

Equity in Australian education and training: an examination of access and outcomes data across the sectors¹.

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Abstract

This paper reviews the available data on education and training outputs and outcomes across the sectors for six major equity groups. The review indicates that:

- cross sectoral analyses of equity outcomes are hampered by the lack of uniformity of data
- while education and training outputs and outcomes for most targeted sub-groups have improved in absolute terms over the past decade, members of these social groups remain disadvantaged in relation to the rest of the population
- not all members of a particular target group are equally disadvantaged and membership of more than one equity target group has been shown to compound the educational disadvantages faced by individuals
- low socio-economic status is a significant sub-category associated with poor educational outcomes within all target groups.
- a low level of educational attainment is a predictor of poor participation and achievement in post-school education and training, including participation in adult community education
- a low level of educational attainment is also associated with low-socio economic status.
- Year 12 retention is an inadequate indicator of educational outcomes from schooling. As school subject knowledge remains highly structured and hierarchical, the subject participation and achievement (outcomes) for specific social groups need to be monitored along with retention rates (outputs).

From this review, the authors conclude that government equity strategies could be improved by:

- targeting low-SES students within all equity groups
- identifying two new target groups – those with low skills and the unemployed
- focusing on the outcomes (and not just the outputs) of education and training and strengthening genuine pathways into employment
- improving data collections across the sectors in ways that enable a better analysis of the effectiveness of equity initiatives.

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Equity target groups in each sector

For over twenty-five years Australian federal and State governments have implemented equity programs in education and training targeted at specific social groups. Equity programs are sector-specific and implemented separately in each of the four sectors of schools, VET, higher education and adult community education

The six population sub-groups that are the target of equity policies in most sectors of education and training are:

- Indigenous Australians
- people with a disability
- people from low socio-economic (SES) backgrounds
- women and girls
- people from rural and isolated backgrounds
- people from non-English speaking backgrounds (NESB).

The main difference in the definition of equity groups across the education and training sectors is that low-socio-economic status students are not identified as a target group in the vocational education and training sector. This is probably because this sector has traditionally catered to a higher proportion of students from low socio-economic backgrounds than from high socio-economic backgrounds.

Since the 1980s Commonwealth labour market programs have directed education and training assistance to the long-term unemployed, although unemployed people are not generally identified as an equity group in sector-based policies.

The impact of education and training on specific groups

The impact of education and training on specific equity groups is usually examined by comparing their outputs and outcomes in relation to the rest of the population. Although the scope of the sector-specific data collections are limited and there are variations in the years for which data are reported there is sufficient similarity in reporting of outputs and outcomes to make observations about the condition of equity groups in more than one sector.

The most fundamental observation is that the distribution of education and training outcomes still reflects the distribution of family background characteristics such as wealth and parents' educational attainment. For all equity groups this pattern is common across the sectors and for all social groups. More specific observations on each social group are summarised below.

Indigenous Australians

Of all the identified equity groups the most comprehensive data on educational outcomes across the sectors relate to Indigenous Australians (see, for example, Robinson and Bamblett, 1998)

Participation patterns for Indigenous students reflect the hierarchy of the education and training system, with the highest rate of Indigenous participation in the vocational education and training sector and the lowest in higher education. The relationship between access, retention and completion rates for Indigenous students differs in the vocational education and training and higher education sectors.

In the vocational education and training sector Indigenous students have high rates of access relative to their share of the 15-64 year-old population and a high retention rate relative to other students (0.94 against a reference value of 1). While retention rates are high the pass rate of Indigenous students is three-quarters the rate for non-Indigenous students (0.73 against a reference value of 1).

In higher education, Indigenous students have a reasonable rate of access (the same as their share of the adult population) but a lower retention rate than in vocational education and training (0.78 against a reference value of 1). The pass rate of Indigenous students in higher education is slightly higher than Indigenous students in vocational education and training but still much lower than the non-Indigenous university student population (0.78 against a reference value of 1). The Year 12 retention rate for Indigenous students in secondary school is only 31 per cent (0.43 against a reference value of 1) so the Indigenous students who are successful in gaining access to university courses are more highly selected from their own population than non-Indigenous students. Nevertheless the attrition rate for Indigenous students remains higher than for the rest of the university population implying the existence of institutional barriers to participation and completion.

Course type: given the low rate of Year 12 completion among Indigenous students, it is not surprising that high proportions of Indigenous students in vocational education and training and higher education are in preparatory courses. In vocational education and training, 47 per cent of Indigenous students are in the preparatory stream, compared to 25 per cent of non-Indigenous students. In higher education, 30 per cent of Indigenous students are in enabling courses, compared to 1 per cent of non-Indigenous students.

A higher proportion of Indigenous students in vocational education and training transferred to further education and training (45% compared to 39% of non-Indigenous students). However transferring Indigenous students were more likely to remain in the vocational education and training sector (74% compared to 68% of non-Indigenous transfers) than to proceed to a higher education course (16% compared to 23% of non-Indigenous transfers).

Employment pathways: the labour market outcomes for Indigenous students who complete vocational and training courses are less favourable than for non-Indigenous students. In 1998, 49 per cent of Indigenous graduates were employed compared to 73 per cent of non-Indigenous graduates. Twenty-two per cent of Indigenous graduates were unemployed, compared to 14 per cent of non-Indigenous graduates.

An economic study of the private returns to education for Indigenous Australians found that Indigenous male and female graduates who completed post-secondary qualifications obtained a relatively high financial return on their participation in education (Daly and Lin 1997). However, Daly and Lin also found that Indigenous students who completed Year 12 had a lower than average return on their additional years of schooling.

In summary, the data suggest that there has been substantial improvement in the outcomes of Indigenous students in the education and training system over the past two decades. From a very low base in the 1970s, the participation rates of Indigenous students has improved in all sectors of education and training (Robinson and Bamblett 1998). However, as the number of higher education students doubled between 1988 and 1998 (DETYA 1998), the participation and success rates of non-Indigenous people have also increased. Relative to other students, the educational outcomes of Indigenous students remain significantly poorer than the rest of the population.

Students with a disability

A key problem in comparing educational outcomes for students with a disability is the range of disabilities within the population sub-group and the impact of those disabilities on educational attainment. For example, the data collections do not differentiate between students with a physical and intellectual disability.

There are also ethical issues involved in asking students to self-identify as having a disability and it is likely that the category is under-reported (ANTA 1998b:13). There are insufficient published data available on students with a disability in schooling or adult community education to make observations about these sectors.

Students with a disability are more likely to be engaged in lower level courses, have higher withdrawal rates and lower rates of completion in vocational education and training (NCVER 1996).

Although students with a disability are under-represented in higher education, their retention rates and completion rates are comparable with the rest of the student population (DETYA 1999A).

Students from low socio-economic backgrounds

Socio-economic status (SES) appears to have a significant effect on participation and achievement in senior secondary schooling, higher education and adult community education (NBEET 1996 DETYA 1999A). The educational participation rate of low-SES students deteriorates between schools and higher education. The Year 12 completion rate for low-SES students is 0.75 the rate of high-SES students, whereas in higher education, the participation of low-SES students is 0.42 of high-SES students.

Although 57 per cent of low-SES students are retained to Year 12, they appear to lack either the motivation or the marks to gain admission to university. This illustrates the inadequacy of Year 12 retention as an indicator of educational outcomes. Year 12 retention is an indicator of participation (output) rather than educational outcomes because it does not reflect subject participation or student achievement – both of which influence post-school education and employment (Ball and Lamb 1999, Teese *et al* 1995). Once admitted to university, the retention rate of the low-SES students is barely different to the student population as a whole.

In vocational education and training low-SES students are more likely to have higher levels of participation in TAFE than high-SES students (Ainley and Long 1998: 390). As ANTA does not recognise low-SES as an equity group, no national institutional data collection is available for the VET sector.

In adult community education, participation increases with socio-economic decile. In 1995, people in the second highest SES decile participated in adult community education at more than twice the rate of people in the second lowest decile. Participation also increases with level of formal education (AAACE 1995). In all sectors low socio-economic status appears to cut across each equity category, particularly Indigenous Australians and rural and isolated students.

Women and girls

The available data indicate that young women complete Year 12 at a higher rate than young men but are under-represented in higher level maths and sciences. This appears to limit their options for post-school education and employment (MCEETYA 1999). Young women from high-SES backgrounds are more likely to be enrolled in higher level maths and sciences than those from low-SES backgrounds. At the same time, young men from low-SES backgrounds are over-represented in traditionally 'male' subject areas and experience relatively low levels of achievement (Teese 1995).

Women are more likely to participate in post-compulsory education and training in all sectors except vocational education and training, where female enrolments are slightly below those of males. Women comprise three-quarters of total participants in adult community education (Senate Employment, Education and Training Committee 1997:37, ACFE Board Vic:1998). Women outnumber men in university enrolments and female secondary students are more likely to complete Year 12.

In higher education, while women outnumber men overall, they are under-represented in Agriculture, Architecture, Engineering, Business/Economics and Science courses, and in Higher Degree programs (DETYA 1999). After graduation women are:

- less likely to be in full-time employment: of those available for full-time employment after graduating from universities, females (78 per cent) were less likely than males (80 per cent) to be in full-time employment
- less likely to be employed in the private sector: only 38 per cent of female graduates are employed in the private sector, compared to 61 per cent of male graduates
- more likely to be employed in the health industry (30 per cent compared to 11 per cent of males), and in the education industry (19 per cent compared to 9 per cent of males).

(GCCA 1999:18-19).

In vocational education and training, female students are under-represented in non-traditional areas and in apprenticeships. Female students account for less than 8 per cent of enrolments in Trade Certificates and women are more likely to enrol in non-award courses than males (ANTA 1998b, 12).

While roughly equal numbers of women and men participate in TAFE courses, 24 per cent of males are enrolled in the fields of engineering/surveying compared to 3 per cent of females. The highest proportion of females (26 per cent) are enrolled in business/ administration/ economics and in VET multi-field education (22 per cent). This field has the poorest labour market outcomes (NCVER 1999a: 33, NCVER 1999b: 11, Ryan 1999).

In 1998, 79 per cent of male TAFE graduates were employed after their course, compared to 67 per cent of female TAFE graduates. However, male graduates were almost twice as likely as females to be employed full-time (64 per cent compared to 35 per cent of females). Thirty-two per cent of female TAFE graduates were unemployed or not in the labour force compared with 20 per cent of male TAFE graduates (NCVER 1999b: 10).

The prior employment status of the TAFE student has a significant effect on his or her likelihood of being employed after completing a course. In 1998 ninety-one per cent of those employed prior to their course were employed after graduation, compared to 46 per cent of those who had been unemployed before their course. Of those unemployed prior to their course, 42 per cent of women TAFE graduates found employment compared to 52 per cent of male TAFE graduates (NCVER 1999b: 121-123).

The average weekly earnings of female TAFE graduates working full-time were significantly lower than the earnings of male graduates in full-time work. The disparity in earnings persists in almost every level of qualification and regardless of field of study.

In summary, an equity issue for women in post-compulsory education and training appears to be that women graduates have poorer employment outcomes than men. Women are less likely to be employed full-time upon graduation and their wages are lower than men with comparable qualifications. Women graduates of both vocational education and higher education courses also experience lower incomes than male graduates. The persistence of poor wage outcomes for female graduates relative to male graduates in all sectors could be related to female students' chosen fields of study, but is also likely to be evidence of persistent structural discrimination in the labour market.

Rural and isolated students

People from rural and isolated backgrounds are disadvantaged in terms of education and training outcomes in all sectors compared to urban dwellers, with the highest level of disadvantage being suffered by isolated students. However, access to vocational education and training does not appear to be an equity issue for rural and isolated students. The participation rate of rural and isolated students in vocational education and training is higher than for urban students.

Data on educational outcomes for rural and isolated students tend to reflect multiple group disadvantage, as rural dwellers are more likely to be from low socio-economic backgrounds and high proportions of isolated students are Indigenous Australians. There are little data on

the participation of rural and isolated students in adult community education, and provision in this sector tends to be concentrated in urban areas (AAACE 1995)

Students of non-English speaking backgrounds

Non-English-speaking background was found to be too broad a category to be useful in identifying disadvantaged students in any sector of education and training. For example, groups as different as second-generation European migrants and recently arrived refugees do not suffer similar types of educational disadvantage. The extent of diversity within the NESB category suggests that a major re-definition of NESB as an equity group is needed, or that NESB should be replaced by more relevant categories of disadvantage.

One option could be to report participation and outcomes for sub-categories of NESB students (such as date of arrival or proficiency in English). As a minimum, the language or country-of-origin of NESB students should be reported in the data collections. At present NCVET reports statistics for this group in vocational education and training (see, for example, NCVET 1999). Characteristics such as low-SES, low skills, or unemployment, could also be used to identify sub-groups within NESB who are most disadvantaged in the post-compulsory education and training system.

Multiple group membership and intra-group differences

Membership of more than one equity target group has been shown to compound the educational disadvantage faced by individuals. Golding and Volkoff (1998) analysed employment outcomes for vocational education and training students and found a positive relationship between the percentage of graduates who were not working and membership of more than one targeted equity sub-group.

The equity sub-groups identified by Golding and Volkoff were: Indigenous; with a disability; unemployed; low skills; non-English speaking backgrounds (NESB); rural; and women.

Golding and Volkoff (p 11) found that:

- Only ten per cent of individuals who were members of one target group were not working after graduation
- Graduate unemployment rose to 40 per cent of individuals who were members of two target groups
- Fifty per cent of members of three target groups, and 55 per cent of individuals who were members of four target groups were unemployed
- Eighty-five per cent of individuals who were members of five or more target groups were not working after completion of their course.

The labour market disadvantage faced by vocational education and training graduates who are members of targeted social groups is compounded by unemployment status and low skills. Golding and Volkoff (1998b) found that members of target groups who were long-term unemployed had worse employment outcomes after graduation than members of social groups who were employed or not in the labour force. Members of target groups who had low skills were even less likely to obtain work on completion than members of target social groups who were long-term unemployed. The capacity to learn new skills appears to be more important in achieving labour market success than any other factor associated with group disadvantage, including unemployment.

On the other hand, as discussed in previous sections, there are sub-groups of students within the equity target groups who have no difficulty succeeding in the education and training system. These students are likely to come from higher socio-economic backgrounds or possess exceptional academic abilities that enable them to overcome many of the economic, social and cultural factors that serve to disadvantage other members of their social group

While education and training outputs and outcomes for most targeted sub-groups have improved in absolute terms over the past decade, members of these social groups remain

disadvantaged in relation to the rest of the population. The trend towards rising levels of participation in all the sectors has tended to mask the fact that specific groups remain under-represented in relation to the rest of the population. In addition, there appears to be a negative relationship between access and outcomes for target groups in higher education. For example, the three universities that have the highest rates of access for Indigenous students all have very low retention and success rates. By contrast, the universities that have lowest rates of access for Indigenous students have the highest rates of success. Whereas students with a disability, low SES students, and rural and isolated students all have low rates of access to higher education, their retention and pass rates are no different to the general student population. This suggests that many individuals from target groups who gain access to higher education would be 'over-selected' and that this influences the outcomes data.

To address the needs of those individuals who face multiple disadvantages equity policies and programs could be more tightly targeted to the members of groups most in need of assistance. How this could be done is discussed in the next section.

Improving targeting within social groups

There is a rationale for continuing to target equity policies and programs to specific groups. As many social groups suffer common barriers to educational participation and attainment, it is efficient for institutions and systems to address these barriers in a uniform way.

Low socio-economic status is also a significant sub-category associated with poor educational outcomes within all target groups. A low level of educational attainment (in other words, low skills) is a predictor of achievement in higher education and is also associated with low-SES. If governments want to define sub-categories within social groups who are most in need of equity services, they should target sub-groups who are from low socio-economic backgrounds, have low skills, or are unemployed. As there is a high correlation between these three categories of disadvantage, these sub-groups could be targeted in all sectors, as appropriate. For example, while the category of unemployment is irrelevant for policy purposes in schooling, low-SES and low achievement would be sufficient to identify disadvantaged students in secondary schooling within all the equity groups.

For policy development and accountability purposes, the measurement of low socio-economic status should be improved. The use of postcodes as an indicator of low-SES appears inadequate for identifying individual students in need of equity assistance. To ask students to identify levels of family income would be highly intrusive and inappropriate at the institutional level. A less intrusive means of identifying low-SES students would be to identify their parents' highest level of educational attainment and occupation, as recommended by Western *et al* (1998).

Western *et al.* found that occupation and education form the key dimensions of socio-economic status that impact on an individual's ability to participate in higher education. They argued that the collection of information on individual student characteristics and their households was the most effective way to identify socio-economically disadvantaged students for targeted equity initiatives, rather than relying on surrogate measures of socio-economic status derived from area-based measures (Western *et al.* 1998, 17). This measure would provide a vastly improved means of targeting equity services and of monitoring educational outcomes for disadvantaged students.

New target groups

Two new factors now appear to be linked with labour market disadvantage: low skills and unemployment.

The importance of education and training to the economy and society has increased in recent years in the wake of structural changes to the labour market. The disappearance of unskilled jobs over the last two decades has meant that educational attainment is increasingly

important to obtaining jobs and remaining in steady lifetime employment. Below-average school attainment now has a strong relationship to a person's likelihood of being unemployed when they leave school (Marks and Fleming 1998: 8). The 'deepening divide' between those who are involved in and those who are marginal to education and training places an estimated 300,000 young adults at risk of labour market disadvantage (Spierings 1999:10).

Unemployment has a significant impact on a person's capacity to find work after completing a course of education or training. The employment rate of vocational education and training graduates who were unemployed prior to commencing a course is half the employment rate of graduates who held jobs when they commenced their courses. Only forty-six per cent of graduates who were unemployed before the commencement of their course were successful in gaining employment the following year, compared to 88 per cent of those who were employed before the start of their course (NCVER 1999A: 15).

Unemployment and low skills are not completely adequate for identifying disadvantaged students because they are educational outcomes as well as input characteristics. The point of defining equity groups in terms of input characteristics is to try to help those most at risk of experiencing poor educational outcomes, before the poor outcomes eventuate. The category of unemployment is also not useful at the school level, and given the parlous state of data collections on school education outcomes, it will be a long time before school education authorities report information on student achievement in a meaningful way. An alternative is to target low-SES students within all equity categories as a means of identifying students at risk of educational disadvantage after Year 10.

The increasing level of disadvantage associated with low skills and unemployment indicates the significance of lifelong learning as an educational outcome for all students. While equity strategies should be focussed more on the individuals most in need within equity groups, the services provided need to be more comprehensive in scope and integrated with genuine pathways to employment. Ryan (1999) argues that post-course employment for both VET and higher education students could be improved by assisting students into employment activities during their courses. He advocates either a restructuring of courses to include a work-experience element or the re-direction of student employment services towards facilitating with-in course employment.

Directions for policy

All Australian governments have policies in place that promote access and participation in education and training for all who are able to benefit from it. From our review of access and outcomes data for equity groups in the four sectors, we conclude that the following issues warrant further attention:

- governments should consider targeting low-SES students within all equity groups. Poverty has been shown to be a significant indicator of educational disadvantage in all sectors, especially when combined with any other identified form of educational disadvantage.
- the existence of intra-group differences within equity target groups could create inefficiencies in existing equity programs and strengthens the case for targeting low-SES students within equity groups.
- as low skills and unemployment are now linked to labour market disadvantage, these categories could be recognised as equity target groups
- given that low skills and unemployment are linked with low participation and attainment at the school level, students at risk of failing to satisfactorily complete secondary school should be targeted as a specific equity group.
- government policies in all sectors need to facilitate genuine pathways between education and employment for the most disadvantaged members of equity groups, such as those who are low SES, low skilled or long-term unemployed.

- The effectiveness of government equity strategies would be enhanced by improving the quality and uniformity of data collections on student pathways.

Our cross-sectoral analysis of equity data indicates that much has been achieved in recent decades. At the same time, however, the dynamic nature of the social and economic structures of our society ensures that efforts to achieve more equitable outcomes remains a major social justice imperative for governments.

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