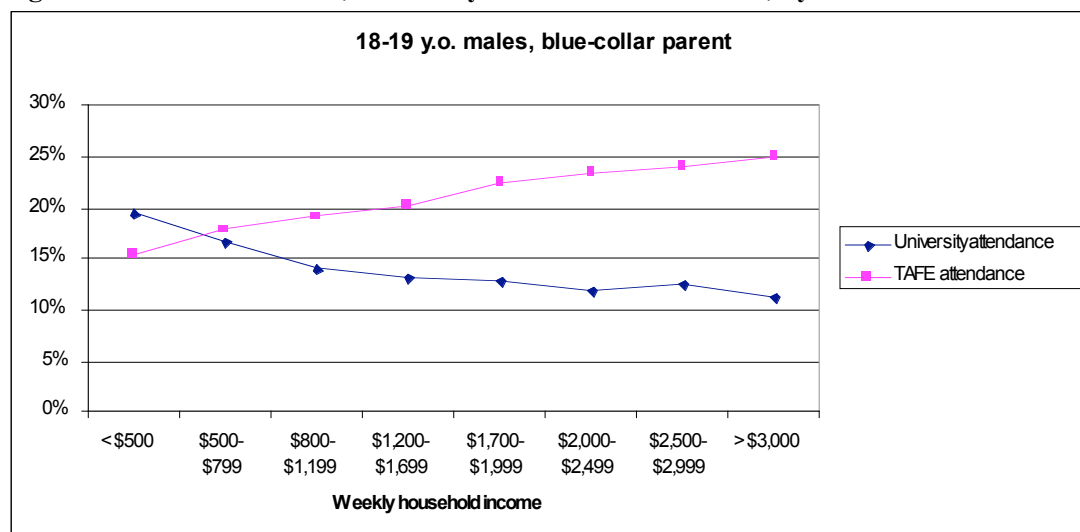
Figure 2: University attendance by parental occupation



Overall, parental occupation seems to be more important than family income. For example, among households earning \$72,800 to \$88,400 a year, the most common income range for these families, the children of professionals are still more than twice as likely to be at university as the children of labourers or production and transport workers (36% compared to 17%).

Nearly a third of blue-collar families with 18 or 19 year olds at home have household incomes exceeding \$100,000 a year, but affluence does not make them more likely to go to university. In the case of males (figure 3) higher household income, as shown in previous census years, is associated with a *lower* likelihood of attending university and a higher likelihood of attending TAFE. Possibly these young men follow their fathers into the more lucrative blue-collar jobs. The expected pattern of rising university attendance by income is seen for the daughters of blue-collar parents, but the differences are small. As seen in figure 4, 22% of young women in the poorest blue-collar families attend university, and 25% in the highest-income blue-collar families.

Figure 3: Blue-collar males, university and TAFE attendance, by household income



Note: Blue collar defined as the following ABS occupational categories: tradespersons and related workers, intermediate production and transport workers, and labourers and related workers.

Figure 4: Blue-collar females, university and TAFE attendance, by household income

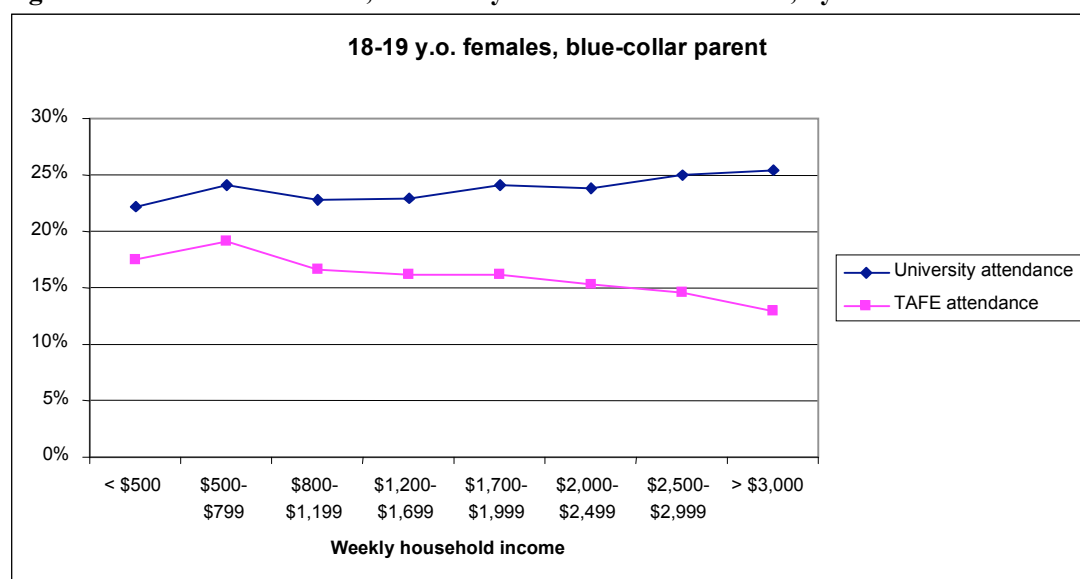
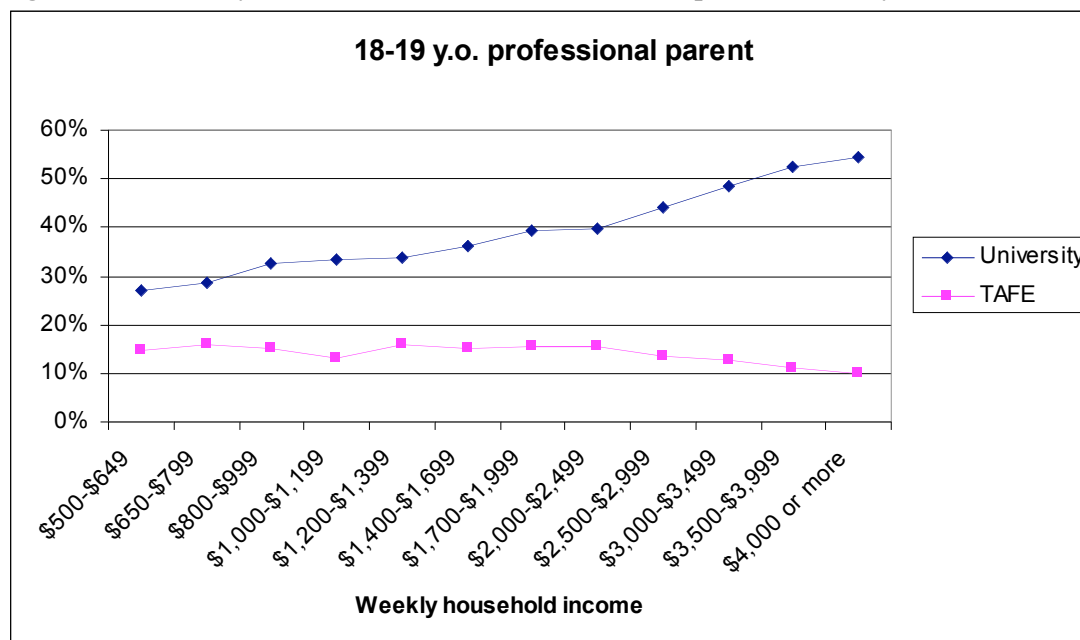


Figure 5 show that among professional families, unlike blue-collar families, university attendance becomes more likely as family income increases. However, children from the poorest professional families have higher university attendance rates than the children of the wealthiest blue-collar families.

Figure 5: University and TAFE attendance, children of professionals by household income



Comparisons with previous census years

Comparisons over time are potentially affected by changing proportions of students living at home. However, among those who are living at home there was a steady increase in university attendance rates between 1991 and 2001, followed by a slight decline from 25.86% to 25.21% between 2001 and 2006 (figure 6).⁵ This was caused by a small decrease in attendance rates among the late teenage children of white-collar workers, while the children of blue-collar workers maintained the gains they had made between 1991 and 2001.

If more students from white-collars families were living away from home in 2006 compared to 2001 it would help explain why the attendance rate of the living-at-home group dropped slightly. Unfortunately that theory cannot be tested with the available census data. However, comparing the census data on 18 and 19 year old students living at home with the DEST data on domestic 18 and 19 year old enrolments suggests that a lower proportion of students in this age group are group are living at home. 61% were at home in 2001 and 58% in 2006 (figure 7).⁶ It is therefore likely, though not certain, that the change between 2001 and 2006 seen in figure 6 represents a change in where students live rather than a decrease in enrolment rates.

⁵ 1996 data drawn from Bob Birrell, Angelo Calderon, Ian R. Dobson and Fred T. Smith, 'Equity in access to higher education revisited', *People and Place*, Vol. 8 No. 1 (2000).

⁶ Comparisons with different data sources are not ideal. For example, DEST data does not cover students at some private higher education providers (especially 2001), the census data includes at-home children of foreign citizens temporarily living in Australia, and students' ages refer to dates at different times in 2001 and 2006.

Figure 6: University attendance trend, 18 & 19 y.o. living at home 1991-2006

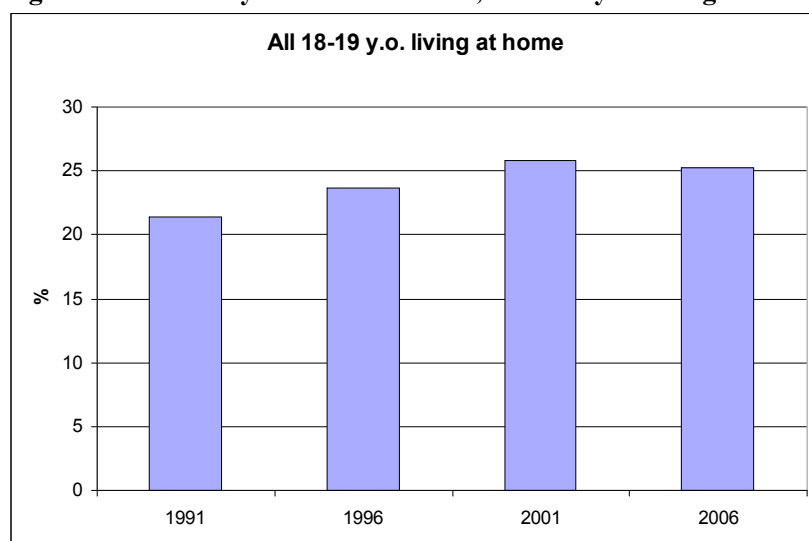
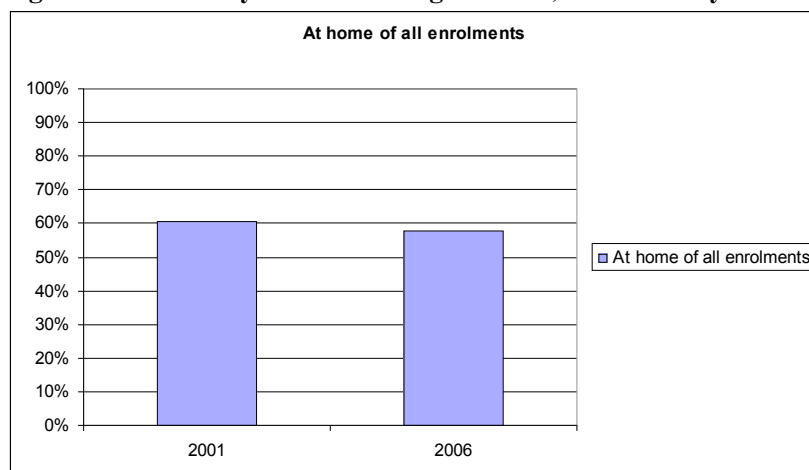


Figure 7: University students living at home, all 18 & 19 y.o. university students 2001-2006



Conclusion

Overall, this census data suggests that university attendance rates were stable for young people in all socioeconomic groups between 2001 and 2006. Though the socioeconomic gaps remain very large, a higher percentage of low SES teenagers attended university in 2001 and 2006 than did so in 1991 and 1996. The increased cost of attending university since 1997 does not appear to have had net adverse effects on any of the socioeconomic groups.

However, the fact that cost increases had no negative effect on attendance rates raises doubts about whether cost decreases or other financial incentives would have positive effects. For blue collar families, household income appears to have very little effect on the likelihood that their teenage children will attend university. School results are the major influence on university attendance.⁷ Reducing hours spent in paid work to improve academic results may be a better policy rationale for improved student income support.

⁷ Buly A. Cardak and Chris Ryan, 'Why are high ability individuals from poor backgrounds under-represented at university?', La Trobe University School of Business Discussion Paper No. A06.04, June 2006.

APPENDIX II

Higher Education Statistics Agency (UK)

APPENDIX IIA:

Selected definitions used by HESA in calculating performance indicators

In section 5 of this report we discuss performance and benchmarking indicators used in the UK to measure the participation of various groups in higher education and to set admissions goals for institutions. Technical notes for the UK's performance indicators are set out below as a useful example of measuring socio-economic status, including the use of geographic-based analysis (information for the UK's benchmarking process is included at Appendix IIB). This information is taken from the Higher Education Statistics Agency (UK) website (access date 20/12/2007):

http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=596&Itemid=141

Indicators included

The Performance Indicators cover the following areas:

- Widening participation indicators, that is, what proportion of entrants come from various under-represented groups such as state schools or colleges, specified socio-economic classes and low-participation neighbourhoods.
- Students who are in receipt of Disabled Students' Allowance (DSA).
- Indicators of the non-continuation rates of institutions. T3 looks at the proportion of students who do not continue at an institution beyond their first year there. T4 looks at the proportion that resume study after a year out of HE. T5 gives the projected outcomes for students who are at an institution, that is, what proportion are projected to qualify at the institution, transfer to another institution, or leave higher education with no qualification.
- Table T6, which is published only for Welsh institutions, provides module completion rates for part-time students.

Higher education institutions in the UK are diverse and the range of indicators reflects part of this diversity. Some of the factors that make up this diversity have been taken into account in producing the benchmarks which are included in most of the tables. For more information on what the benchmarks are, please see the Guide to PIs.

How to interpret the indicators

Because of the diversity of UK HEIs, there is no one measure of what is 'best'. The indicators in this report are designed to be taken together and even so do not cover all facets of the sector.

In making comparisons, care should be taken to ensure that two institutions are alike enough to compare, or at least that the differences are made explicit. There is no point, in the extreme case, in trying to compare a small specialist college of art and design with a large multi-

faculty university. However, there are less extreme cases where comparison is still not meaningful. To help decide if two institutions are alike enough to be compared, the benchmarks may be used. In general, if two institutions have substantially different benchmarks they should not be compared.

Definitions

The data used in constructing the indicators have been taken from the HESA database. The HESA Student Record contains information about individual enrolments, which, because a student can be enrolled on more than one programme of study, will exceed the number of students. Postdoctoral students are not included in the HESA Student Record.

All students included in the tables are those whose normal residence is in the United Kingdom, excluding the Channel Isles and the Isle of Man. This information comes primarily from the HESA POSTCODE field, with the DOMICILE field used if there is no valid postcode supplied. If neither field supplies valid information, it is assumed that the student is resident in the UK. Incoming and visiting exchange students and students studying for the whole of their programme of study outside the UK are excluded from the tables.

Age

Data are divided between young and mature students, defined as follows:

- **Young** students are those who are aged under 21 at 30 September of the academic year in which they are recorded as entering the institution. So for students recorded as entering an institution in 2005/06, young students are those born after 30 September 1984.
- **Mature** students are those who are aged 21 or over, also at 30 September of the academic year in which they are recorded as entering the institution.

Socioeconomic classification

The information on socioeconomic classification is taken from the National Statistics Socioeconomic Classification (NS-SEC). The classifications used are:

- 1 Higher managerial and professional occupations
- 2 Lower managerial and professional occupations
- 3 Intermediate occupations
- 4 Small employers and own account workers
- 5 Lower supervisory and technical occupations
- 6 Semi-routine occupations
- 7 Routine occupations

The performance indicator is the proportion of students from NS-SEC classes 4 to 7 (HESA field SEC codes 4, 5, 6 and 7) out of those from NS-SEC classes 1 to 7. NS-SEC class 8, long-term unemployed or never worked, has been included with unknown classification for the purposes of the performance indicators.

Low-participation neighbourhoods

This definition uses work carried out into the rates of participation in higher education of young people. Areas for which the participation rate is less than two-thirds of the UK average rate have been defined as **low-participation neighbourhoods**. Students have been allocated to these neighbourhoods on the basis of their postcodes, using the Super Profiles

classification.

Geodemographic analysis and location-adjusted benchmarks – technical details

Defining areas

Any geodemographic analysis must start by defining the areas to be used. The starting point is generally a set of small administrative areas for which information is readily available. There is a range of classifications which can then be used to combine these small areas into groups. The classifier used here is the Super Profiles system.

The small areas taken are the Census enumeration districts (EDs) in England and Wales, and the output areas (OAs) in Scotland. The classification is based on data collected in the 1991 Census of Population, supplemented with data from other sources. Areas belonging to the same group, or cluster, will not necessarily be geographically adjacent. For example, one cluster might contain suburban areas of semi-detached housing from Leeds, Manchester, Birmingham and Bristol, and another may contain inner city areas from those same cities. Postcodes can be used to identify the ED (or OA) and hence the clusters. This ‘postcode mapping’ allows nearly all students to be allocated to one of the clusters, on the basis of their home postcode.

A small proportion of postcodes cannot be mapped to EDs, either because they have been wrongly recorded or because they are too new to have been included in the postcode file. Similarly, a small proportion of EDs have not been classified, for example if the number of residential dwellings in the area is too small to provide reliable information. In either case the result will be a cluster whose neighbourhood type is unknown. The 160 clusters which resulted from this method were classified as ‘low participation neighbourhood’ or ‘other neighbourhood’ by estimating, for each cluster, the participation rates in higher education for young entrants. These rates vary from under 5% to over 95%. Clusters with participation rates less than two-thirds of the national average were defined as ‘low participation’.

Population estimates

The participation rates as defined above depend on two elements: the population of the area and the number of students from that area. The number of students is taken from the HESA database, with postcodes used to allocate students to areas. The population estimates are an uncorrected projection of the 1991 Census population figures. HEFCE is working to create more accurate estimates of populations as part of a project to monitor participation across the sector, and these new estimates will be used to check the classification of neighbourhood types as ‘low participation’.

Localised effects

Under certain conditions the location of an institution can have an impact on the low participation neighbourhood indicator, making it appear different from the other widening participation indicators. In particular, there are three characteristics which have an impact on institutions in London:

- Although most clusters are geographically widespread, some are concentrated in London. This is due to the special patterns of car ownership, methods of commuting, accommodation types and so on.
- Institutions in London tend to recruit a high proportion of students from London.

- The participation rate overall is higher in London than for most other parts of the country. These factors taken together mean that areas in London may be less likely than similar areas elsewhere to be classed as low participation. As a result, institutions in London tend to have a lower proportion of students from low participation neighbourhoods relative to their benchmarks.

There are also other local effects which could have an impact on the rates of participation. For example, enumeration districts in some rural areas cover a greater area than those elsewhere, and so tend to include a wider range of household types. This could, in principle, lead to pockets of low participating groups being incorporated in high participation neighbourhood types. However, we have found no evidence that such effects have a significant impact on the statistics for institutions.

Measuring effects of locality

Supplementary Table SP1 shows the percentages of young entrants from each of the regions of the UK who come from low participation neighbourhoods; NS-SEC Classes 4, 5, 6 and 7; and state schools. The scale of the differences between regions means that institutions which recruit most of their students locally may find they have characteristics quite different from the national average.

Because of these differences, we have looked at ways in which a student's domicile could be incorporated into the existing benchmarks of the widening participation indicators. Using the same methodology as is used for the current benchmarks, and taking the student's region of origin as another factor, we have produced a value that will give an indication of how important the location factor is. This is the location-adjusted benchmark.

For institutions which recruit from across the UK, there is very little difference between the standard benchmark and the location-adjusted benchmark. Institutions which recruit more locally will have larger differences, possibly 3 or 4%, between the original and the location-adjusted benchmark. These larger differences show that the indicator is affected by the characteristic of the area the institution recruits from. In general, the greatest differences occur for the low participation indicator, and the smallest for the NS-SEC indicator.

Questions

In considering how best to measure locality effects, a major concern was raised. By allowing for the effects of locality, there is a danger that what we are trying to measure could be partly obscured. Differences between geographical areas may be caused by disparities between institutions, or these disparities may be the result of geographical differences. Until we have resolved this circularity we need to be careful in making allowances for geographical effects. There is a further difficulty with the method used. In theory, if an institution situated in a region of low participation were to recruit predominantly from another region of high participation, that institution's benchmark would not reflect its locality. Rather, it would reflect the locality from which its students were recruited. In practice that is unlikely to happen, partly because we have used region rather than some smaller geographical area as the basis.

The location-adjusted benchmark has only been used with the participation indicators, because of the known differences in the way these groups are spread across the country. They have not been used with the indicators of retention or non-continuation, nor is there any plan

to do so, for two reasons. The major reason is that to include location as a factor in non-continuation would imply that people from different regions could have different continuation rates, even taking into account their subject of study and their entry qualifications. This would not be acceptable. A further reason is that the differences between the non-continuation rates for students from different regions is small. A location-adjusted benchmark for these indicators would therefore not provide any extra information.

APPENDIX IIB:

Sector benchmarks (UK) – technical notes and detailed information

The following information shows how institutional benchmarking, against which access is measured in the UK, is calculated by the Higher Education Statistics Agency (UK). It is taken from the HESA website (access date 20/12/2007):

http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=587&Itemid=141

Tables referred to below include the ‘widening participation’ tables, which can be found at: http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=586&Itemid=141

Adjusted sector benchmarks – technical notes and detailed information

This page contains the technical details and assumptions made in producing the adjusted sector benchmarks [given in tables]. It also covers the location-adjusted benchmarks, and the calculations for the standard deviations. Details of the subject and entry qualifications breakdown used to obtain the benchmarks, and tables showing the numbers of students in each category and the proportion of students in each category with different characteristics, are given at the end of this document.

Most of the indicators included in these tables have benchmarks attached. The benchmarks are not targets. They are average values which will change from one year to the next if the overall value of the characteristic changes. They are provided to give information about the sort of values that might be expected for an institution’s indicator if no factors other than those allowed for were important. The corollary of this is that where differences do exist, this may be due to the institution’s performance, or it may be due to some other factor which is not included in the benchmark.

What should be included in the benchmark?

The factors to be included in the benchmarks need to have a number of characteristics. In particular they should:

- be associated with what is being measured
- vary significantly from one institution to another
- not be in the institutions’ control, and so not be part of their performance.

The first two characteristics were easy to identify. It was obvious from analysis already done that non-continuation rates, for example, varied between subjects, so subject as a factor had the first characteristic. It also had the second characteristic, as the proportion of students in each subject area varied between institutions.

It was not so easy to identify factors with the third characteristic. For example, the subjects offered at an institution could be considered to form part of that institution’s performance, in that they could theoretically be changed, but in practice changing an institution’s subject mix substantially is very rare. After much discussion it was agreed that both subject of study and entry qualifications should be counted as outside an institution’s control.

The benchmarks were therefore set up to take account of the entry qualifications of an institution’s students, the subjects they studied, and their age. It needs to be stressed that

because a difference between institutions may be accounted for by differences in the subject or entry qualification profiles of the institutions this does not imply a justification of that difference. The purpose of the benchmarks is to allow any discussion of the reasons for the differences to be carried out on an informed basis.

Using the benchmarks

The tables of indicators, by including all institutions in one table, allow direct comparisons to be made both between institutions, and between an institution and the sector. However, if the benchmarks were ignored such comparisons would not take account of the effects of different subject profiles or the different entry qualifications of the students. In general, indicators from two institutions should only be compared if the institutions are similar. If the benchmarks are not similar, then this suggests that the subject / entry qualification profiles of the institutions are not the same, and so differences between the indicators could be due to these different profiles rather than to different performances by the two institutions.

To compare an institution's indicators to the sector, the benchmark should be used in preference to the overall sector average, again because it takes account of the subject and entry qualifications profile. We have provided a symbol beside the benchmark to show whether the difference between the indicator and the benchmark is significant.

Two symbols are used to show significance. A plus sign, '+', indicates that the institution's indicator is significantly better than its benchmark and a minus sign, '-', indicates that the indicator is significantly worse than its benchmark. If there is a blank, the institution can say that its indicator is similar to the sector average allowing for subject and entry qualifications. Institutions whose indicator is significantly worse than the benchmark should look carefully at their figures to determine why the difference is occurring, bearing in mind that there may be some explanation based on factors that have not been taken into account.

Location-adjusted benchmarks

For institutions in England location-adjusted benchmarks are included in tables T1 and T2, in addition to the original benchmarks. These benchmarks take account of where an institution's students come from, as well as their subject and entry qualifications. They are the result of work done by HEFCE to try and measure the effect of location on the access indicators in these tables.

The difference between the two benchmarks will show how much effect the region of origin of an institution's students has on the indicator. Small differences, say no more than 1 or 2 per cent, suggest there is little effect. Either the institution recruits nationally, or it recruits locally from a region which is similar to the average of the UK as a whole. Larger differences mean that the geographical effect seems to be important.

Which benchmark is used will depend on the context. Both benchmarks provide information about the institution, and together they can shed light on why an indicator takes certain values. Note that in deciding whether two institutions are similar, it is the original benchmark that is most informative – the fact that the location-adjusted benchmarks of two institutions are different may only indicate that the institutions are in different parts of the country. Institutions which do better against the location-adjusted benchmark than against the original one can point out that their location, in the sense of where their students come from, is

affecting their results. An institution that does better against its original benchmark than against the location-adjusted benchmark may note that, although much of its success in recruiting students from low participation neighborhoods, for example, is because of its location, nevertheless it is still taking in large numbers from such areas. In both cases institutions should examine their results critically.

The location-adjusted benchmarks have not been included for institutions in Wales, Scotland or Northern Ireland. The funding bodies for these institutions have decided that such benchmarks could be confusing when applied to institutions in these areas.

Technical notes

The factors allow the population to be broken down into well-defined categories, which are used in the calculation of the adjusted sector benchmark. In addition, the 'sector population' needs to be defined, as it is not the same in all cases. Each indicator relates to a specific sub-set of the institution's students, for example, young full-time first degree students, or mature part-time undergraduates, and the adjusted sector benchmark is based on the equivalent sub-set of the sector population.

The sub-set of the population used will only contain students for whom information to calculate the indicator is available. The institution's profile is also based only on those of its students with that information available. So, for example, if the information about school type is available for only 80 per cent of an institution's students, the institutional profile used to obtain the benchmark for the indicator will be based on that 80 per cent.

The number of categories used in the calculation of the benchmarks will depend on which factors are included. As there are 18 subject groups and 22 entry qualification groups, the original adjusted sector benchmark for the access indicators is based on $18 \times 22 = 396$ categories. For the non-continuation indicator for all ages, where age is also taken into account, the number of categories will double to 792 and for the location-adjusted benchmark for the access indicators, where region is also a factor, there will be $396 \times 13 = 5148$ categories.

APPENDIX III

Key findings from the LSAY project

The Longitudinal Study of Australian Youth (LSAY) is a national project that traces a representative sample of young Australians from mid teens to mid twenties. LSAY is funded by the Australian Government. Initial data are gathered from school achievement tests and questionnaires and are followed up with annual interviews about education and training, work, finances, social activities and attitudes to related issues. New cohorts of students were recruited to the study in 1995, 1998, 2003 and 2006. Management for the project moved from ACER to NCVER in July 2007.

Measurement of SES

Marks (LSAY technical paper 14) mounts an argument for using Father's occupation or, if not available, Mother's occupation as a single measure of SES for the LSAY because that measure is more stable than others for the purposes of a longitudinal study.

Marks analysed ten measures of SES (see below) and looked at how highly they were correlated with achievement (based on scores from literacy and numeracy tests) and with leaving school before year 11. Most of the SES measures Marks used produced correlations of between 0.20 and 0.25. The lowest correlation for achievement was with a measure of wealth (based on ownership of specified consumer items) and the highest was with a composite measure (based on parental occupation, education and wealth). For students leaving school before year 11, the strongest correlation was with father's education and the composite measure, and the weakest was with wealth and the SEIFA index of disadvantage. It is notable that the composite measure, which produced strong correlations, contains the wealth measure as part of its composite, even though the wealth measure produced the weakest correlations.

The ten measures of SES used in this analysis were:

1. father's occupation
2. mother's occupation
3. parental occupation (father's, or mother's if father's not available)
4. father's education (years of formal education)
5. mother's education
6. parental education (constructed as for parental occupation, above)
7. wealth index based on ownership of specified consumer goods
8. composite measure based on sum of 3, 6 and 7 above
9. the SEIFA disadvantage area-based measure, and
10. the SEIFA education and occupation area-based measure.

The composite SES index had the highest correlation with achievement, but was not correlated with leaving school before Year 11. The father's education (rather than his occupation) had a stronger correlation with leaving school before year 11 than with school achievement.

Marks concluded that the intercorrelations between the ten SES measures were so low that the different variables of SES should be considered separately rather than being combined.

Measurement of locality

Jones (2002) investigated the viability of the 1995 and 1998 LSAY Year 9 cohort data for national reporting on outcomes by geographical location. The number of students from remote areas in the LSAY sample would need to be $n=625$ to be statistically reliable. This number was achieved in 1995 but in 1998 only 356 students from remote locations were included. The sample attrition from students from remote areas was only marginally higher than students from other areas. However the differences in the regional distributions of sampling within States and Territories led Jones to conclude that, for the 1995 and 1998 student cohorts, the use of LSAY data for national reporting of outcomes by geographical location is not recommended.

Low SES and participation in higher education

Rothman (2003) analysed the university participation of students from low SES families collected from student cohorts that started in 1995 and 1998. Rothman reported that the LSAY data indicate that low-SES students have lower test scores on school achievement, are less likely to stay at school until Year 12, are more likely to take VET subjects at school and are less likely to undertake studies in science and maths at Year 12 level, than are students with higher SES backgrounds.

Low SES students who complete Year 12 are less likely to go on to university than higher SES students. The students from low SES backgrounds in the 1995 cohort who went on to study at university in 1999 and 2000 had higher reading and comprehension scores and higher self concepts about their achievement at Year 9 level than low SES students in the cohort who did not go on to university. The low SES students had lower achievement scores at Year 9 than students in the higher SES groups.

The low SES students who went on to university were more positive at Year 9 about the opportunities offered by schools, more likely to finish their homework, to spend longer each week on homework and to do extra work than low SES students who did not go on to university. Those who participated in university also watched less TV during the week and at weekends, were more likely to visit museums and art galleries, to play (rather than watch sport) and to read books, magazines and newspapers.

Analysis of the LSAY data from 1980 to 1998 show that Year 12 participation is associated with both higher SES backgrounds and urban residence. The data also show, however, that influence of family background (parental occupation and education) and the type of school a student attends have less influence on Year 12 participation rates than was the case in the late 1980s.

For the 1998 LSAY cohort, 41% who were in year 12 in 1998 went on to higher in 1999. Another 6% enrolled within the next 2 years. From 1994 to 2000 this rate of progression has been similar. However for the 1998 cohort the move from Year 12 to university was lower for the students of unskilled parents (32%) than the students with professional parents (32%). This effect is associated with differential school achievement and university entry (LSAY briefing 2003).

Khoo and Ainley (2005) noted the influence of Year 9 intentions on later participation in Year 12 and university. 52% of students who said they intended to go to university when they were in Year 9 actually did go to university, and only 14% of those that said they did not intend to go to university, eventually attended university. Students' attitudes to school related more strongly to their educational intentions than their socioeconomic background.

Fullarton *et al.* (2003) found a gap of 15 percentage points between the highest and the lowest of six socioeconomic groups in 2001 for participation in Year 12.

Marks (2005) analysed the characteristics of the LSAY Year 12 students in 2001 who applied for places at university but were not offered a place. He found that most students who applied for university were offered a place and that those students that did not gain a place had similar demographic and social characteristics to the other Year 12 students. Multivariate analysis showed that, of the characteristics measured, only parental occupational background related to membership of students in the group that applied but did not receive a university place. Having parents in a professional occupation reduced the chance of being in this group.

At university, students from different SES backgrounds differed in the subjects they tended to study (Fullarton *et al.* 2003). The students from higher SES backgrounds were more likely to enrol in advanced mathematics, physics and chemistry whereas students from lower SES backgrounds were more likely to enrol in technical studies, computer studies, arts and home sciences.

Marks (2007) also analysed the characteristics of the 1995 Year 9 LSAY students who completed their university courses. The data was weighted to control for attrition of the cohort. He did not find a systematic relationship between course completion and parents' occupational grouping. However he did find a relationship between university completion and parents' highest educational level. The students whose parents completed a degree or diploma had an 85% completion rate; those with parents who had completed Year 12 had an 87% completion rate; and students whose parents had not finished secondary school had a 72% university completion rate. Overall he found little negative influence of low SES background on university course completion.

Students from remote or isolated locations and participation in higher education

In 2001, university participation rates for students from metropolitan areas were 8 per cent higher than for student from non-metropolitan areas (Fullarton *et al.* 2003). For the LSAY 1998 cohort 42 per cent students from metropolitan addresses went on to tertiary education compared to 31 per cent from non metropolitan addresses. (LSAY Briefing 2003)

Hillman (2005) investigated the transition experiences of students in the LSAY study after they had moved from school to university. Hillman found that students from remote or isolated backgrounds reported costs related to study, including paying fees, as the main cause of problems more frequently than other students.

Marks (2007) analysed the characteristics of the 1995 Year 9 LSAY sample who went on to complete university. He weighted the data to allow for attrition in the cohort. He found no regional differences in the students who completed their university courses, based on students' home addresses while still at school.

Progression from VET to University

Stanwick reported that “Thirty-two per cent of young [VET] graduates and 14% of graduates aged 25 years and over went on to university-level study. In some minor fields, such as accountancy, and banking and finance, over half of the graduates aged 15 to 24 went on to university-level study.” (2006: 2, based on the NCVER’s Student Outcomes Survey, 2003)

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APPENDIX IV

Formation of a new Institute on Equity Research Methods and Critical Policy Analysis in the USA

This following information is from a press release issued by the American Society for Higher Education (ASHE), December 12, 2007

ASHE is pleased to announce the formation of a new Institute on Equity Research Methods and Critical Policy Analysis. The institute will be a collaborative effort among the Higher Education Research Institute at the University of California at Los Angeles, The Center for Urban Education at the University of Southern California, the Institute for Higher Education Law and Governance at the University of Houston Law Center, and ASHE. The Ford Foundation is providing a one-year planning grant to establish the institute with the possibility of bestowing support for an additional five years.

The ASHE Institute on Equity Research Methods and Critical Policy Analysis is being created because of the historical and current inequalities that exist in higher education for minority populations. Specifically, the institute is targeting inequalities that exist for African Americans, Latina/os, Native Americans and Native Hawaiians. The institute was born out of the ASHE Equity Task Force led by Estela Mara Bensimon from the University of Southern California. As she states, “the current body of empirical and policy oriented knowledge contains a major weakness: it tends to ignore race, ethnicity, and language altogether or to interpret differences in educational outcomes to characteristics of minorities that set them apart, e.g., “high risk” or “underprepared.” The impetus for the creation of this institute is to ask the “race” question critically and knowledgeably.”

The institute will focus on addressing three urgent needs: (1) to support greater inclusion through the development of a core group of minority scholars with the knowledge and research methods to study questions of racial and ethnic equity in higher education; (2) to transform the agendas of higher education policy centers and give greater visibility to the needs and interests of minority communities; and (3) to develop greater recognition of minority experts in higher education and expand the network of minority scholars who are called on to shape policy agendas. Issues and events in higher education currently being discussed such as race-linked barriers to achievement and race conscious admissions are exemplary of the types of concerns that this institute will address.

Michael Olivas from the University of Houston Law Center states that “there is a tremendous need for training and support for junior faculty. The demands upon them for meeting the requirements for teaching and scholarship have increased, and the pressures for entrepreneurial grantsmanship and service are nothing short of extraordinary. These programs will provide the academic village that it takes to raise a contributing scholar and productive faculty member. In addition, there is a pressing need for minority voices to add to the discourse concerning higher education issues. In a small way, these efforts should help shape these developments.”

Sylvia Hurtado from the University of California at Los Angeles added that, “within recent years, ASHE has seen a steady increase of minority scholars and we would like to keep supporting their development as scholars. The Institute helps to acquaint them with publishing in the best journals and guides them to see other ways at studying equity in higher education.”

APPENDIX V

DEST equity data on access, participation, retention and success for low, medium and high SES students

Source: DEST Selected Higher education Statistics (2001 to 2006 enrolment files, MCEETYA/SEIFA). These data include Table A Institutions only (excluding ADFA), and domestic students with permanent home residence in Australia only.

Explanatory notes

The high SES regional and remote groups have been collapsed to form the "high SES and regional/remote" group due to very small numbers in the "high SES and remote group".

Access Rates	Year					
	2001	2002	2003	2004	2005	2006
Low SES and urban	8.63	8.49	8.43	8.35	8.66	9.02
Low SES and regional	6.50	6.35	6.23	6.17	5.96	5.93
Low SES and remote	0.73	0.70	0.70	0.68	0.61	0.61
Medium SES and urban	32.01	32.04	32.23	32.13	33.18	33.33
Medium SES and regional	12.92	12.52	12.36	12.30	12.02	12.19
Medium SES and remote	0.69	0.66	0.65	0.64	0.66	0.60
High SES and urban	36.71	36.68	37.44	37.88	37.27	36.82
High SES and regional/remote	0.62	0.63	0.61	0.65	0.65	0.64

Participation Rates	Year					
	2001	2002	2003	2004	2005	2006
Low SES and urban	8.43	8.39	8.37	8.33	8.39	8.58
Low SES and regional	6.06	5.95	5.84	5.75	5.64	5.61
Low SES and remote	0.66	0.61	0.59	0.58	0.54	0.53
Medium SES and urban	31.95	32.04	32.26	32.29	32.71	33.02
Medium SES and regional	12.09	11.93	11.82	11.66	11.59	11.63
Medium SES and remote	0.60	0.58	0.56	0.54	0.53	0.53
High SES and urban	38.56	38.51	38.84	39.18	39.06	38.64
High SES and regional/remote	0.60	0.60	0.59	0.59	0.61	0.61

Retention Rates	Year				
	2001	2002	2003	2004	2005
Low SES and urban	77.66	76.80	77.46	77.83	79.00
Low SES and regional	77.12	76.41	76.73	76.95	77.74
Low SES and remote	68.98	69.35	68.97	69.66	71.47
Medium SES and urban	77.94	77.19	78.02	78.42	79.56
Medium SES and regional	75.80	75.63	76.22	76.89	77.57
Medium SES and remote	67.30	66.50	65.35	66.56	67.98
High SES and urban	78.51	78.33	78.85	78.94	80.17
High SES and regional/remote	75.20	72.97	73.38	74.51	77.24

Retention Ratios	Year				
	2001	2002	2003	2004	2005
Low SES and urban	0.99	0.99	0.99	0.99	0.99
Low SES and regional	1.02	1.01	1.01	1.00	1.00
Low SES and remote	1.03	1.04	1.06	1.05	1.05
Medium SES and urban	0.99	0.99	0.99	1.00	0.99
Medium SES and regional	0.99	0.99	1.00	1.00	1.00
Medium SES and remote	0.98	0.96	0.95	0.96	0.95
High SES and urban	1.01	1.02	1.01	1.01	1.01
High SES and regional/remote	0.99	0.97	0.97	0.98	1.00

Success Rates	Year					
	2001	2002	2003	2004	2005	2006
Low SES and urban	83.80	84.17	84.72	85.29	85.22	85.24
Low SES and regional	86.01	86.24	87.04	87.23	87.47	87.71
Low SES and remote	79.24	80.81	80.41	80.85	82.98	80.53
Medium SES and urban	86.57	86.91	87.54	87.92	87.82	88.08
Medium SES and regional	85.89	86.56	87.33	87.66	87.85	87.73
Medium SES and remote	79.63	79.26	79.41	80.21	81.18	80.13
High SES and urban	88.38	88.66	89.38	89.71	89.58	89.86
High SES and regional/remote	87.11	87.04	88.02	88.63	88.48	88.18

Success Ratios	Year					
	2001	2002	2003	2004	2005	2006
Low SES and urban	0.96	0.96	0.96	0.96	0.96	0.96
Low SES and regional	1.00	1.00	1.00	0.99	1.00	1.00
Low SES and remote	0.99	1.02	1.01	1.01	1.02	1.00
Medium SES and urban	0.99	0.99	0.99	0.99	0.99	0.99
Medium SES and regional	1.00	1.00	1.00	1.00	1.00	1.00
Medium SES and remote	1.00	0.98	0.99	0.99	0.98	0.99
High SES and urban	1.03	1.03	1.03	1.03	1.03	1.03
High SES and regional/remote	1.02	1.01	1.01	1.02	1.01	1.01

Participation Numbers	Year					
	2001	2002	2003	2004	2005	2006
Low SES and urban	56,847	58,567	58,879	58,160	57,724	59,711
Low SES and regional	40,899	41,547	41,101	40,159	38,796	39,013
Low SES and remote	4,420	4,294	4,177	4,015	3,697	3,659
Medium SES and urban	215,571	223,779	227,012	225,414	225,029	229,728
Medium SES and regional	81,574	83,329	83,169	81,403	79,741	80,937
Medium SES and remote	4,075	4,019	3,951	3,798	3,655	3,662
High SES and urban	260,173	268,936	273,255	273,517	268,663	268,814
High SES and regional/remote	4,036	4,170	4,128	4,153	4,183	4,231
No SES information	7,094	9,738	7,935	7,431	6,400	5,950

APPENDIX VI

A possible taxonomy for higher education admissions and selections processes

This taxonomy was adapted by Carnevale and Rose (2003) from *Toward a Taxonomy of the Admissions Decision-Making Process*, New York: College Entrance Examination Board, 1999.

Entitlement

Higher education is an inalienable right and should be made available to everyone.

Open Access

College is a natural progression after high school and should be made available to everyone who is qualified.

Meritocracy

Access to higher education is a reward for those who have been most academically successful.

Character

Access to higher education is a reward for personal virtue, dedication, perseverance, community service, and hard work.

Enhancement

The goal of higher education is to seek out and nurture talent.

Mobilization

Higher education is the “great equalizer” and must promote social and economic mobility.

Investment

Access to higher education should promote the greater good and further the development of society.

Environmental/Institutional

The admissions selection process is designed to meet the enrolment goals and unique organisational needs of the admitting institution while promoting the overall quality of students’ educational experience.

Fiduciary

Higher education is a business, and access must first preserve the institution’s fiscal integrity.

APPENDIX VII

Rethinking equity in higher education: Misconceptions and possibilities

This appendix is an excerpt from a paper on equity by Richard James, '*Social equity in a mass, globalised higher education environment: The unresolved issue of widening access to university*', presented at the University of Melbourne Faculty of Education Dean's Lecture Series, 18 September 2007. The excerpt focuses on identifying some of the myths and dilemmas associated with seemingly intractable international problem of low SES participation and proposes possible strategies for the Australian context.

Six myths surrounding equity

An initial step towards more effective equity policies is better theorising on the precise character of the problem. I'd like to debunk six myths or misconceptions that surround equity in higher education and that limit the capacity to imagine more effective policies and initiatives. I begin with the two most prevalent myths.

Myth 1 'Expanding participation will improve equity'

Whether or not this assertion is a myth is admittedly the subject of some debate. A common international strategy to advance equity has simply been to fund the expansion of access. While it is true that expansion can allow more people from lower socioeconomic backgrounds to attend university, it is also the case that the access benefits of higher rates of participation in higher education are spread roughly equally across social strata — this effect appears universally true in developed nations. So expansion alone does not improve the participation share of people from lower socioeconomic backgrounds — thus, whether there are social equity gains is debatable. Almost paradoxically, expansion can lead to greater social inequality. As has been argued, mass or universal higher education systems invariably become highly stratified and access to the elite universities and most highly sought after courses becomes heavily skewed towards the higher social classes.

Myth 2 'Free or low cost higher education will improve equity'

This is the second most prevalent myth. 'Free higher education' is the mantra in protests about the rising costs of higher education. But there is no evidence at all that free or low cost higher education widens participation on a grand scale. In fact, during the Whitlam era of free higher education the social composition of the university student population was largely the same as it is today.

This myth is based on the assumption that cost is the principal barrier to access. Cost is a factor, but it is not the only factor. All the evidence points to lower levels of school achievement, lower aspirations, and lack of perceived personal relevance being far more potent factors. In any case, it is probably a 'pie in the sky' hope to argue for free higher education. Governments seem unwilling or unable to provide the resources to fund appropriate quality higher education in an era of mass or universal participation. Free higher education is likely to lead to far fewer people going to university or very low quality

provision, or both. In the current context free higher education would create a regressive tax situation in most nations, for the middle and upper classes are over-represented compared with the lower classes. However, targeted reduction in the cost of higher education is definitely essential for the successful participation of some people, as the 2006 CSHE national study of student finances conducted for Universities Australia has shown. Everything possible must be done to achieve minimal costs for students who otherwise would not be able to participate or whose quality of study would be seriously compromised by their financial circumstances.

Myth 3 ‘Improving equity involves the removal of barriers to access’

The third myth involves an important conceptual shift. It is closely related to myth two. It is naïve to think only in terms of removing barriers, or even to think in terms of the popular rhetoric of ‘expanding choices’. The challenge is not only to remove or reduce barriers, where they exist, but also to *build* possibilities and choices: to raise aspirations, to raise perceptions of relevance, and to boost personal educational achievement. Many young people do not even get to the point of confronting barriers or having ‘choices’ — education is a *precursor* to informed choice. So here’s the rub: building possibilities is far more costly and needs far more imagination than removing barriers and it needs a long-term commitment. It requires improvements within all education sectors and a coordinated policy approach.

Myth 4 ‘The onus is with universities to resolve equity problems’

No, not entirely. The die has been cast for many students well before the point of transition to higher education at which universities have the most influence. Differential school completion rates are a significant factor in the differential rate of transfer to higher education, as are differential levels of school achievement. Putting aside mature-age entry, universities in the main part play out their low SES recruitment initiatives around a relatively small, though nonetheless very important, target group of prospective students — those who have stayed at school and successfully completed secondary schooling, whose academic attainment is at a suitable level, and who see relevance in higher education and have confidence in their ability to succeed at university. For these students much of the equity concerns are quite reasonably focused on financial issues. But these students represent a narrow slice of the participation imbalances. Focussing solely on these ‘survivors’ is to work on the margins of the equity problem. Again, the improvement of equity in higher education requires improvements within all education sectors.

Myth 5 ‘Widening participation will lower standards or lower retention and completion rates’

The belief that widening participation will lower university standards is one of the most pernicious myths, reflecting a deeply pessimistic view of human potential and the capacity of education to develop people. The idea of standards in higher education is too conceptually complex to be examined properly here, but it is sufficient to say that using student achievement on entry as a measure of standards or a safeguard of standards is shallow thinking in a mass higher education system. The notion that ‘inputs’ safeguard academic standards is a relic of elite era thinking but it will persist until there are better ways of measuring ‘outputs’, that is graduate capabilities. There is some truth that widening participation will lower retention and completion rates, but the drop is unlikely to be dramatic. The current data show there are few significant problems with the retention rates, success rates and completion rates for people in the designated equity groups once they enrol

in higher education, with the significant exception of Indigenous people (DEST 2002, Devlin & James 2006).

Myth 6 ‘Students can be selected for higher education on academic merit’

Well, yes, but only to a point. In mass or universal higher education systems in which perhaps half the population will undertake higher education the idea of merit has less salience than it did in the elite era. Yet our hopes for meritocratic entry to university are still largely pinned on ENTER rankings (and the counterparts in other states), at least for school-leavers and the Go8 institutions. Clearly ENTER is not a measure of intrinsic individual intellectual ability. ENTER partly measures the cumulative advantage or disadvantage of family, school and community circumstances. ENTER measures preparedness, perhaps, and certainly not ideally, but it is a less than perfect proxy for the potential of individuals to thrive in and benefit from university study. Investing too much trust in ENTER as a fair and just indicator of merit for higher education is a mistake in a mass system.

The point here is that equity and merit, as they are currently conceived, are in significant tension. The concept of equity in elite systems of higher education was partly based on the meritocratic principle that certain people were deserving of higher education on the basis of ‘untapped’ intellectual potential and these people needed compensatory access. Equity was simply an appendage to merit. Martin Trow (1973, 2006) speculated that as systems moved from mass to universal participation, access would move from being a right to an obligation, and that meritocratic admissions coupled with compensatory programs for equity purposes would be replaced by more open access. Internationally, there is little evidence of this occurring on a large scale, even in the most expanded systems.

Taking bold steps: Some ideas on the conditions for advancing equity in Australian higher education

I would like to offer a set of interrelated ideas that I believe would allow the problem of the under-representation of people from low SES backgrounds to be tackled in a more active way and on a larger scale. I do so to illustrate the major change in thinking and policy that would be needed. I do not suggest that the sector is ready to, or ought, take these steps. However, if new approaches are not adopted we must reconcile ourselves to continuing with well-meaning initiatives that have limited impact and periodic hand-wringing over the seemingly intractable nature of the problem.

Frame policy around a multi-causal understanding of the factors underlying under-representation

The problem of educational disadvantage will be addressed in only a piecemeal fashion while it continues to be depicted almost solely in terms of financial disadvantage and financial barriers. The limited and simplistic theorising that narrowly equates socioeconomic educational disadvantage with financial hardship needs to be eliminated. Similarly the persistent concepts of external ‘barriers to access’ and the ‘deserving poor’, despite the appeal of the latter, need to be downplayed. The cost of higher education (real or perceived) is only one inhibiting factor. Boosting the encouraging or enabling factors is as necessary as removing barriers, including the barrier of cost. Scholarships and other forms of financial incentive and support are essential for removing financial deterrents and hardship but are only part of the solution — these are a necessary but not sufficient condition.

Improve the definition and measurement of socioeconomic status

Ironically, while SES is perhaps the most important demographic characteristic for equity purposes its measurement is the most fraught. Considerable work needs to be done to improve the way in which socioeconomic status is defined and measured. The present postcode index has been a useful and inexpensive way of estimating aggregate participation shares and trends but it is not an appropriate way to identify individual socioeconomic status or educational disadvantage. It is likely that the use of the postcode index under-estimates the social stratification in Australian higher education.

The idea of social classes or social strata is relatively unproblematic but the identification of individuals with particular social classes is highly problematic. By and large people do not self-identify with social classes and there may be some stigma in doing so. Thus one of the main problems for universities in implementing access programs is in targeting prospective students and in distinguishing between individual educational disadvantage and the patterns of disadvantage experienced by particular groups. Here the postcode index fails us almost totally. The postcode index is rarely, if ever, used by universities to explicitly target postcode regions. This non-alignment of monitoring measures with intervention strategies is an obvious shortcoming of the equity policy framework. Measurement alternatives need to be considered, including parental occupations, educational levels and income levels. Of course these alternatives are not without limitations of their own and to collect data on any of them would be intrusive and more costly than the present approach. But advancing an evidence-based approach to policy certainly requires improvement in the measurement of individual socioeconomic status.

Set targets and provide more incentives for universities

The Higher Education Equity Program (HEEP) provides modest financial incentives in return for what has become a ritualised annual reporting of institutional equity plans. The government might employ new policy devices that establish incremental targets and financial incentives. These might have a particular focus on the Sandstone universities where there is a pressing need to more effectively recruit low SES students, especially from the most under-represented schools. The measurement dimension of equity policy is critical. In modern higher education what is measured counts, thus what is measured and the way in which it is measured can drive university behaviours in powerful ways.

Reach back into schools, well before the school-university transition

As has been argued, equity initiatives will have limited impact if they operate only at the point of transition to university. Yet there is a tendency within universities for equity of access to be perceived primarily as a student *selection* issue. The present participation inequities might be reduced if there was a commitment to focusing more energy on the early stages of the creation of educational ambition. This would require programs in under-represented schools and communities to build aspirations, raise confidence in the relevance of higher education and to contribute to higher levels of academic achievement early in students' secondary schooling. This would require universities to establish stronger partnerships with disadvantaged schools, districts, regions and communities to build aspirations among students in middle secondary, or earlier. In some cases this may mean establishing preferential pathways into university.

Select students more flexibly by being less reliant on ENTER, encourage and support mature-age entry

Continuing improvement in the pathways into higher education that bypass competitive selection procedures is essential, and this includes through mature-age entry. Competitive entry based on school achievement is a major stumbling block for young people from low SES backgrounds: in their personal assessment of their possibilities; in their actual chances; and in their assessment of the labour market value of courses to which they might realistically gain access.

As has been argued, there is a gridlock, of sorts, at the point of selection for entry to university. Admission is conceived largely in meritocratic terms to which is coupled a suite of special admissions or compensatory mechanisms for equity purposes. Typically, equity policy initiatives attempt to influence the compensation side of this equation. The merit-compensation monolith might equally be softened if the present belief in merit, narrowly construed around senior secondary achievement, is confronted.

The challenge of loosening the alignment of ideas about merit with ENTER rank is the greatest for the Go8 universities of course. These universities might, for example, preserve a higher proportion of higher education places and create alternative entry schemes for prospective students who are unlikely due to their circumstances to be successful in securing the high grades needed for competitive entry. However, any programs of this kind will likely elicit concern about ‘falling standards’. Rarely is ENTER not the ‘bottom-line’ for admissions and the litmus test of standards — a rise in the clearly-in-rank for courses appears to be celebrated in most universities.

Renew first year curricula

Equity policies and programs are closely related to choices about the curriculum and approaches to teaching and learning, though this is rarely recognised. The student selection and recruitment stance adopted by institutions influences first year curriculum decisions, for universities are required to teach students who are more diverse and perhaps less well-prepared in conventional terms. So the widening of participation, especially in the Go8 universities, invites a re-conceptualisation of first year curricula to accommodate students from different backgrounds with different types of preparedness. While ENTER is not an ideal measure of individual ability it is probably a reasonable indicator of the immediate preparedness for higher education, albeit for some fields of study more so than others.

Develop better ways of measuring graduate outcomes

This final suggestion might look odd at first. However, a value-added measure of the outcomes of university education might help break down the vertical stratification of Australia universities. Without better information on what graduates have learned and what they are capable of doing, institutional positional status based on reputational effects will prevail. In turn, the competition for places in the institutions offering the most positional status will continue to be fierce, and so the cycle will go on.