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How Far Have We Come? Gender Disparities in the Australian Higher Education System

It is thought that because women now make up approximately half of Australia's university students, and more than half of all staff employed in Australian universities, that gender equity in Australian higher education is no longer an issue which requires attention. This Brief illustrates however, that despite recent gains in women's participation in universities, as both staff and students, significant gender differences remain. This brief also offers some observations about the possible impact of the forthcoming higher education reforms on the gender composition of university students in the future.

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Contents

Executive Summary	1
Introduction	2
Defining Gender Equity	2
University Staff	3
Academic versus General Staff	3
Women in the Academic Workforce	5
Gender and Security of Academic Employment	5
Academic Seniority and Gender in 2002	6
Women in University Senior Management	6
Horizontal Gender Differences in Academic Staffing	7
Explanations for Gender Inequities in Academic Staffing	7
Undergraduate Students	8
Gender Differences in Broad Field of Study	8
Gender, Socio-Economic Status and Debt	10
The Under-representation of Men in Non-traditional Areas	11
The Under-representation of Women in Non-traditional Areas	11
Need for Monitoring Changes to Higher Education	12
Postgraduate Students	12
Postgraduate Research Students	13
Gender Differences in Broad Field of Study	14
The Changing Nature of the Postgraduate Research Environment	14
Postgraduate Coursework Students	15
Gender Differences in Broad Field of Study	15
Gender Equity in a Deregulated Fee Environment	16
Conclusion	18
Endnotes	19

List of Figures

Figure 1: Academic and General Staff in Australian Universities by Gender, 2002	4
Figure 2: Percentage of Female Academics in Australian Universities, by Seniority, 1985–2002.	4
Figure 3: Academic Staff, Gender and Security of Employment, 2002.	5
Figure 4: Percentage of Academic Staff in Australian Universities, by Seniority and Gender, 2002	6
Figure 5: Percentage of Undergraduate Students by Gender, Selected Fields, 2002	9
Figure 6: Postgraduate Research Students by Gender, Selected Fields 2002	13
Figure 7: Postgraduate Coursework Students by Gender, Selected Fields, 2002.	16

Executive Summary

In the 2003 Federal Budget, Education, Science and Training Minister Brendan Nelson announced proposals to allow universities to charge fees for up to 50 per cent of most undergraduate courses. In response, the Australian Vice-Chancellors' Committee (AV-CC) stressed the need to seriously address the participation rates of equity groups within the higher education sector given the possible adverse impact of this proposal on students from lower socio-economic groups.¹ The analysis in this paper suggests that equity issues will require a renewed emphasis if the gains in the representation of female students, students from disadvantaged groups and the participation of men and women in non-traditional fields of study, are not to be eroded. If the proposal to reshape higher education is passed by the Senate, it will be especially important to monitor the effect of the partial deregulation of undergraduate fees on the composition of the student body, and on equity of access to it.

Five decades ago, women represented only one-fifth of all university students. Today they comprise more than half of the student body. It is sometimes thought that because women now make up approximately half of Australia's university students, and more than half of all staff employed in Australian universities, that gender equity in Australian higher education is no longer an issue which requires attention. However, despite recent gains in women's participation in universities, as both staff and students, significant gender differences remain. These gender differences do not just relate to women as the proportion of men entering non-traditional fields of study has also declined.

As staff, the majority of women in universities are still employed as general staff, while men are predominantly employed as academic staff. Female academics have however made significant gains in terms of security of employment. A decade ago they accounted for approximately one-quarter of all tenured staff. In 2002, they account for almost half of tenured academic staff in Australian universities. Women have also made steady gains in terms of participation in the academic workforce. In 1985 they represented only one-fifth of all academics. Eighteen years later they account for two-fifths of the academic workforce. There are also now more women in senior levels of academia than ever before. Nevertheless, women remain concentrated at the bottom of the academic hierarchy, while men still account for more than 80 per cent of the most senior academics in Australian universities. The vertical divisions between men and women in the academic workforce extend to senior executive levels in the university sector. While better represented than women executives within the business sector, women still only account for only 29 per cent of the senior executives in Australian universities.

Gender differences in 2002 student enrolments reviewed within suggest that the divide between 'traditional' male and female fields of study is still strong in engineering, information technology, health and education. While women have made some gains in entering non-traditional fields, such as science, business, agriculture and architecture,² they remain under-represented in engineering and technology related courses. At both

undergraduate and graduate levels, female students remain concentrated in the social sciences, humanities, arts, education and health. These are the cheapest university courses with narrower employment opportunities and less security and income expectation than the more expensive engineering and technology courses where men comprise the overwhelming majority of students. Meanwhile the number of men enrolled in non-traditional fields of study has gone backwards. For instance, the number of men enrolled in the broad field of education dropped from around 25 000 (or 34 per cent of all education students) in 1983 to 18 000 (or 24 per cent of all education students) in 2000. This has flow-on effects for the teaching profession more generally, with fewer men employed as school teachers. Consequently, the gender profile of the student body is important not only for equity reasons, but because it has a significant impact on students' prospective employment opportunity, security and income as well as the gender composition of the labour market more generally.

Introduction

Given the proposals to change the Australian higher education system announced by Education, Science and Training Minister Brendan Nelson in the 2003 Federal Budget, it seems timely to revisit the important issue of gender equity in higher education. In this paper, the most recent statistics available are used to examine the current gender discrepancies in the staff profile of general, academic and senior executive staff employed in the higher education sector. Gender variances in the academic staff profile of the tertiary sector are compared over a longer time frame using published data from 1985 to 2002. Gender differences in the undergraduate and postgraduate student bodies are analysed according to broad fields of study. The paper also offers some observations about the possible impact of the proposed changes to higher education on the gender composition of university students in the future, assuming the current proposals for change are passed by the Senate.

Defining Gender Equity

There is some debate in the higher education sector, and in the literature on gender equity more broadly, about how 'gender equity' should be defined.³ A key 1990 Department of Employment, Education and Training paper on equity in higher education, *A Fair Chance for All*, defined the overall objective for equity as the need to ensure 'that Australians from all groups in society have the opportunity to participate successfully in higher education': this would be achieved by 'changing the balance of the student population to reflect more closely the composition of society as a whole'.⁴

A Fair Chance for All identified three major targets in relation to gender equity: increasing the proportion of women in engineering courses to 15 per cent by 1995, increasing the number of women in other non-traditional areas to at least 40 per cent by 1995, and increasing the number of women in postgraduate study.⁵ More recent Department publications have reaffirmed the idea that equity objectives should be related to the

percentage of the working age population belonging to the equity group:⁶ thus, for women the broad equity objective is taken to be 50 per cent (of both commencing students, and of total student enrolments) with the exception of women in non-traditional fields of study,⁷ and women in higher degree research and coursework programmes,⁸ where different equity targets are set.

Aggregate measures, such as access and participation rates relative to proportion of population, are important equity indicators. Analysis of the most recent staff and student data demonstrates that on these measures, in many areas the equity targets for women's participation in higher education set in 1990 have not yet been met. However, these kinds of quantitative measures only tell part of the story. The other part of the gender equity tale lies in the *qualitative* aspects of women's and men's experiences within the higher education system, and how sometimes less tangible, but equally important barriers exist which prevent the objective of 'all groups in society having the opportunity to participate successfully in higher education' being achieved. Therefore, in addition to the analysis of quantitative equity measures in this paper, some of the qualitative factors which impact on gender equity in the Australian higher education system are canvassed. These include the ways in which the academic promotions process potentially disadvantages academic women with children and family responsibilities, and some of the stigmas attached to the teaching profession which discourage men from entering this field.

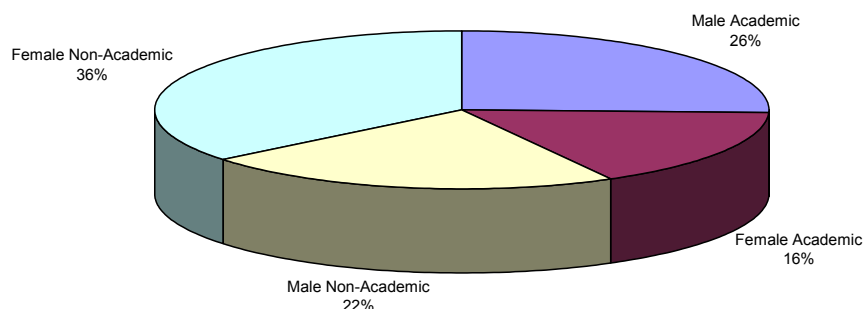
University Staff

The Australian Vice-Chancellors' Committee (AV-CC)⁹ 2002 policy statement on gender equity in university staffing is one in a long list of studies and reports which emphasise gender equity as a key policy issue for the tertiary sector.¹⁰ According to the most recently published statistics, slightly more women than men are employed in the university sector overall.¹¹ However, as the following analysis demonstrates, significant gender differences are apparent when staffing figures are analysed by the level, type and area of employment.

Academic versus General Staff

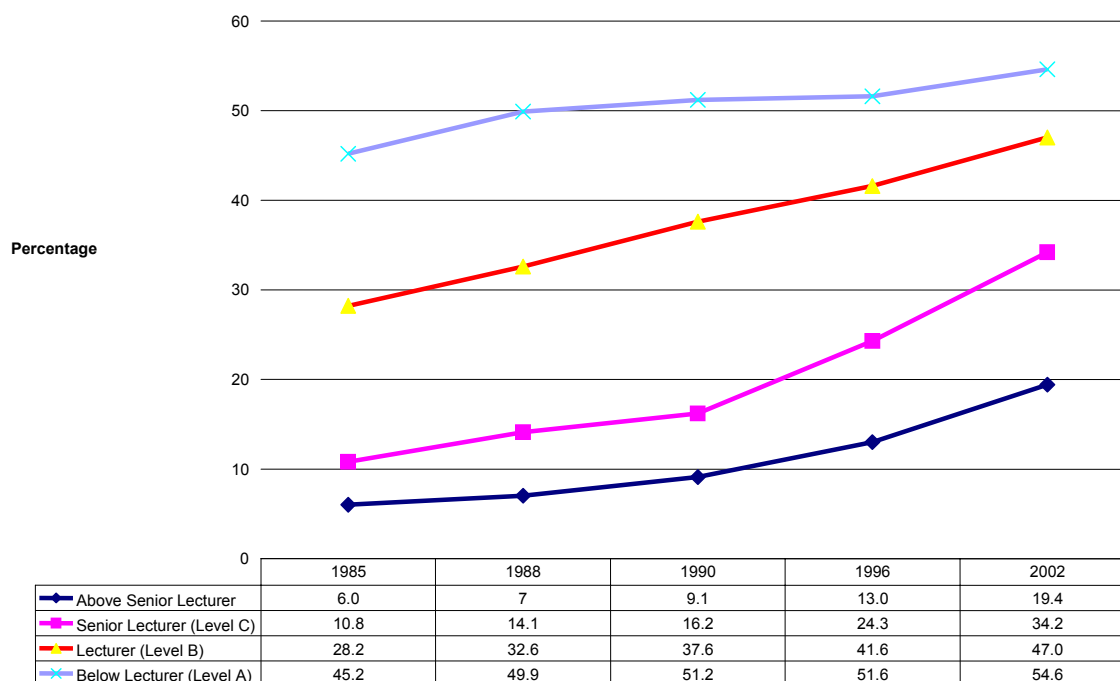
In 2002, just over 70 000 staff were employed in the tertiary sector: around 40 000 (or 58 per cent) of these were general (or non-academic) staff, and around 30 000 (or 42 per cent) were academic staff. Figure 1 illustrates the differences in the gender composition of academic and general staff. The figure shows that the majority of employees in Australian universities in 2002 were general staff (58 per cent in total), and the majority of these were women. Conversely, the biggest proportion of academic staff were men. That is, most men in the university sector are employed as academics, while women are more likely to be employed as general staff.¹² General staff working in non-academic positions include: staff employed in university libraries, finance, marketing, student administration, human resources, executive support, information technology and maintenance.

Figure 1: Academic and General Staff in Australian Universities by Gender, 2002



Source: Department of Education, Science and Training (DEST), *Staff 2002: Selected Higher Education Statistics*, Commonwealth of Australia, 2002: Table 7—FTE for Full-time and Fractional Full-time Staff by State, Institution, Current Duties Classification and Gender 2002.

Figure 2: Percentage of Female Academics in Australian Universities, by Seniority, 1985–2002



Source: Data from 1985 to 1990 from Department of Employment, Education and Training (DEET), *Female Academics*, Higher Education Series, Report No. 18, 1993. Data for 1996 from Department of Employment, Education, Training and Youth Affairs (DEETYA), *Selected Higher Education Staff Statistics*, 1996: Table 9—Number of FT and Fractional FT Staff by Current Duties, Term, Age, Gender and Current Classification Type and Level 1996. Data for 2002 from DEST, *Staff 2002: Selected Higher Education Statistics*, Commonwealth of Australia, 2002: Table 7—FTE for Full-time and Fractional Full-time Staff by State, Institution, Current Duties Classification and Gender 2002.

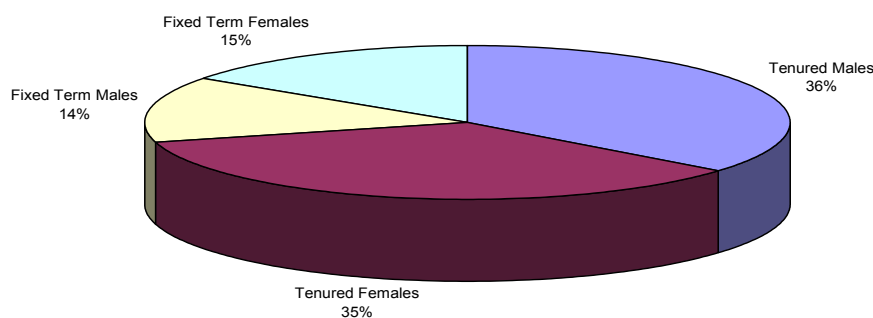
Women in the Academic Workforce

Data on the gender composition of university staff were first published in 1985. Since that time the percentage of women academics has risen from 21.6 per cent to 39.0 per cent of the total academic workforce. Figure 2 shows that from 1985 to 2002 women have made the greatest percentage gain at senior lecturer level (level C), followed by lecturer level (level B), but remain concentrated at the lower end of the academic hierarchy. The most significant increase in the numbers of women in the academic workforce followed the amalgamation of colleges with universities as a result of the 1988 Dawkins higher education reforms.¹³ Colleges had a higher proportion of female teaching staff and a higher proportion of women employed at senior levels than universities.¹⁴ When colleges combined with the university sector this boosted the representation of women in the academic staff profile of Australian universities. The steady rise in the representation of women at all levels of academic appointment from 1985 to 2002 is reflected in Figure 2.

Gender and Security of Academic Employment

A decade ago women accounted for approximately one-quarter of all tenured (or permanent) staff in Australian universities.¹⁵ At that time only 43 per cent of academic staff had tenured employment security.¹⁶ By 2002, however, 71 per cent of all academic staff were tenured,¹⁷ and the proportion of tenured staff was almost equally divided between men and women (see Figure 3). Clearly, academic women have been beneficiaries of the trend towards a higher ratio of tenured staff in universities over the last decade. However, it is also possible that this trend has also hampered women's access to the senior ranks of academia. Tenured staff predominate at senior levels (thus reducing the relative frequency with which positions at these levels become vacant),¹⁸ and as the following discussion shows, men dominate the senior levels of the academia.

Figure 3: Academic Staff, Gender and Security of Employment, 2002

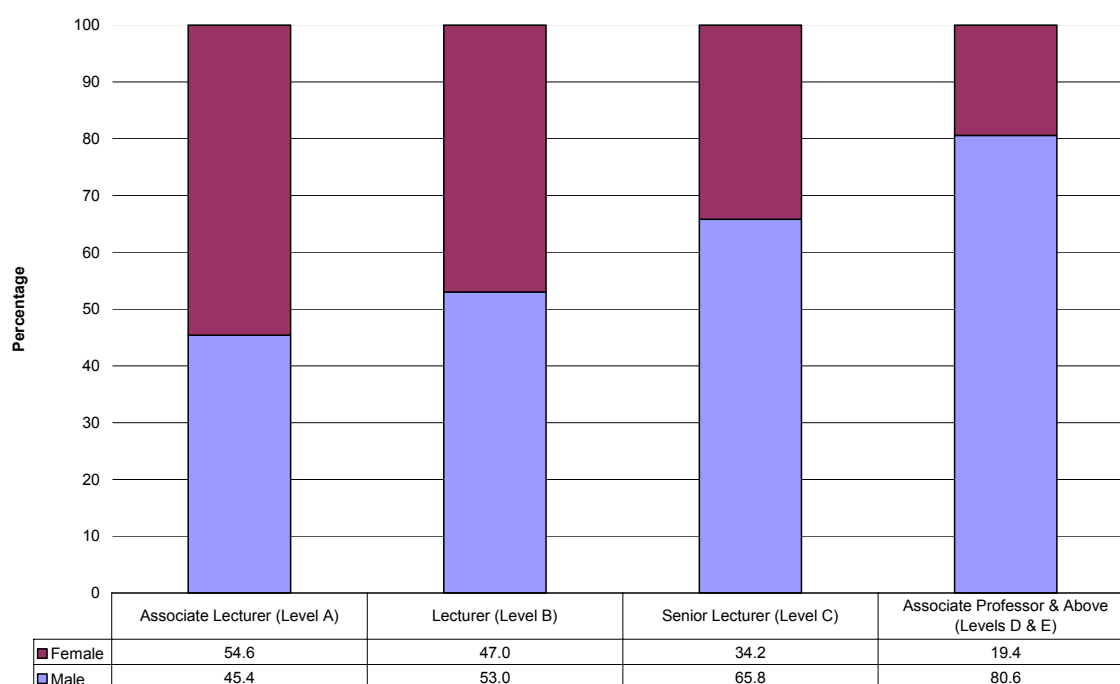


Source: DEST, [Staff 2002: Selected Higher Education Statistics](#), Commonwealth of Australia, 2002: Table —FTE for Full-time and Fractional Full-time Staff by State, Institution, Current Duties Classification and Gender 2002.

Academic Seniority and Gender in 2002

While women academics have made substantial gains in recent years in terms of the security of employment and overall representation in the academic workforce, nevertheless, they remain concentrated at the bottom of the academic hierarchy. As Figure 4 illustrates, in 2002 women accounted for 54.6 per cent of employees at associate lecturer level (level A), the lowest level of the academic hierarchy; 47 per cent of staff at lecturer level (level B); 34.2 per cent at senior lecturer level (level C); and only 19.4 per cent of associate professors and professors (levels D and E), the most senior academics. By contrast, men made up 45.4 per cent of associate lecturers, 53 per cent of lecturers, 65.8 per cent of senior lecturers, and the vast majority—over 80 per cent—of associate professors and professors.

Figure 4: Percentage of Academic Staff in Australian Universities, by Seniority and Gender, 2002



Source: DEST, [Staff 2002: Selected Higher Education Statistics](#), Commonwealth of Australia, 2002: Table —FTE for Full-time and Fractional Full-time Staff by State, Institution, Current Duties Classification and Gender, 2002.

Women in University Senior Management

The vertical divisions between men and women in the academic workforce extend to senior management level. While women have made significant gains in terms of security and representation, still relatively few women are employed as senior executives in

Australian universities. While better represented than women executives within the business sector,¹⁹ women still account for 29 per cent of the senior executives in Australian universities.²⁰ While nine of Australia's 38 Vice-Chancellors are female, none are employed by the Group of Eight, a prestigious group of well-established, wealthy universities.²¹ This is not a surprising finding since university senior executives (pro vice-chancellors, deputy vice-chancellors, and vice-chancellors) are nearly always drawn from the ranks of senior academics, 80 per cent of whom are male.

Horizontal Gender Differences in Academic Staffing

As well as being concentrated in the lowest levels of the academic hierarchy, women academics also remain concentrated in discipline areas which they have traditionally dominated. That is, there are *horizontal* gender differences as well as *vertical* gender differences in Australia's academic workforce. Women academics tend to be heavily represented in the broad fields of teaching, nursing, arts, humanities and social sciences. At the same time, they are under-represented in the science-related disciplines such as medicine, and in engineering, information technology and dentistry.²² The latter parts of the paper demonstrate that these disparities between the representation of male and female academic staff in different disciplines are replicated in both the undergraduate and postgraduate student bodies.

Explanations for Gender Inequities in Academic Staffing

A number of factors have been offered to explain why women continue to be disproportionately represented at the lower end of the academic hierarchy while being under-represented in the senior executive of university management. These include:

- the poor representation of women on key decision-making bodies, such as academic senates and councils and university promotion panels²³
- that notions of merit and success in universities are based more closely on what men in universities do well, to the overall detriment of women²⁴
- that the career paths of academic women are more likely to be interrupted by nurturing children than is the case for men, undermining their competitiveness when it comes to promotion²⁵
- that women do not apply as often as men for senior posts²⁶
- that women tend to begin their academic careers at lower levels (level A, not B), and are less likely than men to have a PhD—an almost universal criteria for employment and promotion in the current university environment²⁷

- as research output tends to count most when it comes to promotion, women, who assume a greater share of family responsibility and do less research, are disadvantaged²⁸
- that female academics are less likely than male academics to work in areas where academic research is most able to attract industry funding²⁹
- that the national research priorities tend to favour those research fields where male academics mostly predominate,³⁰ and
- that cultural impediments peculiar to the academy place informal organisational obstacles in the way of women's career advancement.³¹

Thus, the under-representation of women at senior levels of academia is not caused by overt discrimination in selection or promotion processes, as most universities have good equal opportunity policies in place.³² Further, domestic responsibilities do not fully explain the obstacles faced by tenured female academics with well-established research careers seeking senior executive positions.³³ For aspiring senior female academics the masculine culture of the collegial processes of university leadership has been repeatedly identified as the major hurdle they face to their career advancement.³⁴ Nevertheless the complex interplay between gender divisions in the home and in the workplace is a key factor underlying the career disadvantages faced by those with family responsibilities, such as the nurturing of children.³⁵

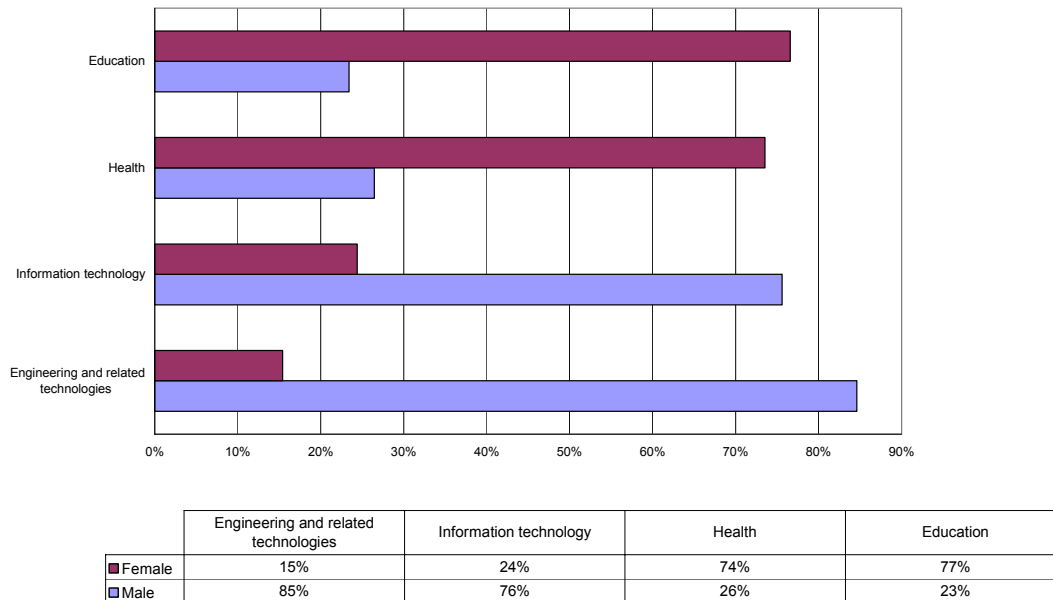
Undergraduate Students

In 1949 women represented only one-fifth of all university students.³⁶ Currently they represent more than half the student body. Yet the profile of the undergraduate student body is characterised by significant gender differences in fields of study. In this section of the paper, the latest data on university enrolments in undergraduate courses are briefly surveyed. The gender profile of the student body is important not only for access and equity reasons, but because it has a significant flow-on effect for the gender composition of the labour market more generally.³⁷

Gender Differences in Broad Field of Study

While women make up more than half of undergraduate students in Australian universities, there nonetheless remain significant gender differences in enrolment patterns by broad field of study. In 2002, there were just over 697 000 undergraduate students enrolled in Australian universities.³⁸ Around 56 per cent of these students were women, and 44 per cent of them men. When these data are broken down into broad field of study, stark gender differences emerge. As Figure 5 illustrates, more than three-quarters of all undergraduate students studying in the fields of education and health in 2002 were female. By contrast, 85 per cent of students enrolled in undergraduate engineering and related degrees, and over 75 per cent of those in information technology degrees, were men.

Figure 5: Percentage of Undergraduate Students by Gender, Selected Fields, 2002



Source: DEST, *Students 2002: Selected Higher Education Statistics*, Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender 2002.³⁹

According to 2002 DEST enrolment data, female undergraduate students are disproportionately concentrated in the social sciences, humanities, arts, education, health and nursing.⁴⁰ Medicine is not included in the health field of study. Compared with the more expensive engineering and technology courses where men comprise the overwhelming majority of students, these courses have narrower employment opportunities and less security and income expectation.⁴¹ They are also the cheapest courses to study. In the Higher Education Contribution Scheme (HECS)—the government loans scheme through which students make a contribution to the costs of their course—these are categorised as 'Band 1' courses, which currently incur a debt of \$3680 per year. Band 1 courses (with the exceptions of health and education, as discussed below) are projected to cost up to \$5101 per year under the new fee arrangements announced in the higher education package in the 2003 Federal Budget.⁴²

Male students by contrast are concentrated in engineering, agriculture, and information technology courses.⁴³ These are 'Band 2' HECS courses which currently incur an annual HECS debt of \$5242 per year (projected to rise to a maximum of \$7137 per annum under the new funding arrangements). While the dominance of men in engineering has been long-term, their dominance in new fields such as technology related courses is evidence that new gender divisions are constantly being produced in academia, not just reproduced.⁴⁴

HECS 'Band 3' courses—which include law, dentistry, medicine and veterinary science—are the most expensive courses. They currently incur an annual debt of \$6136 (and are projected to cost a maximum of \$8355 per year under the new funding arrangements).⁴⁵ Gender disparities in the student profiles of these most expensive and exclusive Australian university courses are, and have always tended to be, less noticeable. For example, roughly equal proportions of men and women now enter law and legal studies, compared to 1983 when a sizeable 40 per cent of entrants were female.⁴⁶ The major defining characteristic of students in Band 3 courses is socio-economic status: the overwhelming majority of students (usually around 90 per cent) enrolled in these courses are from high socio-economic backgrounds. The dominance of students from high socio-economic backgrounds in fields of study such as law and medicine has been a long-term feature of the higher education system, and pre-dates the introduction of HECS in 1989.⁴⁷ Students from low socio-economic backgrounds tend to have higher rates of participation in other fields of study.⁴⁸

Gender, Socio-Economic Status and Debt

A DEST sponsored survey of 7000 year 10–12 students published in 2002, found substantial gender differences in high school students' assessment of the impact of the cost of a university education. The report found that 'an alarming 41 per cent of lower socio-economic status (SES) females reported they believed costs may make university impossible for them' (compared with 34 per cent of lower SES males).⁴⁹ Similarly, 43 per cent of females from lower SES backgrounds surveyed believed their families could not afford the costs of supporting them through university. The gender disparity between higher socio-economic male and female students was much less apparent.⁵⁰ Another study of vocational education and training courses found that female enrolment in these courses was 'much more sensitive to the availability of the resources for self-financing'.⁵¹

On the basis of these studies it may be inferred that women, especially women from lower socio-economic backgrounds, are more sensitive to the cost factors of education and consequently more debt averse than their male counterparts. Because of this it is important to bear in mind the potential impact of differential course fees on gender differences in enrolment patterns. For instance, raising the cost of male-dominated courses like engineering may make them less accessible to female students and thus more male dominated. Female students, particularly those from lower socio-economic backgrounds, may be more likely to opt for the cheaper band courses in teaching and health. In the new fee system announced in the 2003 Budget, these courses will be quarantined from increases in the new funding arrangements in a new HECS 'National Priority Band'.⁵² If this happens, it will probably work against the aim of raising the number of women who enter non-traditional courses, despite a \$2.5 million increase in funding to the Higher Education Equity Programme (HEEP). This program seeks to support categories of students recognised as having disadvantaged access to higher education. They include: indigenous Australians, people with disabilities, people from non-English speaking backgrounds, people from rural and isolated areas, people from lower socio-economic

backgrounds, and women in non-traditional areas.⁵³ There is some justification for adding to this list men in non-traditional areas, as discussed below.

The Under-representation of Men in Non-traditional Areas

Male university students are dramatically under-represented in the broad fields of education and health. Their under-representation in education has particularly important social consequences for the teaching profession. Between 1991 and 2001, the percentage of male teachers in primary education in Australia fell from 26.3 per cent to 21.3 per cent.⁵⁴ The problem is not just a lack of male teachers, but a chronic gender imbalance in teacher supply. Teachers are educated in universities, yet less than a quarter of students currently enrolled in teaching courses in Australian universities are male. In fact, men's participation in the broad field of education has dropped over the last two decades. This is both in terms of the numbers of men actually enrolled, which decreased from 25 369 in 1983 to 17 971 in 2000, and in terms of the proportion of education students who are male: down from 34 per cent in 1983 to 24 per cent in 2000.⁵⁵ This is one field of tertiary study where the gender gap is widening.⁵⁶

The relative absence of men from primary school teaching has been raised as an issue of concern by Minister Nelson, who wants boys to have access to positive male role-models in early childhood.⁵⁷ In recognition of the gender discrepancies in fields like teaching, the Minister has flagged the possibility of introducing male-specific scholarships in teaching courses to encourage more men to take up careers as primary school teachers. However, if more men are to be encouraged to enter teaching careers, then other factors which underscore their under-representation in teaching also need to be addressed. These include the low status and pay of primary teaching, and the stigma of suspicions that men who work with young children may be paedophiles.⁵⁸ While there are good equity reasons for recruiting more men into primary school teaching to balance the gender composition of this workforce, the issue is not just about quantity. Simply increasing the number of male teachers alone will not address the qualitative concern to recruit appropriate role models.⁵⁹ good teachers who, regardless of their gender, are sensitive to the developmental needs of boys and girls.⁶⁰ Nor will it address the factors that support good teachers, and good teaching, which are sensitive to the powerful ways in which formal and informal school culture, curriculum and organisation can otherwise produce systemic gender biases, such as in subject and career choice.⁶¹

The Under-representation of Women in Non-traditional Areas

While women have made some gains in entering non-traditional fields, such as science, business, agriculture and architecture,⁶² they remain chronically under-represented in engineering.⁶³ For instance, from 1983 to 2000, while the number of women entering engineering courses rose from 1280 to 7777, as a proportion of engineering students women still only account for 15 per cent of all enrolments.⁶⁴ While this meets the conservative target of 15 per cent set in 1990,⁶⁵ it is still far short of achieving more

general gender equity objectives (where the number of women in the student body would reflect their proportion of the general population). Not all the gender disparities in higher education are traditional. New ones are constantly being produced within universities, which require monitoring and equity intervention. For example there are marked gender differences in new fields such as information technology and related courses.⁶⁶ If there is an argument for creating scholarships for men in fields where they are under-represented, then surely the same argument applies to women in fields where there are new and old gender divisions.⁶⁷

Need for Monitoring Changes to Higher Education

The gender differences in 2002 undergraduate enrolments reviewed above suggest that the divide between 'traditional' male and female areas of study is still strong in the fields of engineering, information technology, health and education. In education the gender divide is growing. This is the case even though men are no longer actively discouraged from entering fields such as teaching. Likewise, women are no longer actively discouraged from entering fields traditionally thought of as masculine professions, such as engineering, as previously may have been the case. Yet they continue to be poorly represented in the traditionally masculine courses which generally lead to better employment security, opportunity and income.⁶⁸

In its response to the proposed reforms set out in the 2003 budget, the AV-CC has argued that a less regulated university sector needs to seriously address equity issues such as those outlined above.⁶⁹ The AV-CC has also suggested that 'substantial contestable funding be made available to support students from under-represented groups to ensure that their barriers to participation are addressed and their participation in higher education improved'.⁷⁰ Under this proposal universities would be rewarded for supporting disadvantaged students. If the gains in the representation of students from disadvantaged groups (among them women in non-traditional fields and men in non-traditional fields) are not to be eroded in a less regulated university sector, it will be important to monitor the effect of the proposed changes to the higher education sector, on the composition of the student body. Some insight of the effect of partial de-regulation on the composition of the student body can be gleaned from an analysis of its impact on postgraduate study.

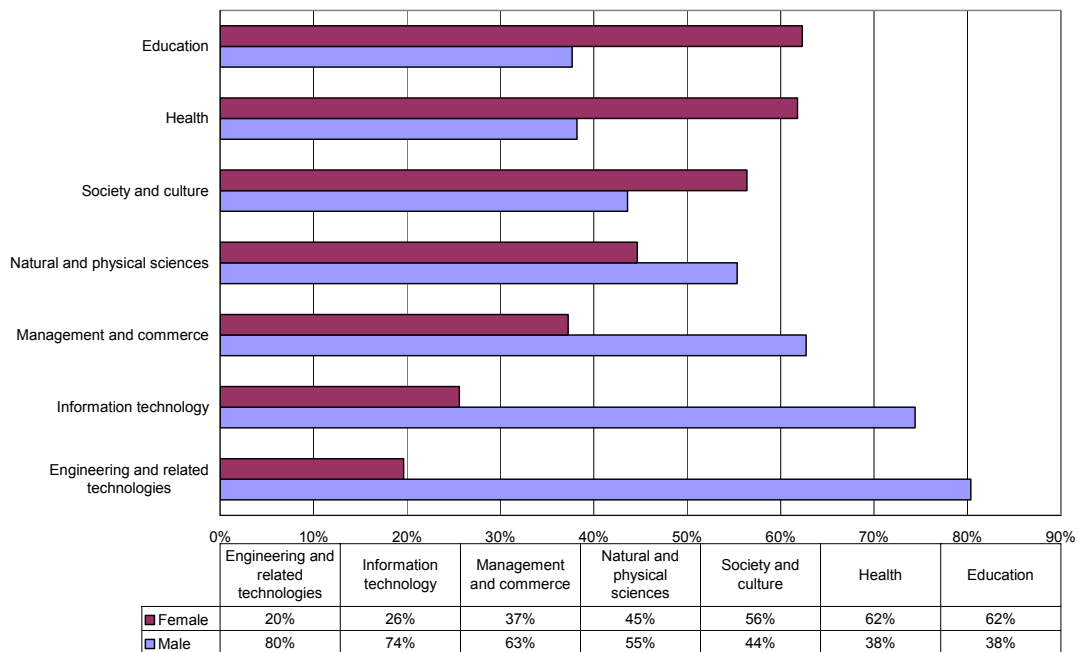
Postgraduate Students

Analysis of the most recent postgraduate student enrolment data shows that the patterns of gender difference in the undergraduate student population are mirrored in the postgraduate student body. This is not surprising since an undergraduate qualification in the same discipline is usually a prerequisite for entry into a postgraduate degree program, particularly in postgraduate research degrees. Of the approximately 226 000 students enrolled in postgraduate degrees in Australian universities in 2002, the overall numbers of male and female postgraduate students are almost exactly evenly divided (men make up 51 per cent of all postgraduate students, women make up 49 per cent). However,

significant differences emerge when the postgraduate student population is analysed by field of study.

Gender differences in postgraduate education are analysed here by two categories: postgraduate research students (those students undertaking doctorates and Masters degrees by research) and postgraduate coursework students (those students undertaking Masters by coursework, as well as graduate diplomas and certificates). These two cohorts differ considerably, not just with respect to the kind of study involved, but also in terms of funding structure, fee structure and income support.⁷¹ In particular, it is important to note that fees for the majority of postgraduate coursework degrees are now fully deregulated, and until recently had to be paid up front. It is argued below that the deregulated fee structure of postgraduate coursework is an important factor in explaining the patterns of gender difference which analysis of the most recent postgraduate coursework enrolment data highlights.

Figure 6: Postgraduate Research Students by Gender, Selected Fields 2002



Source: DEST, [Students 2002: Selected Higher Education Statistics](#), Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender 2002.⁷²

Postgraduate Research Students

In total, there were just over 44 000 postgraduate research students in Australia in 2002.⁷³ The relative proportions of men and women exactly replicated the proportion of men and women in the total postgraduate population. However, as the following analysis shows,

men tend to be heavily concentrated in disciplines such as engineering and information technology, while women tend to make up the vast majority of students in disciplines such as education and health (see Figure 6). Some of these are old gender divisions, but others, such as the dominance of men in technology postgraduate courses are new.

Gender Differences in Broad Field of Study

The two biggest fields of postgraduate research study in 2002 were 'society and culture' (which includes disciplines in the humanities and social sciences), and the 'natural and physical sciences'. A significant finding which emerged from analysis is that these two fields of study were the most evenly split by gender. In the broad field of 'society and culture', 56 per cent of students were female and 44 per cent male while in the natural and physical sciences, around 55 per cent of students were male and 45 per cent female. The latter figures are particularly encouraging since the sciences have traditionally been male-dominated domains.

However, other traditionally male-dominated fields remain heavily so: in engineering men made up 80 per cent of all postgraduate research students. Similarly, areas of study such as health and education remain dominated by female students: women make up 62 per cent of research students in each of these fields. Additionally, new gender divisions have emerged in information technology where men comprise 75 per cent of students enrolled in research degrees.

The Changing Nature of the Postgraduate Research Environment

Postgraduate research has been a burgeoning field in the last decade. The total number of students enrolled has more than doubled since 1991, when 19 000 research postgraduates were enrolled in Australia's universities (there were over 44 000 enrolled in 2002).⁷⁴ Macquarie University academic Ruth Neumann suggests that this reflects a broadening of higher degree research study, which was traditionally viewed as a full-time activity which followed on directly after an honours degree. While full-time study in postgraduate research degrees still predominates, Neumann points out that part-time and distance study has grown, making postgraduate research more flexible than it once was.⁷⁵ While it is probable that this kind of increasing flexibility in postgraduate research has been of benefit to women wishing to pursue postgraduate research degrees,⁷⁶ gender equity has not yet been achieved in this area of Australian higher education. In fact, there is evidence to suggest that recent changes to the funding structure of postgraduate research, in the form of the Research Training Scheme (RTS) introduced in 2001, may have adversely affected gender equity in this area.

The RTS funding formula places considerable emphasis on the completion of postgraduate research degrees. Under the scheme, 50 per cent of government funding for postgraduate research is tied to completions.⁷⁷ This measure was in response to a perception that postgraduate researchers took too long to complete their degrees, and too many of them failed to complete altogether.⁷⁸ However, research conducted by Council of Australian

Postgraduate Associations (CAPA) researcher Hilary Pearse in 2002 demonstrated that the emphasis placed on completion in the RTS funding formula has led some universities to pursue policies which are likely to significantly disadvantage women postgraduate researchers, and in doing so have an adverse impact on gender equity in the postgraduate research environment.⁷⁹

For example, Pearse demonstrated that some universities have chosen to divert RTS places and scholarships away from some areas which are dominated by women (including education, the humanities and social sciences) and towards discipline areas which tend to be dominated by men (including the science and technology fields). This is because students in the former disciplines have tended to have lower completion rates and longer completion times than students in the latter fields.⁸⁰ Pearse also found that several universities had conducted their own surveys on postgraduate completion, which suggested that students enrolled part-time and/or by distance education are less likely to complete their degrees. Some universities had decided to restrict part-time and off-campus enrolments as a consequence. Yet the opening up of postgraduate research to part-time and distance students since 1991 were identified as key factors which have led to increased participation by women in postgraduate research. Thus, as Pearse points out, these developments raise 'serious concerns regarding students' equity of access to postgraduate research education'.⁸¹

A further development in the postgraduate research field since the RTS came into effect has been the introduction of full-fee paying postgraduate research places by some universities. This has often been in direct response to a reduction in the number of government funded research places under the RTS.⁸² The advent of full-fee paying postgraduate research student places has important equity implications. It will be important to continue to monitor the effects of the RTS on the participation of women (and members of other equity groups) as more long-term data on its implementation becomes available.⁸³

Postgraduate Coursework Students

In total, there were just over 182 000 postgraduate coursework students in Australia in 2002, with the balance between men (51 per cent) and women (49 per cent) once again almost evenly split. Again, however, an analysis of gender difference by area of study reveals stark differences (see Figure 7).

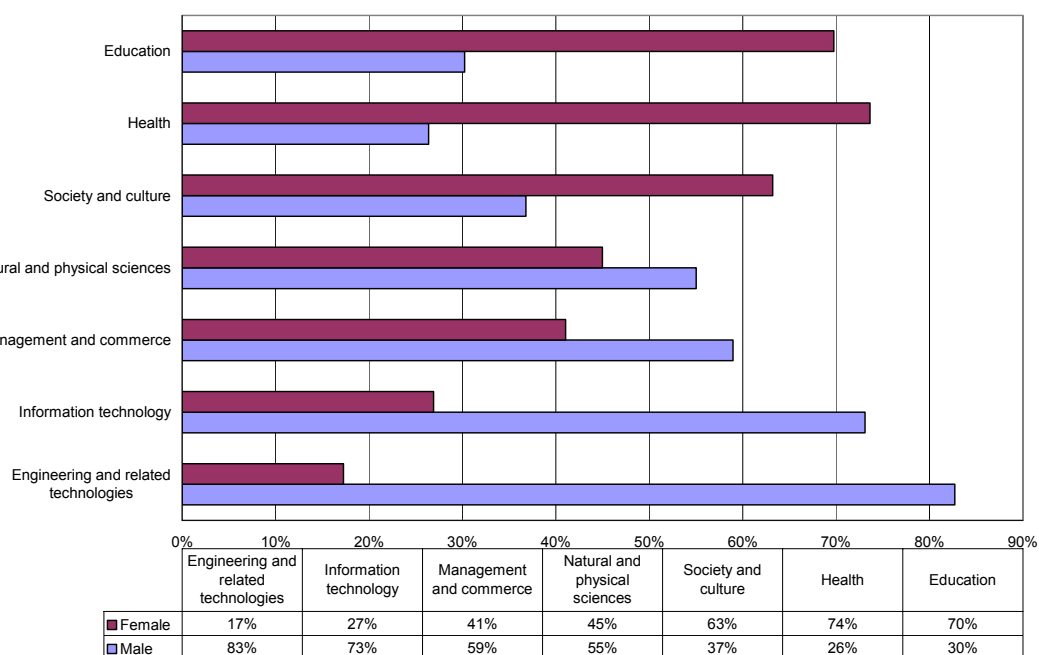
Gender Differences in Broad Field of Study

As Figure 7 shows, the patterns identified in the undergraduate and postgraduate research student bodies are replicated in the postgraduate coursework arena: fields such as engineering and information technology are heavily dominated by male students. Men represent over 80 per cent of postgraduate coursework students in engineering, and over 70 per cent of students in information technology. On the other hand, postgraduate education and health studies are, again, similarly dominated by women students. Like the

under-representation of men in undergraduate education courses, their under-representation in postgraduate education coursework studies is of concern because postgraduate coursework degrees in education, such as the Graduate Diploma in Education (or Dip. Ed.), are teacher training courses. Thus the under-representation of men in these courses has a flow-on effect for the under-representation of men in the primary and high school teaching professions, as discussed above.

A significant finding which emerged from the analysis of the postgraduate coursework student data is in relation to the biggest field of study in postgraduate coursework education: management and commerce. Students in this field of study alone make up over 40 per cent of the total postgraduate coursework population. The gender difference in this field was more marked than was the case for the biggest fields of study in the postgraduate research student body. As Figure 7 shows, almost 60 per cent of students enrolled in postgraduate management and commerce studies are men.

Figure 7: Postgraduate Coursework Students by Gender, Selected Fields, 2002



Source: DEST, [Students 2002: Selected Higher Education Statistics](#), Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender 2002.⁸⁴

Gender Equity in a Deregulated Fee Environment

A brief explanation of developments in postgraduate coursework—and in particular the deregulation of postgraduate coursework fees—in recent years helps to explain the results of this analysis of the 2002 postgraduate coursework data. The deregulation of postgraduate coursework began with the reforms to the Australian higher education system

under Education Minister John Dawkins in 1988. It was extended by the Labor government in the early 1990s and was further intensified when the Coalition government came to office in 1996. In the 1996 Federal Budget, the Coalition government made cuts to universities' funding, removed the majority of government-funded postgraduate coursework places (some HECS places were maintained in the fields of teaching and nursing), and allowed universities to set and charge up front fees for the majority of postgraduate coursework degrees to make up the funding shortfall. This has resulted in a substantial decrease in the proportion of government-funded places—and thus an increase in the proportion of full-fee paying places—in the domestic postgraduate coursework load: in 1996 77 per cent of postgraduate coursework places were government funded, in 2000 only 38 per cent of places were government funded.⁸⁵ That is, by 2000, over 60 per cent of domestic student places in postgraduate coursework degrees were funded by up front fees paid by students.

The increasing proportion of students paying up front fees was accompanied by a decrease in overall domestic enrolments between 1996 and 2000,⁸⁶ though this decrease in domestic enrolments was largely masked by a major increase in overseas student enrolments.⁸⁷ The decline in domestic enrolments has been unevenly distributed through the discipline groups. The majority of discipline groups have declined in numbers, while enrolments in only two areas—mathematics and computer science, and management and commerce (the biggest field of study in postgraduate coursework)—have increased. The increases in these two areas can be accounted for by increases in the international student population, as research conducted by CAPA in 2000 showed that there is a correlation between declining HECS places and declining domestic enrolments.⁸⁸

There is evidence to suggest that the deregulation of postgraduate coursework has been particularly detrimental for women students, and for women wanting to take up postgraduate coursework study (but who may have been prevented from doing so because of the cost of up front fees). A 2001 Senate Committee report, *Universities in Crisis*, found that:

... women are less likely to be the beneficiaries of employer incentives for undertaking postgraduate study. Men are more likely to be given time off to study, and are more likely to have their fees paid by their employers. Women are less likely to be regarded as 'good investments', with men being more highly valued as providers of future financial return. The consequences are that women are more heavily represented in postgraduate coursework [degrees] that are HECS liable than are men, although they are likely to be less able than men to pay off these debts expeditiously.⁸⁹

That is, the deregulation of postgraduate coursework fees has meant that the majority of postgraduate coursework students now pay full fees. Yet women are less likely than men to be able to access at least one source of assistance in paying these fees: contributions from employers. The introduction of the Postgraduate Education Loans Scheme (PELS)—an income contingent government loans scheme for postgraduate students—in 2002 at least removed the 'up front' element out of full-fee paying postgraduate courses. An

increase in postgraduate coursework enrolments in 2002 suggest that the introduction of PELS has had some success in overcoming the deterrent of up front fees for postgraduate courses.⁹⁰ At the same time, however, there is evidence to suggest that universities have taken advantage of the perceived increase in affordability and accessibility of postgraduate coursework created by the introduction of PELS, and increased fees for some postgraduate coursework degrees.⁹¹ If this becomes a trend, it will lead to increased levels of debt associated with postgraduate coursework studies which will have important social and economic impacts.⁹²

It is also important to bear in mind that debt aversion can be a disincentive to taking up study, particularly in the case of equity groups, as was discussed above in reference to undergraduate students and HECS. While there is some debate about this in Australia,⁹³ international research has shown this to be the case.⁹⁴ Further, an income-contingent loans scheme necessarily means that of those who do choose to take out student debt, those groups earning the least will take longer to pay back their debts. Thus, women will take longer on average to pay back their student debts than men, since, on average, they earn less.⁹⁵ For example, a New Zealand parliamentary committee inquiry in 1999 noted that the average male university student would take around 17 years to repay a loan of \$20 000, while it would take the average female student 51 years to repay a loan of this size.⁹⁶

There are two key points which arise from the above discussion. First, that postgraduate coursework is an area within the Australian higher education sector where gender equity has not been achieved. Second, this brief discussion of the relevant literature suggests that, at best, the deregulated fee environment has not helped to achieve gender equity in this area of higher education, and that, at worst, means deregulated fees have hindered progress towards gender equity. Thus, it will be important to continue to monitor patterns in this area, particularly as more data on the effect of the introduction of PELS become available.

Conclusion

While it is the case that female students in Australian universities now outnumber their male counterparts overall, this is not in itself a reason for complacency about gender equity in access to higher education. While there have certainly been gains made in gender equity in Australian higher education—for example, there have been some increases in women's participation in non-traditional areas, and in women's representation at senior levels of academia and management in Australian universities—an analysis of the most recent student enrolment data and staff figures shows that gender equity in the Australian higher education is yet to be achieved. Additionally new gender divisions have emerged in fields such as technology related courses at undergraduate and postgraduate levels. This paper has also identified some areas where there seem to have been backward steps. For example, men's representation in teacher-training courses has decreased over the last twenty years. This issue was highlighted recently as being of particular concern by the

Education Minister, Brendan Nelson, because the under-representation of male students in teacher-training courses necessarily has a flow-on effect for the number of men in the teaching profession. While there is an argument to support the creation of scholarships for men in this field, the same argument applies with equal force to women in fields where there are old and new gender divisions.

These examples highlight one reason why gender equity is important: because of its implications for equity in the labour market. There are also broader reasons why gender equity is important within the Australian higher education system itself. As the AV-CC's 2002 policy statement on gender equity pointed out, gender equity has important implications for the quality and strength of our higher education system.⁹⁷ This is because diversity is central to educational quality, and equity is central to diversity. That is, the interplay between quality, equity and diversity in education is essential. The importance of these three principles, along with that of sustainability, was emphasised in the Minister Nelson's proposed changes to higher education announced in the 2003 Budget.⁹⁸

This brief analysis suggests that in a less regulated university sector equity issues will require a renewed emphasis, if the gains in the representation of female students, students from disadvantaged groups and the participation of men and women in non-traditional fields of study, are not to be eroded. Moreover there are new and emergent gender divisions in technology related courses which require equity attention. In this context, it will be especially important to monitor the effect of the partial deregulation of undergraduate fees on the composition of the student body brought about by the proposed changes to higher education.

Endnotes

1. Australian Vice-Chancellor's Committee (AV-CC), *Excellence and Equity: Foundations for the Future of Australia's Universities: The AV-CC response to the Higher Education Reforms in the 2003 Budget*, Canberra, 2003.
2. Higher Education Division, Department of Education, Training and Youth Affairs, *Equity in Higher Education*, 1999.
3. See, for example, Higher Education Division, Department of Education, Training and Youth Affairs 1999, op. cit.
4. Department of Employment, Education and Training, *A Fair Chance for All – Higher Education within Everyone's Reach*, 1990.
5. *ibid.*, pp. 2–3.
6. Higher Education Division, Department of Education, Training and Youth Affairs 1999, op. cit., p. 18.
7. Which is measured as a *percentage* of total enrolments—*ibid.*

8. Which is measured as the *ratio* of the percentage of women in higher degree research and postgraduate coursework degrees to the percentage of women in undergraduate programs—*ibid.*
9. AV-CC 2002, *ibid.*
10. Clare Burton, *Gender Equity in Australian University Staffing*, Department of Employment, Training, Education and Youth Affairs, 1997; Tanya Castleman, Margaret Allen, Wendy Bastalich and Patrick Wright, *Limited Access: Women's Disadvantage in Higher Education Employment*, National Tertiary Education Union, 1995; Gretchen Poiner, *Women and the academic procession: questions of equality and opportunity*, Women's Research Centre, University of Western Sydney, Nepean, 1991; Felicity Allen, *Women academics in Australian universities*, AGPS, 1990.
11. Overall, women make up 52 per cent of total university staff, and men 48 per cent. These data were compiled from Department of Education, Science and Training (DEST), [Staff 2002: Selected Higher Education Statistics](#), Commonwealth of Australia, 2002: Table 9—FTE for Full-time and Fractional Full-time Staff by State, Institution and Type of Organisational Unit 2002.
12. In 2002, women comprised 38 percent of all academic staff, and 62 per cent of non-academic staff. By contrast men accounted for 62 per cent of all academic staff and 38 per cent of non-academic staff—*ibid.*
13. Tanya Castleman et al, *op. cit.*, p. 25.
14. *ibid.*
15. Or 25.6 per cent to be exact—*ibid.*, p. 40.
16. *ibid.*
17. The DEST data excludes casual staff from the figures.
18. We have been unable to locate any data on the relative proportion of tenured staff at the different academic levels which would confirm that this is the case.
19. Rebecca Scott, 'Jobs are still for the boys', *The Sydney Morning Herald*, 22 May 2002.
20. This percentage is based on a gender analysis of the list of *Senior Officers in Australian Higher Education Institutions*, 2003, produced by the AV-CC. Of the 38 universities listed we counted 610 males and 248 females. Unfilled positions were excluded from the count.
21. AV-CC, [Australian University Vice-Chancellors](#), 2003.
22. Barry Sheehan, Anthony Welch and Fiona Lacy, *The Academic Profession in Australia*, Commonwealth of Australia, 1996.
23. Ann Brooks, *Academic Women*, Open University Press, Buckingham, 1997, p. xii.
24. Claire Burton, *op. cit.*, p. xi.
25. *ibid.* p. 6; Tanya Castleman et al., *op. cit.*, p. 16.
26. Dorothy Illing, 'Too few women in the pool', *The Australian*, 24 July 2002.

27. Tanya Castleman et al., op. cit., p. 15.
28. See Ann Brooks, op. cit.
29. See, for example, A. Pratt, Council of Australian Postgraduate Associations (CAPA) Vice-President, *Senate Committees Hansard*, 2 July 2001, p. 771.
30. See the DEST website summary of the National Research Priorities: http://www.dest.gov.au/priorities/goals_summary.htm. With the exception of health, the National Research Priorities prioritise research work conducted in fields where men dominate, including information technology and the sciences.
31. Claire Burton, op. cit., p. 7; Tanya Castleman et al, op. cit. p. 18. See also Pauline Gallagher, 'Gender Issues for Science', *Australian Science*, March 2003, pp. 41–2.
32. Claire Burton, op. cit., p. xi.
33. Tanya Castleman et al, op. cit., p. 17.
34. *ibid.*; Claire Burton, op. cit., p. 7; Ann Brooks, op. cit.; Pauline Gallagher, op. cit.
35. See Robert Connell, *Gender*, Basil Blackwell, Cambridge, 2002.
36. Department of Education, Training and Youth Affairs, *Higher Education Students Time Series Tables, 2000: Selected Higher Education Statistics*, Commonwealth of Australia, 2001: Table 2—Higher Education Students by Type of Enrolment and Gender 1949–2000.
37. See, for example, Michael P. Kidd and Michael Shannon, 'The Gender Wage Gap in Australia—The Path of Future Convergence', *The Economic Record*, vol. 78, no. 241, June 2002, pp. 161–74.
38. DEST, *Students 2002: Selected Higher Education Statistics*, Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender 2002.
39. Undergraduate students include those students enrolled in Bachelor's programs, Associate Degrees, Advanced Diplomas and Diplomas, other award courses, enabling courses and non-award courses. Our analysis is based on data for the total student population, including both domestic and international students. It might be argued that international students should be excluded from this analysis because, for instance, they represent a different student cohort in terms of fee structure (overseas student tuition fees are completely deregulated), and they will not have the same impact on the Australian labour market as domestic students. However, we conducted a separate analysis of gender discrepancies using only domestic student data, which revealed that the relative proportions of men and women students were virtually the same as for the total student population in almost all fields. The data in our analysis was compiled from DEST, *Students 2002: Selected Higher Education Statistics*, Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender 2002, and Table 55—All Overseas Students by Level of Course, Broad Field of Education and Gender 2002.
40. DEST, *Students 2002: Selected Higher Education Statistics*, Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender 2002.

41. Cherry Collins, Jane Kenway and Julie McLeod, *Factors Influencing the Educational Performance of Males and Females in School and their Initial Destinations after Leaving School, A project funded by the Commonwealth Department of Education, Training and Youth Affairs*, Deakin University and University of South Australia, July 2000.
42. Under these new arrangements universities will be able to charge students up to 30 per cent more than the HECS fee set by the government.
43. DEST, [*Students 2002: Selected Higher Education Statistics*](#), Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender, 2002.
44. Robert Connell, op. cit. We are also grateful for Robert Connell's advice on this issue.
45. The Hon. Brendan Nelson, Minister for Education, Science and Training, [*Our Universities: Backing Australia's Future*](#), 13 May 2003, p. 20.
46. Department of Education, Training and Youth Affairs, [*Higher Education Students Time Series Tables, 2000: Selected Higher Education Statistics*](#), Commonwealth of Australia, 2001: Table 7 Higher Education Students by Gender and Broad Field of Study, 1983–2000. See also Justice Michael Kirby, 'Women Lawyers—Making a Difference', *Australian Feminist Law Journal*, 1998, p. 128.
47. Les Andrews, [*Does HECS Deter? Factors Affecting Participation by Low SES Groups*](#), DETYA, 1999, p. 18.
48. *ibid.*, pp. 18–19.
49. Richard Jones, [*Socioeconomic Background and Higher Education Participation: An analysis of school student's aspirations and expectations*](#), DEST, 2002, p. 42.
50. *ibid.*
51. Cherry Collins et al, op. cit., p. 108.
52. Under the new HECS system a fourth band of 'National Priorities' courses will be created. The range for this band will be from \$0 to the current level of HECS for Band 1 (\$3854).
53. The Hon. Brendan Nelson, MP, op. cit., p. 33.
54. House of Representatives Standing Committee on Education and Training, *Boys: Getting it Right, Report on the inquiry into the education of boys*, Commonwealth of Australia, 2002, p. 154.
55. Department of Education, Training and Youth Affairs, [*Higher Education Students Time Series Tables, 2000: Selected Higher Education Statistics*](#), Commonwealth of Australia, 2001: Table 7 Higher Education Students by Gender and Broad Field of Study, 1983–2000.
56. In 1983, when the data were first collected, men accounted for 34 per cent of students enrolled in the broad field of education. In 2000 they account for only 24 per cent of these students—*ibid.*
57. Sophie Morris, 'Nelson pushes for male teachers', *The Australian*, 19 May 2003, p. 1.

58. House of Representatives Standing Committee on Education and Training, *op. cit.*, pp. 155–57.
59. See Christine Skelton, *Schooling the Boys: Masculinities and Primary Education*, Open University Press, Buckingham, 2001, pp. 116–18.
60. See Robert Connell, Dean Ashenden, Sandra Kessler and Gary Dowsett, *Making the Difference: Schools Families and Social Division*, Allen & Unwin, 1983, pp. 176–9. Again we are grateful for Professor Connell's comments in relation to this issue.
61. See Jane Kenway and Sue Willis, *Girls, Boys and Feminism in Schools*, Allen and Unwin, Sydney, 1997, pp. 8–12, pp. 86–95; Connell et al, *op. cit.*
62. Higher Education Division, Department of Education, Training and Youth Affairs 1999, *op. cit.*
63. See also Cherry Collins et al, *op. cit.*, p. 104.
64. Department of Education, Training and Youth Affairs, [Higher Education Students Time Series Tables, 2000: Selected Higher Education Statistics](#), Commonwealth of Australia, 2001: Table 7 Higher Education Students by Gender and Broad Field of Study, 1983–2000.
65. Department of Employment, Education and Training 1990, *op. cit.*
66. See also Cherry Collins et al, *op. cit.*, p. 104.
67. While some universities offer scholarships aimed at encouraging women into fields such as engineering, there is no universal scholarship program for women in non-traditional areas of the kind which Minister Nelson appears to be proposing for encouraging men to enter primary school teacher training courses.
68. This is also broadly the case for vocational education and training outcomes more generally, which take into account the greater participation of men in the TAFE and vocational training sector. See Cherry Collins et al, *op. cit.* pp. 102–32.
69. AV-CC, [Excellence and Equity: Foundations for the Future of Australia's Universities: The AV-CC response to the Higher Education Reforms in the 2003 Budget](#), Canberra, 2003.
70. *ibid.*, p. 15.
71. For example, research students are eligible for scholarships to assist with living expenses, coursework students are not; coursework degree fees are largely deregulated, and until recently were up front, research students are usually exempt from course fees; coursework students tend to be part time, postgraduate research students are more likely to study full-time; and there are far more postgraduate coursework students than research students: postgraduate coursework students make up 80 per cent of the total postgraduate population.
72. Postgraduate research students include those students enrolled in Doctorates by research and Masters by research programs. Like undergraduate students, we conducted a separate analysis of gender discrepancies using only domestic student data, which revealed that the relative proportions of men and women students were virtually the same as for the total student population in almost all fields. The data in our analysis was compiled from DEST, [Students 2002: Selected Higher Education Statistics](#), Commonwealth of Australia, 2002: Table 21—

- All Students by Level of Course, Broad Field of Education and Gender 2002, and Table 55—All Overseas Students by Level of Course, Broad Field of Education and Gender 2002.
73. DEST, *Students 2002: Selected Higher Education Statistics*, Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender, 2002.
 74. Ruth Neumann, 'Diversity, Doctoral Education and Policy', *Higher Education Research & Development*, vol. 21, no. 2, 2002, p. 167.
 75. *ibid.*
 76. The participation rates of women in postgraduate research degrees indicate that this is the case. As we noted above, women now represent almost exactly half of postgraduate research students in Australian universities; in 1991, only 38 per cent of postgraduate research students enrolled in Australian universities were women. Department of Education, Training and Youth Affairs, *Higher Education Students Time Series Tables, 2000: Selected Higher Education Statistics*, Commonwealth of Australia, 2001: Table 6—Higher Education Students by Gender and Broad Level of Course, 1949–2000, 2001.
 77. Hilary Pearse, *Implementing the Research Training Scheme: The consequences for postgraduate research students*, CAPA Research Paper, November 2002, p. 3. Available online via the CAPA website: <http://www.capa.edu.au/frameset.html?./papers/index.html>.
 78. The Hon. David Kemp, Minister for Education, Training and Youth Affairs, *Knowledge and Innovation: A Policy Statement on Research and Research Training*, DETYA, 1999, p. 2.
 79. Pearse, *op. cit.* See also Jane Richardson, 'Research rules bad for equity', *The Australian*, 18 December 2002.
 80. Pearse, *op. cit.*, p. 6.
 81. *ibid.*, pp. 24–5.
 82. *ibid.*, p. 25.
 83. Note also that the higher education reform package recently announced by Minister Nelson also included a commitment to 'comprehensively evaluating' the effectiveness of recent changes to research funding, including the RTS—The Hon. Brendan Nelson, *op. cit.*, p. 31.
 84. Postgraduate coursework students include those students enrolled in Doctorates by coursework, Masters by coursework, Graduate Diplomas, Graduate Certificates, and the DEST category of 'Postgrad. Qual/Prelim'. As for other students, we conducted a separate analysis of gender discrepancies using only domestic student data, which revealed that, even though overseas students make up over 30 per cent of the postgraduate coursework population, the relative proportions of men and women students were virtually the same as for the total student population in almost all fields. The data in our analysis was compiled from DEST, *Students 2002: Selected Higher Education Statistics*, Commonwealth of Australia, 2002: Table 21—All Students by Level of Course, Broad Field of Education and Gender, 2002, and Table 55—All Overseas Students by Level of Course, Broad Field of Education and Gender, 2002.

85. Bradley Smith and Mark Frankland, 'Marketisation and the new quality agenda: postgraduate coursework at the crossroads', *Australian Universities Review*, vol. 43, no. 2, 2000, p. 8.
86. *ibid.*
87. Simon Marginson, 'What's wrong with the Universities?', *Arena Magazine*, no. 61, October–November 2002, p. BB13.
88. Smith & Frankland, *op. cit.*, p. 10.
89. Senate Employment, Workplace Relations, Small Business and Education Committee, *Universities in Crisis*, Commonwealth of Australia, 2001, p. 314.
90. Patrick Lawnham, 'Postgrad numbers lift', *The Australian*, 27 February 2002; Catriona Jackson, 'University enrolments up 14 pc, postgrads lead way', *Canberra Times*, 7 May 2002; Gerard Noonan, 'Postgraduate students flock to university', *The Sydney Morning Herald*, 7 May 2002.
91. Tom Clark, 'Loans drive deregulated fees upwards', *Campus Review*, vol. 12 (29), 31 July–6 August 2002, p. 6. See also Leisa Ridges and Emmaline Bexley, 'Talking about what we'd like' *Campus Review*, vol. 12 (42), 30 October–5 November 2002, p. 19.
92. Hilary Pearse, *The social and economic impact of student debt*, Council of Australian Postgraduate Associations (CAPA) Research Paper, March 2003. Available online: <http://www.capa.edu.au>.
93. See, for example, Les Andrews, *Does HECS Deter?: Factors Affecting Participation by Low SES Groups*, DETYA, 1999. Available online: <http://www.detya.gov.au/archive/highered/occpaper/99F/does.pdf>.
94. See, for example, Universities UK, [*Attitudes to Debt: School leavers and further education students' attitudes to debt and their impact on participation in higher education*](#), 2003. See also Hilary Pearse 2003, *op. cit.*
95. Hilary Pearse 2003, *op. cit.*, p. 21.
96. *ibid.*, pp. 21–2.
97. AV-CC 2002, *op. cit.*
98. The Hon. Brendan Nelson, *op. cit.*