Factors Influencing the Educational Performance of Males and Females in School and their Initial Destinations after Leaving School

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CONTENTS

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EXECUTIVE SUMMARY

For some time there has been widespread concern in Australia over gender patterns in educational performance. Recently, this concern has focused on the perception that girls are now 'doing better' than boys in a number of key areas, most notably retention to Year 12, end-of-school results and competence in literacy. This concern is not isolated to Australia. Similar gender disparities in educational performance have been the subject of major reports in England, New Zealand and Scotland. One key task for this report was to assess the available data and research on these and other related matters in Australia and to identify areas of under-performance and disadvantage with a view to informing future policy and research.

This *Report* was commissioned by the Commonwealth Department of Education, Training and Youth Affairs to investigate the patterns of males' and females' educational participation and performance at school and their initial destinations after leaving school, the key influencing factors and the disadvantages that arise from them. While gender was the major factor under consideration, the research brief also required an examination of the relative impact of other independent variables on participation, performance and post-school destinations including geographic, demographic and socio-economic factors.

Methods

The research comprised several inter-related elements:

- compilation and analysis of statistical data on participation and performance in schools and on patterns of participation in post-school destinations (including higher education, VET and the labour force);
- a review of the relevant research literature and production of an annotated bibliography;
- extensive consultations with experts and key figures in related fields with regard to interpretations of the data and the related research literature; and
- the preparation of this *Report* drawing together the findings from the above elements.

The *Report* thus represents the culmination of substantial research and an extensive interpretative and consultative process.

Outline of the *Report*

The *Report* begins by providing a background to current concerns, surveying preceding gender equity policies and proposing some frameworks for conceptualising gender equity today, in chapter 1. The available data on gender differences in school retention, participation and performance are then presented in chapter 2. Next, data on the interaction between gender differences and other factors - such as socio-economic status, locality, ethnicity, disability and indigeneity - and their impact on school performance are described in chapter 3. After this, an overview and analysis of the ways in which gender differences in education have been explained is offered in chapter 4. Chapter 5 provides the statistical evidence concerning initial destinations post-school. Chapter 6 provides an explanation of patterns of difference in post-school outcomes.

Key Findings

The *Report* indicates that there are indeed major gender differences in educational participation, performance and outcomes. However, it also shows that these do not necessarily translate into disadvantage in straightforward ways. Research indicates that differences in performance need to be examined according to differences both between and within gender groups. The emphasis in the report is on analysing which trends and which differences matter and why.

In summary, the following differences between boys and girls were identified, grouped according to the key indicators of participation, performance and outcomes.

Participation

- ***Schooling***
  There are major differences here, particularly in relation to retention beyond Year 10. The Apparent Retention Rate (ARR) to Year 12 for girls in 1999 stood at 78.5 per cent and for boys at 66.4 per cent . These retention rates have been stable since 1996 and appear to be neither growing nor shrinking now that the recession and post-recession rise and fall of 1991 to 1995 has flattened out. They are now on a par with the ARR for 1991.
- ***Subjects***
  While most students of both sexes take English, mathematics, a science and a social science, there are important differences in subject patterns by gender in Year 12. More girls take clusters of subjects that spread across Key Learning Areas and do not appear as career-focused, while more boys tend to take narrow clusters of subjects, possibly with potential post-school employment pathways directly in mind. Boys' clusters are particularly focused on the mathematico-logical formulaic knowledges and/or hands-on technology knowledges (see particularly table 2.4).
- ***Information Technology***
  Considerably more boys than girls are taking this subject in the post-compulsory years and, in New South Wales at least, the difference in participation has grown considerably during the 1990s (table 2.5).

Performance

- ***Mean subject performances of females and males in Year 12 assessments***
  The average girl is out-performing the average boy in more subjects than vice versa. The range of such subjects has grown during the 1990s, especially in New South Wales (see figures 2.5-2.11). High achievers of both genders are performing about equally. The major difference appears to be that the performances of girls below these high fliers tend to cluster closer to the mean (and slightly above the overall mean for both sexes), while boys' performances tend to spread out more and to end at the lower end of the performance scale.
- ***Performance patterns***
  The fact that the average girl is performing slightly better than the average boy is in part the result of boys' preference for particular high pay-off, and/or traditional subjects even when they may not do well in those areas. Thus in subjects highly rated by boys there is likely to be a longer tail of boys bringing down the average performance. Girls' broader

spread across subjects suggests a greater inclination not to gamble on higher status subjects if they are likely to do poorly in them. (Refer discussion in chapter 2.)

- ***Literacy/subject English achievement***
  More boys than girls are slow starters at literacy, but Western Australian data suggest that they may catch up by the beginning of secondary school (Year 8). Boys fall back in achievement compared with girls in the junior secondary years however, and are under-performing again compared with girls by Year 10 (see table 2.8).

Post-school outcomes

- ***Higher education***
  More females than males enter higher education. Much of this difference results from mature-age female entrants in their twenties, not from large differences in the proportions of school leavers of each gender entering directly from school. School leavers proceeding to university immediately or after one year's break from study now make up only around 35 per cent of entrants to undergraduate programs in Australian universities.
- ***Technical and Further Education (TAFE) sector***
  More males than females proceed to TAFE.
- ***Post-school labour force experiences***
  These are significantly different for males and females proceeding directly from school

  - Boys who leave school before completing Year 12 are only 4 per cent less likely to have full-time work at around age 24 (seven years after the cohort finished Year 12) than those who completed Year 12 but did not complete further major tertiary qualifications. Girls who leave before completing Year 12 are 21 per cent less likely to be in full-time employment than girls who complete Year 12 but do not complete further major qualifications.

  - Girls' overall higher average performance in most subjects in Year 12 does not translate into better labour market outcomes for all girls. In the seven years following Year 12, recent ACER research indicates that while males are more likely than females to be registered in the official unemployed category, they are also considerably more likely to be in training schemes leading safely to full-time work (eg apprenticeships), or in full-time work, and considerably less likely to be permanently in the part-time employment market or to be out of the labour force altogether.

This suggests that boys' early leaving strategy has more 'pay off' for those wishing to pursue full-time employment than has been commonly acknowledged; that girls who do not pursue other options (eg. parenting, part-time work) remain at school for reasons associated with their employability; and that the importance of gender differences in relation to participation needs to be reconsidered in that light. It also points to the extent to which the labour market is gender-segmented in its full-time employment opportunities.

Interaction between gender and other variables – which boys, which girls?

The participation and performance data suggest that some boys and some girls are participating to the end of Year 12 and performing well. The research brief required us to look at other independent variables and to assess their relative impact on educational performance

and relative outcomes. Throughout the *Report* an approach which takes such other variables into account is described as a 'which girls, which boys?' approach.

With regard to gender and other variables the research pointed to the overarching significance of socio-economic status (SES) for school participation and performance.

The *Report* concludes that:

- SES makes a larger difference than gender to Year 12 performance, even in subject English where girls generally do better than boys.

- SES makes the largest difference to educational participation, particularly for boys - about a 30 per cent difference between males from professional/managerial backgrounds and those from unskilled backgrounds. SES makes somewhat less difference for females. Poverty is a major indicator of likely low participation and performance for both genders.

- Rural, remote and urban localities have high concentrations of poverty and disadvantage for both sexes, (with regard to school participation and subject performance), with rural males more negatively affected than rural females. However, seven years after leaving school, boys who graduate from rural schools are much more likely to be employed full-time than their female counterparts. (There are many other complex and subtle differences by location in relation to participation and performance in particular subjects - see chapter 3).

- Differences in subject choice clusters between males and females intersect with socio-economic differences in participation and performance. The lower-middle (skilled) and highest SES (professional/managerial) groups have the greatest differences between male and female patterns and male students in these groups show the most traditional patterns for their SES backgrounds. Well over a third of highest SES males take the traditional maths and physical sciences subject group. Lower SES males tend to divide up (probably on the basis of academic success) between this subject group and one of the subject groups in the Vocational Education and Technology 'Field of Study'. Upper-middle SES students show the least gendered pattern because the males of this group show the greatest spread across Fields of Study. Within Fields of Study, however, these males, like their counterparts from the other SES backgrounds, tend to choose a tight group of subjects rather than the broader options which females tend to take.

- Indigeneity intersects with poverty, locality and SES disadvantage to make the chances of poor schooling participation and performance extremely high for indigenous students.

- States differ in their overall retention patterns and in patterns of subject enrolments. They also differ in the number of subjects, and even in some cases in the particular subjects, in which females dominate. State cultures and structures of post-compulsory schooling make a difference. The ACT and Queensland, where there are no external examinations, have better participation and performance results for boys.

- Recent work has highlighted the extent of mental health morbidity among school children of both genders and its negative effects on school performance. Up to the age of sixteen, considerably more boys than girls are affected by mental health problems. By the upper years of schooling however, girls' rates of mental health morbidity have increased and are on a par with boys' rates.[1]
- States differ in their overall retention patterns and in patterns of subject enrolments. They also differ in the number of subjects, and even in some cases in the particular subjects, in which females dominate. State cultures and structures of post-compulsory schooling make a difference. The ACT and Queensland, where there are no external examinations, have better participation and performance results for boys.

Gender

With regard to males' and females' educational participation, performance and outcomes this *Report* asks when and how such differences become disadvantages. Gender becomes a significant factor when other factors, as outlined above, are considered, eg in relation to rural or low SES boys. Beyond Year 12, particularly for those not going on to complete a higher qualification, gender takes over as the major socio-demographic factor affecting young people's labour market outcomes. A higher proportion of females do not enter the full-time labour market in spite of their higher school retention rate and their better average performance in most subjects in Year 12. In addition the *Report* indicates that Australian youth as a group is generally disadvantaged in the labour market.

Overall, the *Report* concludes that concern about gender patterns of participation, performance and outcomes is justified because certain differences do convert into certain disadvantages; but it shows that the ways in which this happens are more subtle and varied than is usually recognised.

On the basis of the data and the literature, the *Report* divided disadvantage into first and second order disadvantages. First order disadvantages are those factors which must be addressed in order that the participation and performance differences and disadvantages (second order disadvantages), can be ameliorated.

First-order disadvantages

These affect students of both genders and can be summarised as follows:

- being locked into a traditional and narrow gender identity and peer group which constrains rather than enables educational choice and flexibility;
- coming from circumstances which are characterised by such material disadvantages as unemployment, low income and lack of access to resources and support;
- coming from a grouping which is culturally marginalised and stigmatised;
- suffering physical and mental under-nourishment and/or ill health or various forms of abuse, including substance abuse;

[1] Mental health morbidity is defined as one or more of the following: withdrawn; attention problems; aggression, social problems, thought problems; somatic problems; anxiety depression problems; delinquency.

- living a life-style which is characterised by high degrees of personal risk particularly of homelessness, early pregnancy and suicide;
- attending a school which is characterised by any or all of the following: intolerance, harassment and violence; SES, gender and cultural bias; an unwelcoming environment in which students and their families are not valued; and
- lack of a stimulating and rewarding learning program; the absence of regular diagnostic feedback on progress and opportunities to take responsibility and exercise judgment; an environment which is poorly resourced and thus unable to support the full range of learning and welfare needs.

Second order disadvantages

These include:

- early school departure with no or few adequate and sustainable opportunities for paid work or further education and training;
- participation in a narrow range of school subjects which constrain students' opportunities to develop their full human, social and cultural capital;
- participation in a disconnected range of school subjects which do not have the potential to convert into sustainable opportunities for paid work or further education and training;
- inferior performance, but particularly poor performance in the multiple literacies and numeracies which are required for full participation in post-school life;
- inferior performance in those fields which readily convert into opportunities to access further work, education and training and to lead a full and balanced life; and
- severely restricted opportunities in post-school working life. These include the opportunities to work, to pursue training and education, to pursue life with a sense of agency and optimism.

High quality outcomes for all students can only be achieved if all individuals have the opportunity to develop to their full potential through effective education and training. Within this context and if one considers 'full potential' to refer to the development of intellectual, social and cultural capital it can be said that as a result of the differences in participation, performance and outcomes outlined above, boys and girls tend to be disadvantaged in the following ways:

Boys

- Boys' generally poorer performance in literacy and English disadvantages them to the extent that both are central to successful performance in a wide range of school and post-school subjects and fields of work. Boys' choices on entering the labour market may be restricted on the basis of their poor literacy skills.

- The poorer performance of those boys who are in the middle and lower range across the board disadvantages them in terms of their capacity to exercise a full range of subject, higher education and career choices. This may also mean that they miss out on the development of skills and knowledge which enrich their post-school experiences. They also have reduced capacity for continuous learning and maintaining employment through their lives.
- The early school departure of some boys may mean they are less employable than boys who stay at school. However, on average it does not necessarily mean they are less

employable than the girls who stay at school. In particular, boys who leave early are better able to access full-time work and further training on leaving school than are girls who leave early due to the wider range of employment options available to boys in the lower skill occupations.

- Boys' participation in a narrow and vocationally-oriented range of school subjects may mean that they miss out on opportunities to develop diverse knowledge and skills, including interpersonal and civic skills, and to foster their social and cultural capacities. However, it does not mean they are disadvantaged with regard to employment. Indeed, the nature of their choices seems to advantage them in this regard.

Girls

- Girls' post-compulsory pathways are less likely to lead to successful labour market outcomes and this is an obvious disadvantage now that women frequently have to be economically independent. Girls are less likely to secure full-time employment, more likely to be involved in part-time employment and much more likely to be undertaking activities which put them out of the labour market. This may reflect at least in part the role some females have played in family formation and the implications this has for their labour market participation.

- The way the structure of Year 12 assessment privileges some combinations of subjects and certain subjects, works to disadvantage many girls. This is because these girls select a broad range of subjects which are not necessarily well articulated to each other and tend to be of low status. This has serious consequences for their future employment and training.

- The fact that girls in general have a higher order of literacy skills does not give them better labour market outcomes than boys. This is possibly due to the segmented nature of the labour market.

- Although girls stay on longer at school than do boys, this additional retention is necessary in order to secure opportunities for employment and post school studies. In this sense girls are disadvantaged in that, if they leave school early, they are much more likely than boys not to be in full-time work.

- Girls' low participation in subjects that result in information technology literacy leads them to risk becoming members of the information poor and exclusion from the information society. It also excludes them from a range of emerging and important employment opportunities.

Socio-Economic Status

As a result of the differences outlined above, girls and boys from low SES groups tend to be disadvantaged in the following ways:

- many more of them face the risks associated with leaving school early;
- many more select school subjects, subject clusters and post-school education and training that largely lead them towards low SES employment; and

- many more of them have lower school achievement, which severely restricts their educational and career choices and thus increases the chance of their social exclusion and of cumulative social disadvantage.

The *Report* also considers explanations of students' unequal post-school destinations outlining those that focus on:

- the 'goods', 'capacities' and capabilities that students bring from school to their post-school lives - their credentials, other experiences and personal resources;
- the structural and cultural character of the worlds they enter - the nature of the world of work, youth labour markets and institutional environments in VET were the examples noted; and
- the ways in which young people travel between the complexities of work, education, unemployment, welfare, the various routes they take and the transitions and risks they negotiate.

Gender is a key factor here.

RECOMMENDATIONS

The Government's equity objective in education, training and youth affairs is:

- to ensure policy solutions are equitable and responsive so that Australians facing disadvantage have opportunities to learn and gain skills.

The Government is committed to providing:

- opportunities and choice for individuals to participate in education and training;
- policies and programs to achieve outcomes that are sought by individuals and industry, and
- assistance to disadvantaged individuals to address specific needs.

This equity objective is set within the Government's understanding of the value of education to the community which is described in cultural, social, economic and political terms.

This study has acknowledged the value of education to the economy. It has drawn on factors including socio-economic circumstances, location, type of schooling and gender which have an impact on a child's schooling and vocational destinations. It has identified differences between groups in Australian society. Some of these differences are the result of socio-economic circumstances, of gender and of other factors relating to places of residence, ethnicity and indigeneity.

A major requirement of this research project is to identify measures additional to, or building upon those already in place, to address disadvantage related to gender in educational participation, performance and outcomes. Accordingly, this report makes the following recommendations which build, where possible, on existing policy levers available to the Commonwealth Government. Recommendations are grouped under the key areas of the community the school and individual factors. The recommendations are also classified

according to whether they conform to principles of redistribution (ensuring access to opportunities and material resources), or recognition (relating to cultural and social diversity and respect – see chapter 1).

The community - recognition

Recommendation 1: A 'which boys which girls?' approach
It is recommended that DETYA incorporate a 'which boys, which girls?' approach as a fundamental element in consideration of further research and policy development in relation to educational performance and outcomes. It is also recommended that DETYA consider ways in which this approach could be brought to the attention of teachers, parents and other stakeholders in order to provide a greater understanding within the community and to refocus the public debate away from the 'boy versus girl' approach.

Rationale

The 'which boys, which girls?' approach to understanding differences in outcomes is an important development in thinking about difference. Over the last decade, the media has been influential in focusing the debate on gender and in particular, on boys' education. Such media coverage was important in alerting the education profession and parents to an important set of issues. However a side effect has been a focus in the press on 'gender wars/gaps/quakes' in schools.

During the 1990s, educational researchers examined in detail the issues raised by the press and identified some limitations and popular confusions around key concepts. However, more recent research concepts and findings have not filtered easily into the press and thus many of the early naive conceptions have remained.

This *Report* identifies factors influencing the educational performance of boys and girls at various stages of their education and beyond. In fact the differences within groups of boys and girls rather than across gender appear to be more significant than has usually been acknowledged.

In general, the main challenges now are to explain to teachers and parents the gender jigsaw rather than the gender gap and the new patterns which emerge once the pieces are put together. The second challenge is to demonstrate the importance of addressing the pressing needs of the most disadvantaged boys and girls.

The school - redistribution

Recommendation 2: The most disadvantaged girls and boys
It is recommended that DETYA, in conjunction with States, develop programs that address the common and different needs of the most disadvantaged girls and boys. Such strategies should begin at primary school and address aspects of disadvantage such as the negative implications of poverty, isolation and rurality for girls' and boys' engagements with schooling.

Rationale

The *Adelaide Declaration's* goal 3.2, indicates that 'socially just' schooling seeks to ensure that ' learning outcomes of educationally disadvantaged students improve and, over time, match those of other students.' Through schools' outcomes data this project has demonstrated that low SES girls and boys share learning outcomes that are far behind those of 'other students'. Such outcomes may be seen as the result of poor educational inputs - financial and human. Their schools often either overtly or covertly reject such students and such students often reject their schools. This is manifested in alienation, disengagement and early leaving. These patterns begin in primary schools; hence primary schools are important sites for intervention. Additionally, low SES boys and girls share remote, rural and urban geographies of poverty, which may also result in cumulative social deprivation. This includes physical and mental under-nourishment and/or ill health and various forms of social exclusion. The effect of these factors may be manifest differently according to gender.

Elaboration

Such programs may include 'locality based school renewal' programs for localities characterised by poverty. These might, for example, encourage primary schools in such localities to develop 'action learning community partnerships' to:

- identify the implications of poverty and cumulative disadvantage for local students' engagements with school, for teachers' engagements with local students and their families and the way gender impacts on these;
- identify the institutional capabilities needed to support the full range of learning and welfare needs, institutional flexibility is a necessary feature here;
- develop a program which ensures that the local school welcomes and values all students and their families, provides students with a stimulating and rewarding learning program customised to their needs, regular diagnostic feedback on progress and opportunities to take responsibility and exercise judgement;
- involve schools working with local councils and employers to plug local youth into community, capacity- building projects and other projects associated with regional/local economic and cultural renewal; and
- be more accountable for their students' educational outcomes.

The school-recognition

Recommendation 3: Identities, peer cultures and curriculum
It is recommended that DETYA work with States to develop programs that encourage boys and girls to move towards positive and flexible gender identities and peer cultures. Such movement would enrich their interpersonal relationships, enhance their adaptability to economic and social change and thus widen their educational and career choices.

Rationale

Identity and peer group cultures are relevant in explaining some of the differences between the educational outcomes of boys and girls. Some boys and girls who have poor educational outcomes appear to subscribe to outmoded and inflexible gender identities and peer cultures,

the effects of which tend to limit their life choices and chances. The ways some boys and some girls demonstrate their understanding of what it is to be male or female may work against their best interests as far as educational and employment outcomes are concerned, particularly in respect of the national goals described in the *Adelaide Declaration (*1.2, 1.3, 1.18). These goals point to the role of schooling in developing 'a commitment to personal excellence as a basis for their potential life roles as family, community and workforce members', 'the capacity to exercise judgment and responsibility in matters of morality, ethics and social justice' and the skills to 'maintain a healthy life-style, and for the creative and satisfying use of leisure time'.

Some boys and some girls in primary and secondary schools belong to peer cultures of banter, bravado and bullying which may undermine their school achievement, their mental health and their chances of developing a positive outlook on life. The literature indicates that such peer cultures may contribute to an anti-excellence attitude, to a lack of individual and collective responsibility and optimism, and to confining and risk-prone choices of life-style.

Along with this, the purposes of the post-compulsory years of schooling may be very narrow for some boys. They largely use such years of schooling to enhance their human capacities at the expense of developing their full potential in relation to their participation in social and civic life; i.e. they do not choose a 'comprehensive and balanced curriculum'. And, there is evidence that some boys' sense of social responsibility declines over their years of schooling in comparison with that of girls. This can affect their capacity as adolescents to exercise wise judgments, and accept responsibility as 'family, community and workforce members'. This issue is increasingly important in the context of the human relationship skills that are in demand in the new workplace environment.

In contrast, although many girls have 'comprehensive and balanced curriculum' in Years 11 and 12, this is not often well articulated to 'career options and pathways'. Girls' relative success in the senior years of schooling does not necessarily translate into commensurate post-school success in terms of further education or position in the labour force. Further, the 'subject clusters' taken by many girls do not open up/lead to as many post-school opportunities as do the clusters usually undertaken by boys. Finally, and in relation to post-school chances, this project has also demonstrated that girls are tending not to take up curriculum opportunities in information and communication technologies.

Elaboration

These programs may include such things as:

- primary school 'action projects' that encourage students to develop positive gender identities and promote tolerant peer cultures and interpersonal relationships that respect gender diversity. These would seek to foster the capacity to pursue high levels of social responsibility and excellence in educational achievement (which are often devalued in dominant peer cultures). Such projects could focus on the youth and sporting cultures that are important to young people. Successful models could be identified from such projects which may then be circulated for wider adoption.

- more astute career advice that shows how creative combinations of subjects can help boys and girls equally to develop their human, social and cultural capital and thus improve their work prospects and the balance of their lives. One immediate aim here would be to broaden boys' Year 11 and 12 subject choices so that as well as being vocationally oriented they would include choices that enhance their social and emotional growth. Another immediate aim would be to encourage girls to package their broad choices creatively with future paid work in mind, especially core labour market work, and work related to information and communication technologies.
- reform of current assessment and vocational emphases. Such revisions would officially recognise the importance of equipping both boys and girls with diverse knowledge and skills and thus economic, social and cultural capacity.

The school - recognition

Recommendation 4: Peer Cultures and Curriculum Change
It is recommended that DETYA work with states to ensure that curriculum initiatives address the broad educational goals of building girls' and boys' every day citizenship capabilities and pathways to further education, training and employment. Curriculum reform could focus on *engaging disengaged students* of both genders by attending to the way in which gender intersects with other social and cultural differences.

Rationale

The *Adelaide Declaration's* goals 3.1 and 3.6 indicate that students' schooling outcomes should be 'free from the effects of negative forms of discrimination' and that through schooling students should learn to 'value diversity'. This *Report* has demonstrated that although disadvantaged boys and girls share much in common, they also have diverse gendered educational experiences and outcomes due to their social and cultural differences. The intensification of social exclusion and fragmentation is accompanied by an increased intolerance of diversity, including gender diversity. These attitudes influence student peer cultures and create negative school environments that impact adversely on students' educational outcomes. Sexism, racism, homophobia and the stigmatisation of students with disabilities dissolve into peer cultures of abuse which target very specific aspects of students' identities. These problems are most manifest in the middle years of schooling. Further, the middle years tend to be characterised by the intensification of potential early school leavers' disengagement. Such students' dominant self-narratives invoke 'can't learn/won't learn' story lines which reject education as an empowering source of self.

Elaboration

These programs would encourage students to develop innovative ways of working together in groups to offset some of the negative effects of students' behaviours based on their perceptions of what it is to be male or female, disabled, ethnically different, socially different or poor. Such programs involving students particularly in Years 5-8 aim to:

- promote student harmony and challenge peer/peer prejudice, intolerance, harassment and violence;
- support, encourage and celebrate difference and the entitlements of all students but would not support differences built on dominance or entitlements based on cultural and socio-economic hierarchies;

- encourage all students to take positive initiatives for change and ultimately to build their citizenship capabilities; and
- the 'engaging curriculum' development program for the middle years of schooling would aim to encourage disengaged middle-school students through pedagogical reform.

The school - redistribution

Recommendation 5: Employment education
It is recommended that DETYA investigate further development of programs which encourage learning about employment, including the realities of the labour market and workplace and gender segmentation issues. DETYA could consider enhancing programs such as 'VET in schools' and New Apprenticeships to include real life scenarios arising from existing research about the actual experiences of young males and females during and beyond school. It is also recommended that DETYA conduct further research and policy development into how best to facilitate the acquisition of appropriate knowledge and skills to navigate an effective journey from school to further education, training or work.

Rationale

The *Adelaide Declaration's* goals 2.3 and 2.4 point to the benefits of access to vocational learning during the compulsory years and vocational education and training programs in the post-compulsory years. Such programs are aimed at students developing 'maximum flexibility and adaptability in the future' and providing 'clear and recognised pathways to employment and further education and training'. Many young people are no longer taking conventional or clearly defined pathways from school to further education and training and/or to work. They navigate a maze of possible pathways and assemble their experiences as investments in their work opportunities. The knowledge and skills they require here are only just being identified. However, the research shows that being locked into traditional views and choices of gender, work and identity, either by themselves or by employers, seriously constrains young people's choices, capacities and opportunities. Positive and flexible ways of being male and female need to be identified and developed in this context.

The project has demonstrated that in general, some young Australian men and women are disadvantaged in the workforce and the workplace in terms of the distribution and type of jobs available to them and the widely held negative images of them as workers. This leaves young workers under-valued and sometimes stigmatised. It also suggested that a generation gap exists between adults and young people about the realities of the nature of the youth labour market and the working lives of young people. Thus well-meaning advice from adults may bear little relationship to the working worlds young people must negotiate.

Elaboration

Research outlined in this *Report* indicates that such 'vocational learning' program should include learning about:

- the changing worlds of work and workers and the connections between gender, work and workers;
- young people's different navigational practices and skills and how gender can both constrain and enable such practices;

- the development of robustness, social capital and networking and, again, how gender can both constrain and enable such practices;
- workers' responsibilities, rights and entitlements (under changing industrial relations and other provisions); and
- gender and racial discrimination and harassment in the world of work and strategies for dealing with such and for claiming their rights and entitlements without losing their jobs.

Such developments as 'VET in schools' and New Apprenticeships should be accompanied by energetic attempts to attend to the problem of gender segregation - not by trying to force one gender into the 'domain' of the other, but by putting more thought and resources into the development of programs in those expanding industries which are more gender neutral.

Promotional strategies associated with the above programmes would enable:

- adults to become better acquainted with the real world of work for young people and the real experiences of young workers' lives;
- better understanding of the benefits in the world of work which accrue to young people if they are positively adaptable about their gender identities; and
- young people to gain effective knowledge, information and guidance.

The community - redistribution

Recommendation 6: The role of employers
Programs should be developed which encourage employers to co-operate with schools and other 'VET in school' providers to ensure that school work experience and placement programs, and casual work provide opportunities for authentic workplace learning and for gaining worthwhile credentials with real exchange value in the labour market and in the Australian Qualifications Framework.

Rationale

Drawing on wider research, the project pointed to changes to work and workers arising from changing global and local labour markets. The effects of these are the highly casualised nature of the youth labour market, the diversity of various formal and informal economies within which young males and females find work. Early experiences of work for significant numbers of young people might not provide them with genuine workplace learning or with credentialing opportunities. While some people may choose to do so, many move from one casual job to another without building on their experiences to enhance their employment prospects. This makes them vulnerable to becoming the long-term working poor.

The individual - redistribution

Recommendation 7: Early school leavers
A 'package of support' for at - risk early school leavers might offer alternative modes of support not yet available in some conventional schools.

Rationale

The *Adelaide Declaration's* goal 3.6 indicates that schooling should enable all students to complete 'Year 12 or its vocational equivalent'. Although Australian youth as a group are disadvantaged in the labour market, young males and females who leave school early are particularly vulnerable. Among these are indigenous youth, refugees and recent arrivals, rural and remote youth, young mothers, juvenile offenders, young people with learning difficulties and delays, young people with a range of disabilities, homeless young people and wards of the state.

Elaboration

This package of support would involve:

- clear exit planning, work counselling and tracking procedures for each early school leaver;
- user-friendly and full-time access to health, employment, social and counselling services either through 'full service schools' or well linked community networks and 'tightly knit safety nets';
- small scale, alternative learning environments which allow for sympathetic and supportive individualised programs; and
- consideration of a program which allows early school leavers to access the education and training best suited to them. It has been demonstrated that, in the light of the overall and long-term costs of supporting these young people, such entitlement would be an efficient use of resources.

Directions for further research

We have identified the following areas that require further research.

Which boys, which girls?

- The educational experiences of girls and boys in poverty, paying particular attention to poverty's intersections with gender, locality, indigeneity, ethnicity and sexuality.
- The connections between gender, disability and educational retention, participation and performance.
- The effects of boys' and girls' mental health on their school experience and performance and the effects of schooling on boys' and girls' mental health.

Curriculum development research

- The best ways to encourage boys to broaden their curriculum choices in the post-compulsory years of schooling.
- The reasons why girls participate less in those curriculum areas most associated with information technologies and what curriculum changes may best facilitate girls' greater participation and success.
- The sorts of pedagogies which engage disengaged students and the way in which these might differ for different age groups and different groups of girls and boys.
- School and peer cultures of abuse and the effectiveness of different approaches to challenging different such cultures, at different stages of schooling and with different groups of students.
- Different approaches to critical literacy which make issues of gender central and their effectiveness in achieving their intentions at different stages of schooling -particularly the early years, late primary and middle school.

Curriculum policy

- The impact of particular state and territory curriculum and assessment practices on boys' and girls' educational retention, participation and achievement.
- The role and purposes of the post-compulsory years of schooling in relation to Australia's current socio-cultural as well as economic contexts. At the moment there are strong differences in participation and performance between the genders because many students of each gender appear to view the purposes of the post- compulsory years differently. We need to understand much more about the differences in perception so that policy can be developed to encompass common purposes for both genders.

Schooling and post-school destinations

The relationship between school performance and post-school outcomes is identified as crucial, as are early experiences of work and post-school education and training. Further research needs to be conducted into the following matters:

- The impact of school subject and course combinations in restricting or enabling girls' and boys' pathways through further education and employment and the reasons why some combinations have more career 'pay off' than others. (Matters requiring investigation here include why the subjects and subject clusters girls choose at schools and universities are so poorly linked to vocational paths.)
- How the identification of certain types of knowledge with specific genders can be challenged to the advantage of both genders with regard to the more equitable distribution of work and of social and cultural capital.
- What occurs in the labour market which appears to favour boys but disadvantages girls despite their relative advantages in school performance.
- The impact of different localities' economic base on boys' and girls' perceptions of their future and the implications of this for their learning and their attachment to schooling.
- The extent to which VET in schools actually enhances males' and females' employment prospects and under what circumstances.
- The real worth of casual work for building life chances and opening up life choices. For instance, how can part-time and casual work become more centrally part of a credentials portfolio within the AQF?
- The motivations, experiences and choices of the young people whose destinations are very marginal employment or 'not in the labour force'. Particular attention here should be paid to young women who are pregnant.
- The experiences of males and females from key equity groups in VET and universities. In particular, such research should attend to their early experiences, and their curriculum and course selections, and should identify the issues they confront and the particular support they require.
- The different and changing patterns of employer recruitment practices over time and the different strategies young males and females employ to 'get a foot in the door'. It is possible that some strategies are to be recommended and some are harmful. Others may work against merit -based recruitment. Either way, there are curriculum implications that should be explored alongside research on both topics.

Conclusion

Overall, the *Report* suggests that an understanding of gender disadvantage needs to be sufficiently comprehensive to address the educational disadvantages that arise from the unequal distribution of resources, recognition and respect both within and beyond education. Addressing such inequalities, and specifically the ways in which gender intersects with them, is the core business of gender equity policies and programs in education.

This *Report* also attends to gender's intersections with other social and cultural differences. In so doing it suggests that another key focus for gender equity policies should now be on those girls and those boys who are the most disadvantaged. This 'which girls, which boys?' approach leads to a new phase in understandings of trends in educational performance and to new directions in gender equity policies and programs.

Top

1. CONTEXTS, CONCERNS AND CONCEPTS

The purpose of this chapter is to:

- provide a background to current debates and concerns in gender equity and education;
- identify the dominant terms and nature of debates concerning the educational performance of males and females;
- review changing directions and approaches in relevant equity policies over the previous three decades; and
- propose some frameworks to enhance understanding of gender equity in education.

Introduction

There is a strong tradition of Australian policy and research on gender equity and schooling that dates back to 1975 and the publication of the Commonwealth Schools Commission's landmark report *Girls School and Society* (Kenway 1990, Yates 1993). The current attention to gender and educational performance represents a significant stage in this tradition of work. Consequently, it is important to identify both the preceding and the more immediate educational and policy context for this focus. This opening chapter briefly characterises some of the issues which dominate discussions about gender and education in the present and documents key features of previous policies and research orientations in order to provide a background to present concerns. Some additional frameworks are then proposed for understanding gender equity and for devising strategies for reform. On the basis of findings derived from the research conducted for this *Report*, a number of key factors are outlined that need to be considered when recommending and devising policy and programs in relation to gender and educational performance: these arguments and proposals are then substantiated in the main body of the *Report*.

In summary, the research indicates that differences in performance need to be examined according to differences both between and within gender groups. That is, data on gender itself should be disaggregated in order to attend to the influence of other crucial factors such as socio-economic status, location, ethnicity, race, (dis)ability and sexuality (Teese, Davies et al. 1995, Dwyer 1997, Epstein, Elwood et al. 1998). Further, while end-of-school results remain important measures of performance, the picture on either side of this point of transition must also be considered. On the one hand, end-of-school measures register the culmination of twelve to thirteen years of schooling. The myriad factors which have shaped that schooling experience and combined to produce for individuals as well as for groups of young people, particular patterns of attachment to and performance at school must therefore be addressed. On the other hand, the end of formal schooling represents the beginning of a new, post-school life, and the kind of life chances and pathways made possible or restricted by certain performance outcomes at school needs to be considered. In other words, it is necessary to examine how schooling performance translates into post-school outcomes – which include further education and training, labour market participation as well as 'out-of-the-labour market' activities. In this respect, the research undertaken for this project has indicated the importance of assessing which 'differences' between young people matter most, and of asking when and how differences become disadvantages that threaten to undermine opportunities for all individuals to enjoy full, meaningful and equitable participation in social and civic life.

The 1996 UNESCO Report, *Learning: The Treasure Within*[2], identifies some of the many challenges confronting education as we enter the twenty-first century.

> Faced with the breakdown of social ties, education has to take on the difficult task of turning diversity into a constructive contributory factor of mutual understanding between individuals and groups. Its highest aim will be to give everyone the means of playing an informed and active part as a citizen (p. 54).

A particular concern of the UNESCO Report is the role of education in promoting 'social cohesion' and working against 'social exclusion'. This role depends, the UNESCO Report argues, on the extent to which education systems are able 'to take the diversity of individuals into consideration' while ensuring that this does not 'in itself contribute to social exclusion' (p. 56). In terms of educational performance, the UNESCO Report notes that too often 'academic underachievement… becomes irreversible and frequently leads to social marginalisation and exclusion'. Moreover, in many developed countries, 'the lengthening of compulsory schooling has, paradoxically, aggravated rather than improved the situation of the most socially disadvantaged young people and/or those who have failed at school' (p. 57). The UNESCO Report found that the consequences of 'underachievement' extend to the world of work, where young people without formal qualifications are 'shut out' from employment and 'deprived of any possibility of becoming socially integrated' (p. 58).

Throughout this *Report*, we are mindful of the larger educational and social context in which concerns and debates about gender and educational performance must be situated. Extending the arguments developed in the UNESCO Report, we want to emphasise that the significance of educational performance does not simply reside in any particular (comparative or absolute) result *per se*. Rather, 'educational performance' is an important issue precisely because it is linked to processes of social cohesion and exclusion, and to fundamental questions about how we strive to enhance individual life chances and capabilities and promote equal opportunities for all young people.

The current context

Since the early 1990s there have been lively debates over a range of popular and academic concerns about boys, men and masculinity (Connell 1995, Mac an Ghaill 1996, Biddulph 1994, Biddulph 1997, Morton 1997, Browne & Fletcher 1995, West 1996, McLean 1995) These debates have had a particular influence on educational research and policy (Lingard & Douglas 1999, Hickey, Fitzclarence *et al.* 1998, Gilbert & Gilbert 1998); and the topic of 'boys and education' – commonly referred to as the 'what about the boys?' debate – has received considerable media attention. There are two aspects of the 'boys debate' which are of relevance to this chapter. The first is the relation of this debate to questions about educational performance and outcomes; and the second is the way in which the debate has been popularly represented.

Both in Australia and internationally there is a strong policy focus on understanding gender differences in educational performance. A concern with the educational performance of boys

[2] Also known as the Delors Report after Jacques Delors, Chair of the International Commission on Education for the Twenty-First Century.

in particular is a marked feature of contemporary discussions in Australia. And it is a concern also evident in many comparable countries – New Zealand, England, Scotland, Northern Ireland, Scandinavia, Europe, Canada, the USA –where it is similarly commanding attention from policy makers and researchers (Powney 1996, Weiner, Arnot et al. 1997, Arnot, Gray et al. 1998, MacKinnon, Elgqvist-Saltzman et al. 1998, Arnot, David et al. 1999, Erskine 1999, Gallagher 1997, Sukhnandan 1999, Education Review Office 1999).

In much of this work, attention to the education of boys is linked to evidence of girls' improved and in some instances better educational performance. Girls, it is asserted, have better literacy and interpersonal skills, have attained improved results in end-of-school examination results, are staying on longer at school, are increasing their rates of enrolment in higher education, and overall are becoming more successful in education (Powney 1996, Arnot, Gray et al. 1998, Epstein, Elwood et al. 1998, Foster 1999, Gilbert & Gilbert 1998, MacKinnon, Elgqvist-Saltzman et al. 1998, Lingard & Douglas 1999). This, in turn, has given rise to a perception that boys are 'under-performing' and are at risk of becoming disadvantaged. This *Report* attempts to provide some of the necessary data and research needed to assess such propositions in relation to Australian males and females. International research on this topic provides one important context for understanding and comparing Australian trends in educational performance, and for assessing the significance of changes in the absolute and the relative performance of males and females (see Chapter Two). At the same time, the comparative research makes clear that the data on gender and educational performance need to be read carefully to ascertain which groups of girls and which groups of boys are performing highly or falling behind or remaining in much the same position (see Chapter Three). In other words, while it is necessary to understand the overall differences between gender groups, data cannot simply be disaggregated according to undifferentiated gender categories (ie all girls compared to all boys). It is also necessary to investigate the effects on educational performance and outcomes of other significant factors, such as socio-economic status, location, (dis)ability, race and ethnicity and how they intersect with gender. This argument is central to the analysis developed throughout the *Report*, and it is discussed further in Chapter Four.

Current concerns and debates about the perceived poorer educational performance of boys relative to that of girls have often been based on a simple analysis of 'all boys' versus 'all girls'. In these debates, the model of gender equity often implied is that of a see saw or pendulum, in which achieving 'equity' is a delicate balancing act between potential 'winners' and 'losers'. Such an either/or formulation is based on contrasting the experiences of 'all boys' with 'all girls' at one point in their schooling, (often end-of-school results' and consequently is not able adequately to register the effects of significant differences within (ie not only between) each gender group. Further, when the winners and losers discourse is confined to comparisons between end-of-school results, it usually ignores crucial questions about what kind of post-schooling outcomes the results lead to, and what kind of formative schooling experience has preceeded them. This *Report* provides an examination of the actual data and research on the topic of gender and performance and identifies which differences between which groups of girls and boys matter at school and in post-school life, and it assesses the factors that give rise to poor educational performance for both boys and girls.

The following section summarises some key developments in gender equity policy over the past twenty-five years. This provides a background to present concerns, situating them in an historical perspective and as part of an established and ongoing process of gender reform in education.

Changing policy concerns

There have been numerous studies of the changing directions of gender equity policy (Johnson 1990, Yates 1993, Yates 1998, Kenway 1997, McLeod 1998). The most commonly discussed policy documents include: the Commonwealth Schools Commission's report *Girls, School and Society* (1975), followed by *Girls and tomorrow* (1984), the *National Policy for the Education of* Girls (1987), the *National Action Plan for the Education of Girls 1993-97*, and the recent MCEETYA statement *Gender Equity: A Framework for Australian Schools* (1997). Research on these policies discusses the changing rationales, for attending to the education of girls and gender equity, examines shifts in the ways in which policy interventions have been justified and implemented and locates gender equity reform in relation to larger policy developments at the Commonwealth, State and Territory[3], and national levels (Kenway 1997, McInnes 1997).

Until the 1990s, most of the policies and research had been primarily (but not exclusively) concerned with addressing gender equity in relation to improving the educational experience and outcomes of girls. This is not to say, however, that many of the findings and analyses have not also been relevant to improving boys' outcomes from schooling. In the 1970s, for example, there was a strong focus on developing non-sexist and non-stereotypical attitudes for both sexes and encouragement for both girls and boys to enter non-traditional jobs. According to Yates (Yates 1997), we can characterise four main phases in the development of Australian gender equity policy. In the 1970s the focus was on the elimination of sexism and the idea of girls as 'equally human': key phrases here included encouraging 'non-sexist' attitudes and language, 'equal opportunities' for all, and 'non-traditional' curriculum and career choices, and working against 'sex-role stereotyping'. This period was followed in the 1980s by a focus on the specific learning needs and styles of girls as a group compared to boys as a group: here the language emphasised an education which was 'girl-friendly' and a 'sexually-inclusive' curriculum that was responsive to girls' interests and learning styles. By the early 1990s, this was met by a greater attention to difference and diversity within the category 'all girls' and, in the present, attention is directed to examining the processes whereby 'gender identity is constructed' for girls and boys and there is a strong focus on gender as referring to both sexes (Yates 1998, Gilbert 1996).

It is important to note that in the 1990s, primary responsibility for the management and implementation of gender equity policies has devolved from the Commonwealth to the States and Territories via the national body MCEETYA (Kenway 1997). While the extent of Commonwealth involvement in gender equity has fluctuated, the current attention to gender and educational performance suggests a renewed interest in providing an important overview of, and leadership in, this field.

The 1987 *National Policy for the Education of Girls* (Commonwealth, Schools *et al.* 1987) signalled important new directions for gender reform, describing the task of meeting the educational needs of all girls as a mainstream professional responsibility. Four main objectives were identified:

- raising awareness of the educational needs of girls;
- equal access to, and participation in, appropriate curriculum;
- supportive school environment; and

3 Subsequent references to 'States' include 'Territories' where appropriate.

- equitable resource allocation.

The policy suggested that equality of opportunity and outcomes for girls and boys may require a period of differential provision and that action was needed at both the primary and secondary levels. It was emphasised that all action should be based on the understanding that *'girls are not a homogeneous group'*. Strong reporting mechanisms were specified – annual public reports and periodic reviews – involving schools, system and national levels.

The subsequent *National Action Plan for the Education of Girls 1993-97* (Ministerial Council on Education 1993) arose out of a review of the implementation of the national policy. The action plan identified eight priorities for action to improve the educational outcomes for girls over a five-year period 1993-97. The priorities were:

- examining the construction of gender;
- eliminating sex-based harassment;
- improving the educational outcomes of girls who benefit least from schooling;
- addressing the needs of girls at risk;
- reforming the curriculum;
- improving teaching practice;
- broadening work education; and
- changing school organisation and management practice.

A key feature of the action plan, and one that has endured in current debates about gender equity, is its formulation of gender identity as a 'construction'. This perspective underpins the eight priorities, and the examination of the process of gender construction is a major and all-encompassing strategy of reform.

The view of gender identity as 'constructed' has been an extremely influential one and it is discussed further in Chapter Four. Suffice to note here that the 'construction of gender' view sees gender identity as acquired, formed by social practices and discourses such as popular culture and schooling. At school, these processes include the overt and hidden curriculum, forms of assessment, teachers' expectations, the attitudes of fellow students and so on (Collins, Batten *at al.* 1996, Blair, Holland *et al.* 1995, Connell 1997, Davies 1989, Alloway 1995, Martino 1997). The concept of 'gender as a construction' stands in clear contrast to a view of gender identity as the expression of natural and unchangeable dispositions, capacities and behaviours. One of the purposes of examining the construction of gender is to deconstruct the prevailing normative ideals of masculinity and femininity. This strategy, it is commonly believed, will help young people to see the many possible ways in which they can be male and female, and thereby help to break down narrow, rigid and constricting gender stereotypes. Policies based on this view of gender identity emphasise the responsibilities of schools to work towards promoting broader and less conventional ideals of male and female gender identity which, in turn, enhance options and life chances for both genders.

Several commissioned reports undertaken as part of the implementation of the 1993 action plan investigated the day-to-day operation and effects of 'gender' in schools. The Commonwealth - funded report *Gender and School Education* (Collins, Batten *et al.* 1996) was designed to investigate 'the construction of gender through the school environment' (p. 162). Following the criteria established in the national action plan and drawing on findings

from the report *Listening to Girls* (Milligan & Thomson 1992), *Gender and School Education* addressed two main questions:

- How do young people experience gender at school?
- What are schools doing, in a planned way, about the construction of gender?

The report found there is 'considerable evidence that attention to gender issues by systems, schools and individual teachers does make a difference to the gender experiences of students in schools' (p. xiv).

The MCEETYA Gender Equity Taskforce document, *Gender Equity: A framework for Australian schools* (Ministerial Council on Education 1997), illustrates a clear shift in policy focus, making explicit an inclusive definition of gender so that it encompasses boys as well as girls (see also O'Doherty 1994, Ludowyke & Scanlon 1997, Ministerial Council on Education 1997). Additionally, there is discussion about masculinity and a definite commitment to attend to the specific educational needs and experiences of boys; an orientation which, paradoxically, manages to combine a commitment to both equitable and differential provision. As in the 1993 *National Action Plan for the Education of Girls*, the framework emphasises the construction of gender, and the responsibility of systems, schools and teachers to examine this process. The five main strategic directions proposed are:

- understanding the process of gender construction;
- curriculum, teaching and learning;
- violence and school culture;
- post-school pathways; and
- supporting change.

While these five strategic directions all remain important and necessary, it is our assessment that research and public debate have not addressed them equally. For example, the 'construction of gender' has commanded a disproportionate amount of attention in comparison to post-school pathways. The relative inattention to post-school pathways has been exacerbated by the increasing interest in measuring and comparing end-of-school results, a focus which has concentrated on the end point of schooling rather than on the possibilities and pathways that lie beyond. The existence of pronounced differences in men's and women's participation in the labour market and in further education had been, as we noted above, a major rationale for equal opportunity reforms in the 1970s. But the urgency of this rationale appears to have receded, even though, despite some changes, strong gender-based differences in participation and labour market segmentation post-school persist. As this *Report* demonstrates, we need to assess the significance of any changes or improvements in school performance in relation to the kind of post-school destinations available to different groups of girls and boys.

Gender equity—a matter of redistribution and recognition

This section outlines one way of analysing the challenges facing gender equity in education today and, in so doing, sketches out directions for future research and policy and program development. To do this, it is first necessary to situate the specific issue of 'gender equity in education' in relation to the wider political and social context and to broader questions about equity and justice. Fraser, a US political philosopher, has argued that what counts as a 'justice

issue' today has undergone significant change. She proposes that for many people there has been a shift away from a world view in which 'the central problem of justice is redistribution' to one in which 'the central problem of justice is recognition':

> With this shift, the most salient social movements are no longer economically defined 'classes' who are struggling to defend their 'interests', end 'exploitation', and win 'redistribution'. Instead, they are culturally defined 'groups' or 'communities of value' who are struggling to defend their 'identities', end 'cultural domination', and win 'recognition' (Fraser 1997, p. 2).

Claims for redistribution are thus defined as those concerned with promoting a more equitable distribution of material resources and opportunities — its address is largely socio-economic. Claims for recognition are those concerned with ensuring that the voices and needs of marginalised or subordinated groups are properly heeded and that respect is accorded to different groups—here the address is largely cultural. Fraser argues that a 'politics of recognition' is ascendant, having eclipsed a politics based on the redistribution of resources. The former is marked by a concern with 'difference', the latter by a concern with 'equality' (p. 3).

Fraser suggests that although claims for 'redistribution' and 'recognition' are habitually represented as constituting irreconcilable 'either/or' politics, both are required if we are to strive for a more just world. She identifies two forms of injustice. The first is 'socioeconomic injustice', which refers to experiences of 'exploitation', 'economic marginalisation' and 'deprivation'. For example, 'being confined to poorly paid work' or having limited or no access to income-earning work, or being denied 'an adequate material standard of living' (p. 13).

The second form of injustice is 'cultural or symbolic' and is evidenced in 'cultural domination', 'non-recognition' and 'disrespect'. For example, being 'maligned or disparaged' through stereotyping and or prejudice, or being excluded from or by the dominant cultural discourses (p. 14). The first form of injustice is addressed by strategies of 'redistribution', the second by strategies of 'recognition'. Again, because these injustices are themselves inter-related, Fraser proposes that remedying injustice and inequality requires a combination of redistributive and recognition strategies (p. 15).

But what might the discussion of 'redistribution' and 'recognition' mean in terms of education and equity? Three main points can be drawn from Fraser's analysis. First, and broadly speaking, the current policy and professional focus on 'gender identity' reflects a wider cultural and social orientation to concerns about cultural identity and claims for recognition. This is evident, for example, in the policy focus on the 'construction of gender identity' and in the 'what about the boys?' debate and calls to heed the specific needs and interests of boys in education. The related attention to examining the construction of male identity has been an important development.

Claims for 'recognition' have sought to gain greater acknowledgment for all boys as a social group, and have proceeded by taking up some of the discourses which initially justified the policy attention to girls as a group. At the same time as claiming recognition, however, there has been concern that boys are disadvantaged because more girls are perceived to be out-performing boys. Therefore, the argument continues, the rewards from schooling (results,

schooling performance) are not being appropriately and equitably distributed across both genders. However, in our view, this line of argument constitutes a very thin and partial justification of equity based on 'redistribution'. A fuller account requires a consideration of whether all girls are out-performing all boys, and an assessment of equity in terms of the distribution of resources, capabilities and life chances among different groups of girls and boys (Thomson 1999). Such a focus leads to more sustained attention to patterns of difference in post-school outcomes.

Second, it is important to consider how schooling itself is implicated in processes of distribution and recognition. Schooling is involved in the construction and affirmation, as well as the mis- or non-recognition, of identities. It can and should build respect and tolerance for others and cultivate capacities for self-awareness. Schooling is also involved in the distribution of skills and knowledge and is crucial to the fair distribution of young people's life chances, and opportunities for their future livelihood, including a meaningful life and a reasonable level of material well-being. These tasks thus directly link schooling to questions about equity and justice and to the promotion of social cohesion (Delors 1996).

Thomson suggests that addressing equity in education requires us to consider at least the following three things:

- the fairness of the distribution of knowledge, skills, attitudes and credentials;
- how fairly schooling manages the processes of teaching, learning and credentialing; and
- how much school learning contributes towards making a less unjust society (Thomson 1999, p. 2).

Employing the notion of 'capabilities to function' (Sen 1992), Thomson argues that in a just society individuals ought to have 'capabilities to exercise a range of freedoms and enjoy a decent life'. This depends on individuals possessing 'primary goods', such as the 'benefits of schooling', but these goods alone are not sufficient to create a just society. Individuals also need agency – 'the freedom to make choices'. Therefore, Thomson concludes, 'disadvantage equates to a lack of "primary goods" and a lack of agency' (Thomson 1999, p. 3). While schooling alone cannot protect against social marginalisation and disadvantage, it is nevertheless crucial to the formation of young people's 'capabilities to function'. How these capabilities and opportunities are distributed through schooling (differentially or equitably?) and to whom (are some groups of young people likely to have more or less than others?) are key questions for this *Report*.

Questions of distribution pertain not only to capabilities and opportunities; they are also more obviously about the distribution of resources and material goods. In Australia, as in many comparable countries, there is a widening gap between rich and poor and an intensification of poverty (Thomson 1999, Pusey 1998, Fincher & Nieuwenhuysen 1998, Eckersley 1998). The 1996 UNESCO Report on education for the twenty-first century (Delors 1996) argued that worldwide we are experiencing 'an acute crisis in social cohesion' in large part a result of 'growing inequality due to rising poverty and exclusion' (p. 54). Moreover, this phenomenon 'is not just a question of the disparities between nations or regions of the world, but of deep divides between social groups in both developed and developing countries' (Delors 1996, p. 54). The development of research and policy in the gender equity field cannot proceed as if oblivious of this social crisis. Its effects clearly cut across both genders, and have a profound

and fundamental impact on educational participation, performance and outcomes (Rizvi 1994, Delors 1996). Just as schools and education systems have a responsibility to ensure that gender differences do not convert to disadvantages, so too do they have a responsibility to work against the risk of material differences and inequalities converting into educational disadvantages. The challenge is to devise a way forward that acknowledges the many inter-related elements of 'equity' and disadvantage yet, at the same time, remains sufficiently focused to target priority areas for reform.

The third point to be drawn from Fraser's analysis is that of combining recognition and redistributive strategies in order to promote gender equity and remedy educational disadvantage (Fraser 1997, pp. 13-23). Recently claims for 'recognition' have received more attention than 'redistributive' ones . However, the way forward is not now to embrace strategies for redistribution exclusively so that we abandon claims for recognition. Throughout this *Report*, an argument is made for the recognition of differences between and among groups of young people and this, in turn, raises the question of which differences matter most: are all 'differences' of the same order?

In relation to promoting equity in education, *The Adelaide Declaration on National Goals for Schooling in, the Twenty-First Century* (1999) proposes that 'schooling should be socially just', so that:

> students' outcomes from schooling are free from the effects of negative forms of discrimination based on sex, language, culture and ethnicity, religion or disability; and of differences arising from students' socio-economic background or geographic location (Adelaide Declaration 1999 [3.1]).

This goal underlines the obligation of schools to attend to forms of injustice based on both cultural and socio-economic factors. This commitment is evident throughout the declaration. It promotes 'the value of cultural and linguistic diversity' ([3.5]) and the need to improve the 'learning outcomes of educationally disadvantaged students [so that] over time, [their learning outcomes] match those of other students' ([3.2]). Again, this statement of the purposes of education indicates an existing interest in integrating issues of recognition (cultural diversity) and of redistribution (remedying educational disadvantage).

Conclusion

In 1972, Martin, an educational sociologist, observed that 'Despite manifest inequalities, the subject of sex differences in educational qualifications has aroused little serious interest' (Martin 1972, p. 96). Moreover, she continued, the well-established focus in Australia on 'inequalities between government and independent, and metropolitan and urban schools, and between children from different socio-economic backgrounds, has over-shadowed interest in sex differences, and much excellent material on school populations is not broken down by sex' (Martin 1972, p. 104).

Almost three decades later, it is as if we have come full circle. Since the early 1970s, there has been a proliferation of statistics, reports, policies and research quantifying the differential relation of girls and boys to schooling. Whereas previously the documentation of gender differences was overshadowed by other sociological interests such as socio-economic status, there is now a substantial collection of educational data on qualifications, participation,

subject choice and so on, disaggregated by gender (Yates & Leder 1996) (see also the *Data Collation and Analysis Report* produced for this project). At the same time, the research conducted for this *Report* suggests that while not losing sight of gender, there may also be a need to return to some of the questions which, according to Martin, once dominated educational enquiry. In other words, while it remains necessary to document gender differences, it is equally necessary to complicate our understanding of 'gender' itself in order to attend to the influence of other factors such as socio-economic status, location, ethnicity, Aboriginality, (dis)ability and sexuality (Teese, Davies *et al.* 1995, Dwyer 1997, Epstein, Elwood *et al.* 1998).

Throughout this *Report* a number of questions are raised about the relative and absolute significance of gender differences in terms of understanding educational performance and post-school outcomes. Key questions to be explored include:

- Which girls and which boys are or are not succeeding at school?
- How and with what effects does gender intersect with other sociological and cultural factors?
- Do some differences matter more than others?
- Which differences are more likely than others to become disadvantages?
- Do gender differences matter differently (more or less?) in post-school life compared to school life?

The following chapters review the current statistical evidence and research literature on gender, educational participation and performance, and initial post-school destinations. Together they build an analysis of and program for gender equity which combines a focus on strategies of recognition and redistribution..

A note on the uses of databases

Before we move to examining the statistical evidence on educational performance, it is necessary to acknowledge briefly some of the limitations of quantitative data, and to note what it can and cannot tell us. In their overview of national databases on gender equity, Yates and Leder (1996) observe that:

> Large databases can point to broad directions, but to understand these requires understanding of the specific measures and questions used for a particular indicator and qualification accordingly; requires care regarding imputation of causual relation between data; and requires reference to other appropriate research (p. 56).

In terms of interpreting data on gender and performance, Yates and Leder argue that 'in a number of respects [it is] not possible to answer straightforwardly a question about gendered pathways from existing "national databases"' (p. 5). They recommend that more attention needs to be given to analysing findings from, and not simply generating, large databases; and that in order to better understand gender equity and pathways, the findings from large databases need to be supplemented by further qualitative research.

This *Report* draws on a large range of statistical data. Overall, however, the study is based on relatively simple statistics that attempt to document broad patterns rather than more complex

statistics that seek to attribute cause and effect or rank significance of effect. The analysis is mindful of the problems with descriptors and measures in two main respects. First, descriptors can elide or obscure differences within categories, such as 'non-English-speaking background' (differences between 'ethnic groups' disappear) or 'disability' (failure to differentiate between type of disability, e.g. physical or intellectual). Further, cultural values and bias can be built into measures, for example, into forms of assessment, which has an obvious impact on the outcome and measure of performance. Gipps, for example asks: "How does cultural knowledge mediate individuals' responses to assessment in ways which alter the construct being assessed?" (Gipps 1995, p. 5). Such limitations are highly significant in relation to aggregating data on educational performance.

Second there is, as Ainley has noted (1995), a lack of clarity in definitions of key measures such as socio-economic status, which is compounded by the absence of an agreed - upon definition employed in major databases: for example, is socio-economic status most meaningfully and reliably measured by residential postcode or occupational grouping, or household income. These definitional problems make comparisons between databases, using different measures, extremely difficult and highly problematic. While we therefore acknowledge the documented limitations of statistical data, as the following chapters show, careful use and selection of such data can help us to build up a meaningful picture of patterns in gender and educational performance today and over time.

In this chapter we have:

- **described some of the background to current concerns about gender differences in educational performance;**
- **suggested that differences in educational performance need to be examined according to differences both between and within gender groups;**
- **posed the question of 'which differences matter most and when?' and signalled other key questions to be examined in the following chapters;**
- **reviewed the changing focus of gender equity policies over the last three decades, from non-sexist to girl-friendly schooling, and more recently to a focus on the gender identity of both males and females;**
- **proposed an approach to gender equity in education which incorporates a focus on strategies of recognition and of redistribution; and**
- **endorsed a view of educational performance as an issue intrinsically linked to processes of social cohesion and exclusion.**

Top

2. PARTICIPATION AND PERFORMANCE IN SCHOOLS

This chapter is concerned with Australian data on school participation and performance. Data on post-school outcomes – on what happens to school students after they leave school – is examined in Chapter 5. Here we have an eagle's eye view of overall similarities and differences between the genders during the school years, setting out the most important school participation data on enrolment, on age participation and on apparent retention rates. This is followed by available performance data on literacy and numeracy and on Year 12 (final year of schooling) results. These summary accounts and selected tables and figures from our *Data Collation and Analysis Report* and other related literature give an overall sense of the history and current state of participation and performance by gender. The chapter also includes some questions and comments on what this information may represent.

Commonalities and differences

The databases and the literature reveal large commonalities and some differences between the genders with regard to their modes of participation, their subject and subject-cluster choices and their performances. This report necessarily focuses on differences. Yet it needs to be established at the start that these differences are properly seen within a much larger reality of common humanity and common patterns of school experience and performances across the genders. Once a statistical picture of what is happening nationally and across States is drawn, one is confronted with the challenge of how to explain and interpret it. What does it mean? Which trends and which differences matter and why?

Ascribed differences, such as gender, matter in schools if they affect the *distribution of opportunities and goods* so that there is differential access to knowledges and experiences now, or differential access to future study, work, health and well-being and the opportunity of leading a full and balanced life. Ascribed differences of *recognition* matter in schools too: these are differences which create or perpetuate differential respect, understanding and even visibility, and which lead to differently valued public perceptions and representations. These differences matter educationally because they are dehumanising for those who are devalued by them: whenever such differences cause some students to internalise diminished views of themselves as persons with fewer rights to define who they are, what they are good at, who they might become, or with fewer rights to demand that such places are safe and affirming environments for them, this matters.

Differences matter if they negatively affect the *distribution of opportunities* with regard to future study, work, health and well-being and the opportunity of leading a full and balanced life. Differences also matter if they have the effect of restricting students' opportunities for critical reflection and advocacy with regard to their own attitudes, values and behaviours, and with regard to the cultures and institutions within which they live, work and play. Differences, finally, matter in terms of public perceptions and representations (see Chapter 1).

Participation

Enrolment

Table 2.1 sets out Australia-wide enrolment figures. Nationally, because there are more males than females in the population from birth well into young adulthood, there are more males

than females enrolled in every year of school up to and including Year 10. In senior secondary school, Years 11 and 12, there are more females than males enrolled. The figures suggest a trickle of attrition of both sexes starting in Year 8. In Year 7, the ratio of males to females is virtually the same as in primary school. In Year 8, however, there is a gain in the percentage of females, suggesting that more males drop out very early. In Year 9, more females than males appear to drop out. Thereafter, in Years 10, 11 and 12, attrition is greater for males than females in expanding ratios each year. A higher proportion of males than females leave at the end of Year 10 and an even larger proportion of males compared with females leave at the end of Year 11. This *Report* investigates this phenomenon further in the discussion of retention rates.

Table 2.1: School enrolments by gender, Australia 1998

	Male number	Male % of cohort	Female number	Female % of cohort	All persons
Primary	960051	51.3	909801	48.7	1869852
Junior Secondary	479347	51.1	458545	48.9	937892
Year 7	*130974*	*51.2*	*124974*	*48.8*	*255948*
Year 8	*131734*	*50.4*	*129605*	*49.6*	*261339*
Year 9	*130001*	*51.0*	*124982*	*49.0*	*254983*
Year 10	*126379*	*50.6*	*123216*	*49.4*	*249595*
Senior Secondary	187825	48.0	203386	52.0	390911
Year 11	*104087*	*48.7*	*109590*	*51.3*	*213677*
Year 12	*83738*	*47.2*	*93496*	*52.8*	*177234*

Source: ABS Schools Australia 1998 Catalogue 4221.0

Age participation comparatively by Year level

Age participation data (the numbers of males and females at each chronological age in each school Year level) in our *Data Collation and Analysis Report* (see figure 1.1) show another interesting fact: there is a greater proportion of older males than females enrolled in each school Year level. This remains true in Years 11 and 12. Four per cent more boys are one year or more older than the median age when they start school. This is probably the result of the belief of early childhood educators and many parents, supported by evidence of slower neural development and later puberty for boys, that boys develop neurologically more slowly than girls in ways which affect their 'readiness' to start school. The percentage of the boys' cohort which is older increases slowly to 5.1 percent by Year 9 suggesting that more boys repeat a Year. In Years 10 and 11, while there are still more older boys than older girls, there is a decrease in the percentage of older boys remaining at school, suggesting that age is one factor behind the higher male early-leaver statistics (see also Marks & Fleming 1999). In Year 12 the gap widens again, giving a hint that more boys than girls repeat Year 12. The fact that there is a higher percentage of boys in every Year to Year 10 has not attracted the same attention as the greater percentage of girls beyond Year 10. The equally interesting fact that boys' average age is a little older in every Year has not drawn any comment we could find either. We have found neither data nor case study work on whether, or how, these patterns affect the gender culture of schooling.

Time series on age participation of secondary school students

A time series on age participation gives more meaningful data than a time series on school grade (Year) enrolments. This is in part because, over time, States have differed in fairly random ways in the nexus between completing a particular Year of schooling and post-school options. The matriculation Year itself has changed several times over the century and varied State by State in any given year. In general terms, matriculation was once common at age 16, it moved to around 17 at different times in different States during the middle years of the century, and it now sits at 17 or 18.

Figure 2.1a: Time series of participation of 16-year-olds in schooling, by gender, Australia 1911-1998 (irregular)

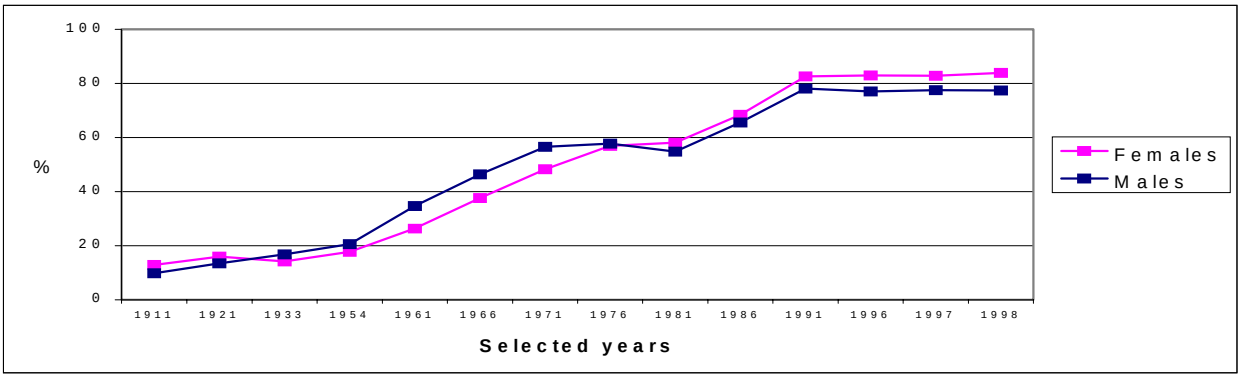


Figure 2.1b: Time series of participation of 17-year-olds in schooling, by gender, Australia 1911-1998 (irregular)

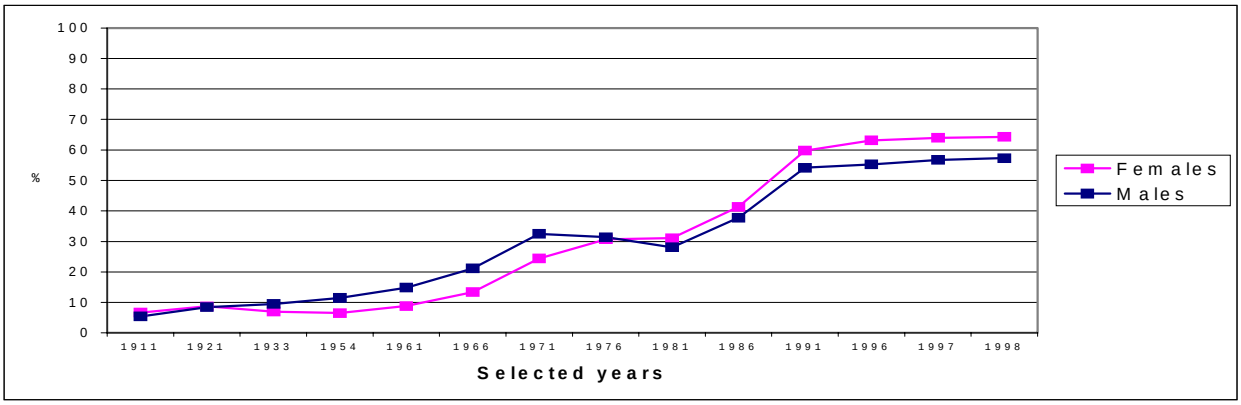


Figure 2.1c: Time series of participation of 18-year-olds in schooling, by gender, Australia 1911-1998 (irregular)

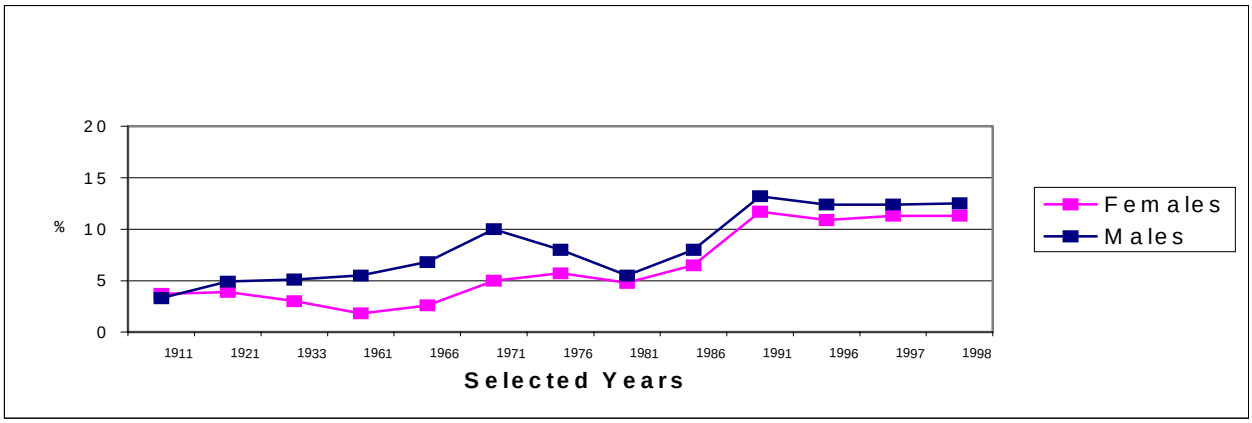


Figure 2.1 (a,b,c) shows age participation of 16, 17 and 18-year-olds on three separate graphs of a time series (irregular) beginning with the year 1911. Age participation indicates the proportion of an age cohort in the population still enrolled at school. These graphs indicate that a greater percentage of 16 and 17-year-old females than males stayed on at school during the first quarter of the twentieth century; a greater percentage of males of these ages remained at school each year during the middle half century (from the mid-1920s to the mid-1970s); and a greater percentage of females of these ages stayed on at school in each year of the last quarter of the century. Males outnumbered females throughout the whole century in the small percentage (until the mid-1980s) still at school at age 18. This is in keeping with their later start at school (and probably because more of them, throughout the century, have been supported to repeat Year 12).

This data suggests that school enrolment beyond the compulsory leaving age has had different meanings for each gender at different times over the century. Almost certainly, one powerful meaning for both genders has had to do with available paths between schooling and employment or work-related training. At the beginning of the century, employers took responsibility for a considerable amount of further training for males through apprenticeships, through on-the-job training, and in firms where juniors were mentored directly and worked their way up in the hierarchy. More females needed to educate themselves through higher levels of schooling because employers required higher levels of education in the areas of employment available for women such as teaching and clerical work. Teese (1995) maintains that girls currently have a much greater economic dependence on senior secondary schooling and that this is a global phenomenon. His analysis is confirmed by Lewis and Koshy (1998) and Lewis and McLean (1999). Teese's argument appears equally applicable to girls at the beginning of the century.

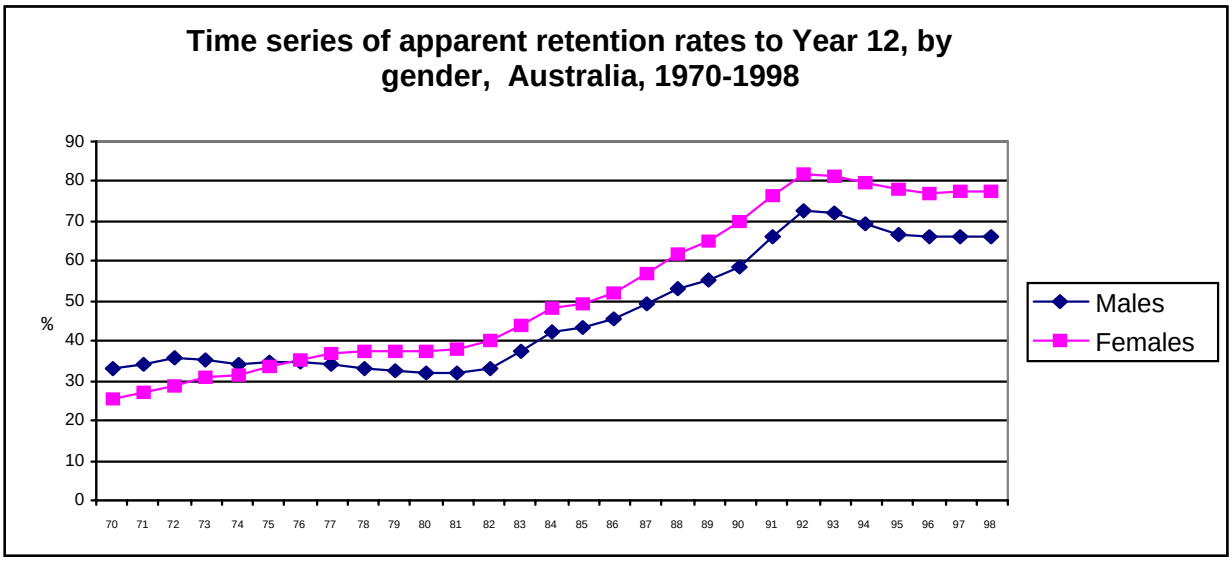
An interesting end-of-century speculation is whether the culturally expected age of marriage and of motherhood has had direct effects on girls' tendencies to remain at school longer than boys. Later marriage was fashionable at the beginning of the century and has become increasingly so again since the 1970s, the periods of greater school retention for girls. Early marriage and motherhood were promoted in the late 1940s, 1950s and 1960s, which is the period when girls were most inclined to leave school at younger ages.

Apparent retention rates

An apparent retention rate is the enrolment number in a later secondary school year expressed as a percentage of those who originally commenced secondary school in that cohort. It is an attempt to capture a sense of the proportion of those who started secondary school who made it to the Year (grade) under scrutiny. This is not as simple a statistic as it sounds. Hence the caution of the word 'apparent'.

In 1976, summing across the States of Australia, girls' apparent retention rate crept past the boys' rate in Year 12 for the first time for half a century. It has continued to climb, in an average year, at a faster rate than the boys, so that the Australian retention rate to Year 12 for girls now (1998) stands at 77.7 per cent for girls and 65.9 per cent for boys. There has been considerable concern since the lagging of the boys' retention rate came into public focus in the early 1990s.

Figure 2.2: Time series of apparent retention rates to Year 12 by gender, Australia 1970–1988



Created from ABS Schools Australia cat no 4221.0; National Schools Statistics Collection cat no 4220; Commonwealth Schools Commission and ABS (1979) Australian Students and Their Schools.

Figure 2.2, a graph of Year 12 retention rates since 1970, shows a steady growth in the retention rate of girls from 1970 to 1986, with one flatter patch from 1977 to 1981. The girls' rate took off between 1986 and 1992, then braked sharply and fell back to 1991 levels by 1996. It has steadied at that level for three years. The girls' rate passed that of boys in 1976 in a long period – 1972 to 1981 – in which the boys rate failed to rise at all, and, indeed, went down slightly. From 1982, the boys' Year 12 retention rate took off in parallel with the acceleration in the girls' rate. It lost momentum a little in the late 1980s, recovered, and in the period 1991 to 1992, it was actually rising more rapidly than the girls' rate. In 1992, the peak retention year for both sexes the difference was 9.5 per cent. Boys' retention rate dropped more sharply than girls (it went down nearly seven percent compared with girls' five per cent) in the years from 1992 to 1996. The gap has not widened since and currently (1998 figures) stands at 11.8 per cent. For both sexes, the retention rate has doubled since 1981.

The steady retention rates over the past three years seem to suggest that there is some temporary balance point for each gender. But a balance of what? The valuable recent statistical analyses by Lewis and Kosky (1998) and Lewis and McLean (1999) had led them to conclude that the greater availability of full-time work for early-leaving boys is paramount. The availability of part-time work does not have the same drop-out pull for either gender. Lewis and McLean suggest that a possible contributing factor to the recruitment into the full-time labour market of early-leaving boys is the importance to employers, in a gender-segmented employment structure, of getting boys younger so that 18-year-old wages do not have to be paid for raw recruits (Lewis & McLean 1999). The greater availability of apprenticeships to early-leaving boys, a long-standing tradition, is also a clear contributor to the current balance (Lamb & McKenzie 1999). In relation to the rapid increase in retention in the late 1980s and early 1990s for both genders, Lewis and Kosky (1998) argue that, as well as the diminishing job opportunities outside school, the availability of better student allowances as an incentive for remaining inside was a strong factor and that it remains important in the decision to stay at school for both genders.

A number of other factors may contribute to the current balance point. First, the level of available student support structures in secondary schools dropped in all States and notably in Victoria from 1993. Hill, Hurworth and Rowe (1998) have shown the importance of access to appropriately trained specialist staff for progress in literacy and numeracy. Second, the suitability of State curriculum structures and of State cultural beliefs about and structuring of viable paths through schooling to work has an independent influence which was evident in State differences in school retention rates for all students in the 1970s and 1980s (Vickers 1995). Vickers' data shows that one component of the curriculum which is a crucial influence on school retention is the ready availability of subjects for other purposes than higher education entry in the repertoire of centrally accredited subjects. It will be pertinent to see if boys' retention rates go up as a major curriculum alternative, Vocational Education and Training Certification, becomes steadily more on-stream in schools across Australia. Additionally, it is worth noting that, in the years 1991 to 1993 in Victoria and South Australia, major changes in State upper secondary curriculum structures were gradually introduced which demanded more stringent, common requirements for Year 12 certification and thus may have adversely affected retention. Finally, Lamb has proposed that the balance point may be affected by a realisation among students that the currency of Year 12 certification has become less valued in the employment market, at least for boys, now that this certification no longer has rarity value (Lamb 1998).

Apparent retention rates to Year 10 are close to 100 per cent for both sexes and have been steady since 1988. Over the same decade, from 1988 to 1998, the difference in retention to Year 11 between females and males has fluctuated between six and eight per cent with the female rate higher than the male. It currently (1998 figures) stands at 88 per cent for females and 80 per cent for males.

The time series on age participation, together with this time series for apparent retention rates to Year 12, suggest that periods of economic uncertainty adversely affect the retention rate of young people of both sexes. But the effect is particularly strong for boys. The gap between male and female rates is largely the product of these periods (the middle to late 1970s and the years immediately following the recession of the early 1990s). The extra reason for early school leaving in such periods may be that the danger of passing up opportunities for work or training, available more readily to early-leaving boys than girls in a segregated labour market, appears to the students to outweigh the chance of picking up better opportunities by longer

school education. What actually happens in the labour market seems to have both immediate and delayed effects. The immediate effect of recession and lack of employment opportunity is that retention rises rapidly, and more rapidly for boys because they are more exposed to labour market fluctuations by their greater opportunities to be involved in the labour market at a young age (Lewis & Koshy 1998). The 1991 and 1992 recession had precisely this outcome. The delayed effect may be that students' faith in schooling as a route to employment is shaken during such times and, as full-time employment and training slowly come on stream again for early leavers (especially boys), these opportunities have an added lustre. The rapid fall in retention to Year 12 in 1993, when employment and training opportunities were only just beginning to pick up, suggests that this is indeed the case. The shaking of faith in school as a route to employment is also evident in the stagnation of retention rates for boys in the 1970s. This was the period when traditionally high youth employment rates in Australia began seriously to fall, and the oil crisis signalled global economic confusion and the beginnings of major economic change. The employment and training opportunities still available for early leavers in these circumstances clearly had enough lustre to entice boys away from school and to cause stagnation in their retention rates while rates for girls slowly crept up. Overall, these analyses suggest that further recovery in the full-time (but not the part-time) employment market for teenagers would lead to lower retention rates.

State differences in participation by gender

Looking across State retention rates (table 2.2) we can say that longer falls in retention in South Australia and Victoria in the early 1990s were compensated for in the national figures by a faster upturn and then slowly rising 'catch up' retention in other States, but particularly in New South Wales where retention had lagged well behind these leading States in the 1980s.

Inside the overall pattern, there are clearly different State patterns. State-by-State differences exist both in the ways in which schooling, curriculum and assessment are structured and in the cultural value placed on school completion (Collins 1992, Vickers 1995). These differences have effects on school retention rates. This is known because States in similar economic circumstances nevertheless had different overall retention rates from the early 1970s to the 1990s. There are differences also in the retention gender gaps across the States. All these differences are lost in Australian summary data.

Currently, in the Australian Capital Territory retention rates are very high for both sexes and the rate is, indeed, slightly higher for males. This is an educational jurisdiction where, first, secondary colleges create a comfortable environment for senior secondary students; second, there are no Year 12 external examinations; third, there is a wide range of subject choice; and fourth, there have been no compulsory subject rules for graduation. The next best retention figure for males is in Queensland, where again there are no Year 12 external examinations; there is a long-standing tradition of respecting all subjects and offering a wide range of them; and there are minimal rules for graduation. The maximum difference in Year 12 retention between the genders is in Victoria where the female rate is currently 83.7 per cent and the male rate is 68.5 per cent a difference of 15.2 per cent and well above the Australian average difference.

Table 2.2: Time series of apparent retention rates to Year 12 by state and gender, Australia 1969-1998 (irregular)

State	1971		1976		1981		1986		1991		1996		1998*	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
NSW	26.2	36.3	33.0	35.7	34.9	31.0	46.6	42.4	66.4	56.6	72.7	62.9	73.0	61.6
VIC	30.1	32.6	38.2	31.8	37.6	28.8	52.2	41.7	83.5	66.3	82.7	68.3	83.7	68.5
QLD	26.7	34.4	34.7	35.1	41.1	36.4	60.7	54.3	84.4	75.1	82.0	71.3	82.6	72.3
SA	24.3	34.9	36.7	37.4	42.3	35.8	58.3	51.4	88.9	78.7	74.6	62.6	72.4	61.2
WA	25.1	30.0	35.9	35.6	37.7	32.6	52.4	48.3	75.5	66.9	77.0	64.8	76.8	65.8
TAS	15.4	23.9	24.6	25.0	29.6	23.9	32.7	28.0	56.1	49.3	56.9	49.4	66.0	58.3
NT	18.6	20.5	25.4	21.7	20.9	15.4	38.3	29.9	57.9	57.1	41.7	40.4	48.0	38.2
ACT	50.3	63.0	61.1	61.3	72.8	63.2	79.5	76.0	95.4	95.8	90.8	91.7	90.7	91.2
AUST	26.9	34.1	35.3	34.6	37.8	32.0	52.1	45.6	76.7	66.1	77.0	65.9	77.7	65.9

Note: Preliminary data-for Australia overall actual
Sources: ABS, Schools Australia; National Report(s) on Schooling in Australia, Australian Department of Education

Much could be learned by treating the States as 'natural experiments' and using the differences in their systems, their curriculum cultures and their public gender cultures to explore likely ways of increasing boys' and girls' school participation and performance. For example, the New South Wales view that moving away from fully examination-based Year 12 assessment favours girls and discourages boys is challenged by the weight of the comparative evidence across States. More boys tend to remain at school in the two non-examination-based Year 12 systems. Further cross-State research is needed to tell us if they also tend to perform better. Cross-State research could tell us many other things too, for example, which of the new State models of VET in schools is increasing retention most strongly, and which traditional groups of school leavers are held at school by different models.

Year 12 subject participation

Gender and subject participation is an even more complex topic than overall participation and retention, especially in Year 12 where different subject names, subject content and subject histories are in place in each State. There are also State differences in the patterns of subjects required for school graduation, as well as different rules about whether any subjects, and if so which ones, are excluded from Tertiary Entrance Score (TES) calculations where these exist. In an attempt to get some sense of what was happening to subject enrolments, 1997 national figures on Year 12 tertiary-accredited subject participation were grouped into the eight Key Learning Areas (KLAs) used with only minor variations across all States. The following sets out the gender figures from this data as one place to start an investigation of Year 12 subject participation.

On the one hand, the figures set out below (table 2.3) show clearly that there are a number of Year 12 subject choices which are popular with both male and female students taking tertiary accredited subjects (those which count for a TES or equivalent). Just as most students of both genders now participate in school to the end of Year 12, so most students of both genders take subjects in four subject 'areas' of Australia's eight Key Learning Areas. Over 90 per cent of both sexes take English (which is compulsory in most States but not all); around 80 per cent of both take at least one mathematics subject; around 90 per cent of both take at least one subject in the Society and Environment KLA; and about two-thirds of both take at least one science subject.

On the other hand, there are considerable differences in the popularity of subject choices by gender. These include the following: many fewer girls than boys take a physical science (ratio is 4:7) and many fewer boys than girls take a biological science (ratio is 3:5). A third of girls, compared with a quarter of boys take at least one of the arts. Nearly twice as many girls as boys choose to take a non-English language; girls outnumbered boys 5:1 in home science; and boys decisively outnumber girls in other technology domains including information technology (computer studies) by around 7:4.

Table 2.3: Participation by Year 12 students in tertiary-accredited subjects, by Key Learning Area, by gender, Australia 1997

	Males		Females	
Key Learning Area	**Subject* enrolments**	**a%**	**Subject enrolments**	**a%**
English	76388	93	91885	100
Mathematics	79596	85	77307	79
Society and environment	85666	85	110628	94
Science	71793	67	78430	66
Physical sciences	42077		27655	
Biological and other sciences	29716		50775	
Arts	22834	23	38557	34
Languages other than English	8257	10	16524	18
Technology	43004	49	28625	36
Computer studies	21960		13387	
Home science	1156		5936	
Technical studies	17031		7628	
Agriculture	2857		1674	
Health and physical education	17946	22	20597	24

a percentage of Year 12 students studying at least one subject in the KLA

* numbers of students exceed subject enrolment numbers in some KLAs. Enrolments are classified to KLA by DETYA, while student numbers are classified by State authorities

Source: Derived from National Report on Schooling in Australia, 1997

Lamb and Ball (1999) of ACER have published a study in which they identified the twenty most common clusters of subjects, including non-tertiary accredited subjects, taken in Year 12 across Australia using the national Longitudinal Studies of Australian Youth (LSAY) database as their source. National studies of subject choice have been uncommon because the comparability of individual subjects across State boundaries is always disputable. This study finesses the issue of direct subject comparability by looking at clusters of subject types. First we should note that all clusters have at least a few enrolments from each gender. None have only boys or only girls. However, there are important subject choice patterns by gender (table 2.4).

Table 2.4: Participation in the Year 12 curriculum, by gender (5)*

Subject group	Males	Females	Total	N
ARTS AND HUMANITIES				
French, German, music, literature, history, geography	2.3	4.1	3.3	104
Art, art other, graphics, music, media studies	4.0	5.2	4.6	147
History, geography, gen. maths, humanities other, art	2.9	4.7	3.9	123
BUSINESS STUDIES				
Maths, economics, accounting, computing	6.6	4.8	5.6	178
Economics, accounting, legal studies, gen.	3.4	3.5	3.5	110
BUSINESS STUDIES AND HUMANITIES				
Maths, economics, geography, history, art	3.1	3.3	3.2	102
Bus. studies, legal studies, textiles, gen. maths, biology	3.8	5.9	4.9	156
BUSINESS STUDIES AND SCIENCES				
Maths, economics, chemistry, biology, computing	4.8	4.7	4.7	151
SCIENCES AND MATHS				
Maths, advanced maths, physics, chemistry	19.0	8.0	13.0	414
Maths, chemistry, biology, other science, computing	4.9	7.1	6.1	196
SCIENCES AND HUMANITIES				
Maths, chemistry, literature, music, French, history, art	2.5	4.1	3.4	110
Gen. maths, biology, history, geography, health, art	7.0	12.8	10.2	323
Maths, biology, history, geography, art, LOTE	5.4	10.5	8.1	259
HEALTH SCIENCES AND PHYSICAL EDUCATION				
Phys. ed., home ec., health, biology, gen. science, gen. maths	3.1	3.8	3.5	111
Maths, biology, phys. ed., health, home ec., legal studies	4.5	6.0	5.3	168
Health, gen. maths, general science, biology, home ec.	4.4	4.3	4.4	139
VOCATIONAL EDUCATION AND TECHNOLOGY				
Technical drawing, technology, gen. maths, computing	5.8	0.5	2.9	92
Agriculture, craft, technology, gen. maths, health, gen. science	5.6	0.6	2.9	91
Typing, secretarial studies, gen. maths, home ec., app. comp.	1.0	5.3	3.4	107
Maths, industrial arts, industrial technology, tech. Drawing	5.9	0.8	3.1	100
TOTAL (%)	100	100	100	
TOTAL N	1455	1726		3181

- English was excluded from the analysis because it was studied by the majority of students, irrespective of subject grouping.
  'General maths' represents the least academically-demanding level of maths (including subjects such as 'maths in society').
  'Maths' represents a university-qualifying level of maths study.

Source: Lamb and Ball (1999)

More than 40 per cent of boys are in a handful of popular clusters for their gender. Nineteen per cent of them take the mathematics/physical science cluster of subjects compared with only eight per cent of girls. Another 17 per cent of boys are in one of three technology clusters in

which there are fewer than one per cent of girls: a computing/technology cluster, an agriculture plus technology cluster, and an industrial technology plus general maths and general science cluster. A fifth cluster deserves runner-up mention, one in which boys are in a strong majority but in which girls also participate. It consists of the career-oriented cluster of computing/accounting. These popular clusters among boys focus on mathematicological, formulaic knowledges and/or on hands-on know-how. They provide for the development of only two or three of Gardner's eight identified intelligences[4] (Gardner 1993) or, in Australia's Key Learning Area (KLA) terminology, these clusters contain knowledges which belong inside only two or three of the eight KLAs[5]. This 43 per cent of boys misses out, in the school curriculum at senior secondary level, on the sociological, the cultural, the political (all the history and current functioning of the institutions and ideas of the society they live in and the world beyond), the inter- and intra-personal, the ethical, the biological sciences, the verbal beyond English requirements, and all other expressive capacities . The 43 per cent of boys (and the 14.7 percent of girls) who limit themselves to one of these clusters are learning very important knowledges, but are they learning broadly enough? This question is taken up briefly again in Chapter 4.

The question is Janus-faced. Its other face becomes apparent when we look at girls' popular cluster choices in the Lamb and Ball data (Lamb & Ball 1999). First, girls spread more evenly between clusters and, second, the most popular two clusters for girls contain five Key Learning Areas and involve developing a range of Gardner's intelligences. Girls tend to be braver than boys in venturing out of their traditional gender-identified area. Indeed schools currently encourage girls to do so (Collins, Batten, Ainley & Getty 1996). In sum, girls tend to choose a much broader spread of knowledges.

This raises important and complex issues. How are we to explain or interpret such differences and in what ways do they matter? Are girls spreading across too many subjects, or are boys too narrow (or both)?. Lamb's gender analysis for this report of the Lamb and Ball (1999) data file suggests that boys tend to follow what have traditionally been considered appropriate routes for them according to their level of achievement in junior high school. Are girls' broader choices more naïve about employment or realistic in their understanding of a labour market which is segmented? Are they more mature in their understanding of the breadth of life's possibilities, of the complexities beyond work of adult life, or do they think less about life beyond school than boys? What are the implications of these gendered subject-choice patterns for Australia's future? The very fact that they exist raises issues about government policy purposes for upper secondary schooling.

What are the knowledge purposes of senior secondary schooling? The above subject clusters suggest that, in making their educational choices, many boys are interested primarily in the human capital which such choices generate for them. Or are they just more channelled by home and school on the basis of previous achievement? In Lamb's gender analysis of the Lamb and Ball (1999) data for this report, 37 per cent of male students in the maths/physical science cluster in Year 12 had been in the top quartile of male achievers at age fourteen while 34 per cent of the boys in technology vocational fields in Year 12 had been in the lowest

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4 Gardner's postulated intelligences are: linguistic, musical, logico-mathematical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, naturalist (Gardner 1993).

5 The eight Key Learning Areas are: English, Mathematics, Science, Studies of Society and the Environment, the Arts, Physical Education and Health, Technology Education, Languages other than English.

achievement quartile at age fourteen. What are the implications of these gender choice patterns both for employment prospects and for Australian culture as a whole? These are important issues of policy for both sexes.

Under-enrolments in particular subjects by gender

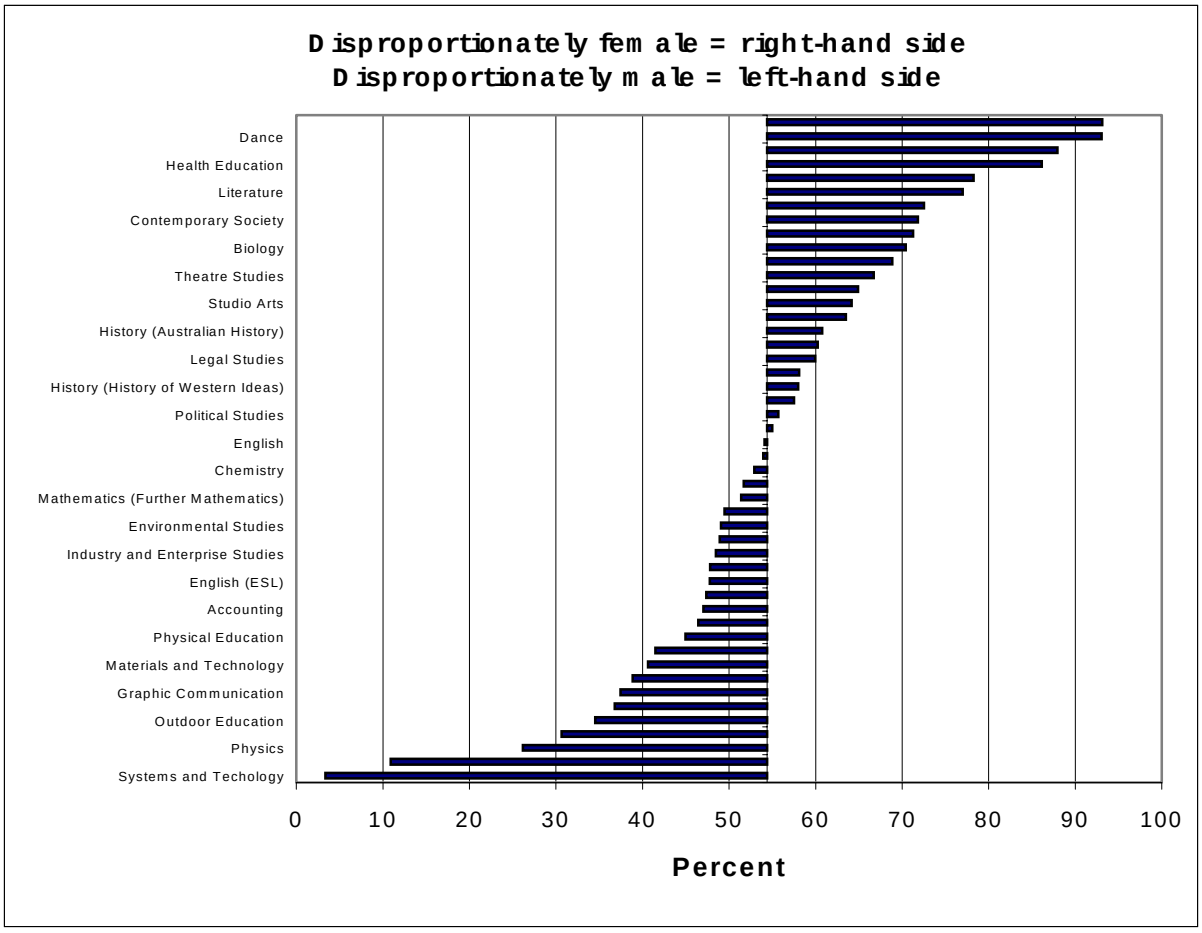
In the *Data Collation and Analysis* Report we looked carefully at male and female subject preferences in Year 12 in Western Australia and Victoria (*Data Collation and Analysis Report* figure 2.3, table 2.3). Both confirm the national KLA pattern in general terms. We have reproduced the Victorian data (figure 2.3) but will attempt to give a deeper sense of common gender patterns across States.

Female students across Australia comparatively under-enrol in the highest level mathematics, in physics, in economics, in information technology, in agriculture, horticulture and outdoor education and in a range of old and new technology subjects. These are the key components of the popular boys' subject clusters we noted in table 2.4. Since female enrolments in Year 12 spread more evenly across the KLAs and across individual subjects inside them, comparative under-enrolment figures for girls are generally less dramatic than those for boys. The major subjects in which under-enrolment is at concerning levels are all in the technology KLA. Of these the most important is information technology which is discussed below.

Males tend to under-enrol, in varying degrees by State, in history, in European languages, across all the arts, in biology, in certain 'technology area' subjects (secretarial/business studies and home economics), and in high-level English in States where there is a hierarchical range of English subjects. Where no Year 12 English is required (eg South Australia) there is a general under-enrolment of boys in English. These male comparative under-enrolment patterns need to be seen within worrying overall enrolment declines, by both genders over a generation, in languages other than English (LOTE), in history and in humanities participation. How much are these broader declines tangled up with gender cultural issues? We know that boys today are more likely to avoid subjects they see as 'feminine' than girls are to avoid subjects they see as 'masculine' (Collins *et al.* 1996). Male and female gender cultures are not symmetrical. Does an increasing association of a subject with girls start a spiral of devaluation of the subject in the eyes of boys and then of employers and finally of girls themselves?

Taking New South Wales subject enrolment figures since 1991, there is little evidence of further decline this decade in the male share of enrolment in most of the above areas (*Data Collation and Analysis Report*, figures 2.5 to 2.8). One major boys' subject issue stands out from this NSW data: the increasing avoidance by boys of higher-level courses in English. It is our view that boys' under-enrolment in challenging English courses matters in relation to standards in tertiary education; in relation to business, and in relation to the overall future of Australia as a democratic society in which citizens need to be able to articulate and discuss complex issues. Formulaic approaches to knowledge, characteristic of many of the subjects undertaken by males, do not provide a sufficient basis for addressing such complex issues.

Figure 2.3: Female proportion of enrolments in VCE units 3/4 subjects, Victoria 1998



Source: Derived from Board of Studies Victoria. VCE results 1988 (CD-ROM)

Information technology

Information technology is a particularly interesting case for research because it is an example of masculine gender 'territory' in the process of formation in a newly developing curriculum area. In 1997 national statistics showed this subject to have an enrolment breakdown of 63 per cent male and 37 per cent female. This is disproportionally male. However, the gender breakdown of students in this area varies by State. In New South Wales (the State which influences the overall national figures most because of its comparatively huge student population), information technology is rapidly becoming marked as a boys' subject (see table 2.5). Proportionately, there were many more girls in it in 1995 than in 1998. By 1998 boys outnumbered girls by a ratio of more than 2:1 in 2-unit computer studies, where girls' enrolment numbers have actually fallen, and by nearly 5:1 in 3-unit computer studies. Looking at Victoria in comparison, Year 12 information technology (processing and management)has been rather more gender-neutral with just a tilt towards greater male interest in 1997 (see figure 2.3). Recently published 1998 figures show some deterioration in this position, but the gender situation does not resemble NSW at this stage. This comparative illustration shows the importance of within-State school gender cultures in subject choice issues. Looking into the future, one movement needs monitoring from a gender perspective: the growing tendency across States to split information technology into an information processing subject on the one hand, and an information systems subject on the other. This

offers the potential for a new gender split in which boys commandeer information systems and hand information processing back to girls.

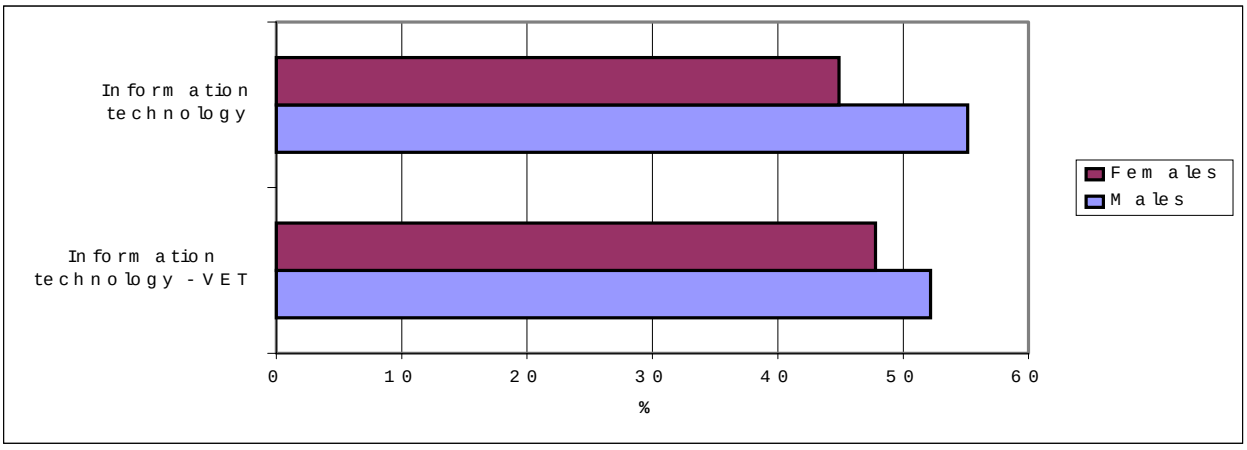
Table 2.5: Time series, 1995 to 1998 enrolments in HSC computer studies by gender, NSW

		1995 Number	1995 %	1996 Number	1996 %	1997 Number	1997 %	1998 Number	1998 %
2 Unit	M	4766	59.3	5271	63.5	5357	66.1	5720	67.8
	F	3273	40.7	2988	36.2	2745	33.9	2719	32.2
3 Unit	M	831	76.8	1177	80.8	1308	83.0	1404	83.0
	F	251	23.1	279	19.1	267	17.0	288	17.0

Source: Derived from data supplied by the Board of Studies, NSW

In so far as Australia's future requires being competitive in a global economic structure based on information and communication technology developments and expertise in using ICT products, there is a national interest in ensuring that both genders are comfortable with information technology and that these knowledges are not the province of one gender. This is an important equity issue requiring an effective policy and program which tackles the peer gender culture in this field.

Figure 2.4: Male and female proportion of technology KLA enrolments, Victoria 1997



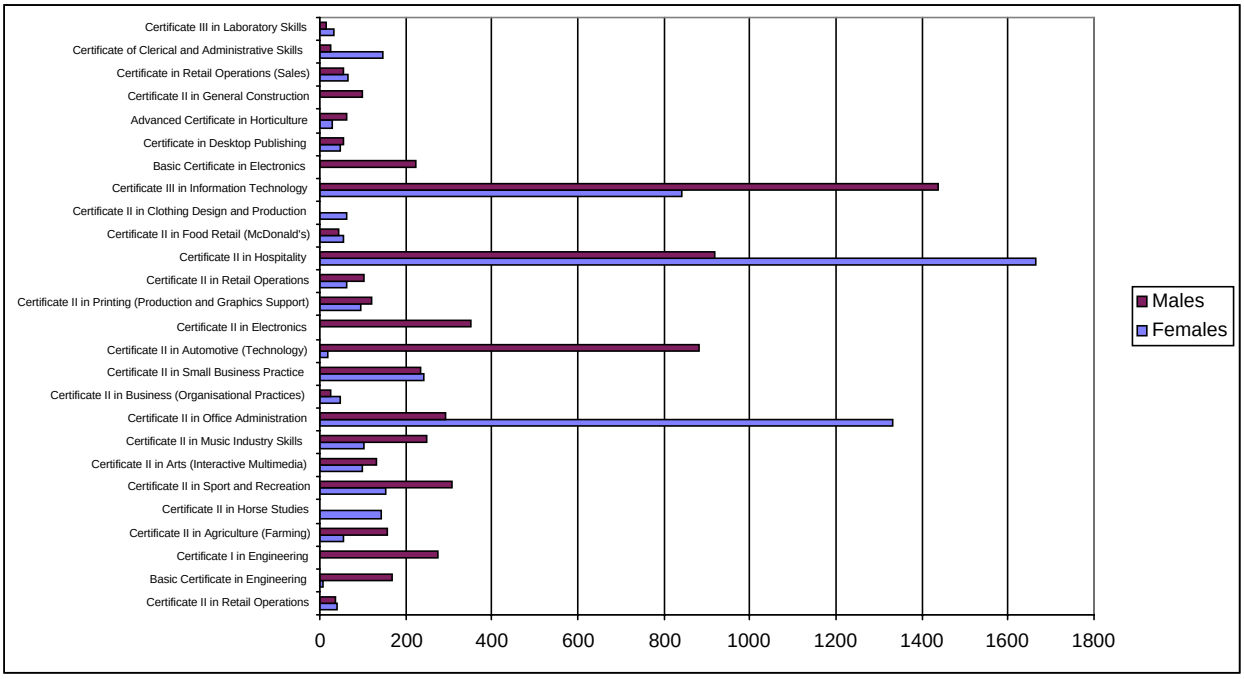
Source: Derived from National Report on Schooling in Australia, 1998

Enrolments in Vocational Education and Training (VET) in schools

The Vocational Education and Training (VET) sector now has courses on offer in many post-compulsory schools across the Australian States. Data on enrolment in this new curriculum area is difficult to gather because every State is negotiating its own VET-Schools agreement and national reporting guidelines are still being finalised. In our *Data Collation and Analysis Report*, we take the case of Victoria, tracing the growth in VET enrolments in Victoria's schools in just three years, from 1996 to 1998. During that time, overall school enrolments in this area have nearly tripled from a total of 3103 students to 9180 students. Because the Board of Studies in Victoria has chosen to register only whole certificates rather than just individual VET modules, whole certificates have come on-stream year by year as the negotiations have been completed for offering that certificate. The 'gender balance' in VET enrolment in schools in Victoria has therefore been affected heavily in any given year by the particular VET certificates so far available and the capacity of individual schools to offer them. By 1998, three of the VET certificates available in schools had many more females enrolled than males—office administration, hospitality and (in much lower overall numbers at this stage)

clerical and administration skills. On the other hand, at least five VET certificates available had disproportionately more males than females—automotive technology, information technology and (with fewer overall enrolments at this stage) electronics, sport and recreation, and agriculture.

Figure 2.5: Enrolments in VET in schools certificates, Victoria 1998



Source: Adapted from data supplied by Victorian Board of Studies

Gender is already present as a major background factor in enrolment choices in this new upper-secondary schooling venture. The introduction of VET-certified courses appears to be fostering the replication of the gender segmentation of the labour market inside schools.

Does this matter? Our position would be that gendered ownership of knowledges always undermines the efforts of schools, under their equity policies, to ensure equity outcomes. Beyond this generalisation from historical evidence, further analyses of what positions in the labour market popular boys' VET choices lead to compared with popular girls' VET choices need to be built in as part of the monitoring of the new 'VET in schools' venture. Without such information, it is difficult to advise schools on wise policies and practices for both genders. Are some choices for either gender likely to lead to labour market disadvantage? This is discussed in later chapters.

Performance

Performance (achievement level) is a separate issue from participation. The following analysis provides data on boys' and girls' results in school assessment. It begins by looking at some indicators of literacy and numeracy performance during the primary and junior secondary school years. The data on literacy and numeracy achievement is absorbing and important. The importance of literacy in relation to post-school outcomes, particularly the work of Lamb (1997), is discussed in chapter 4.

Literacy performance by gender

Masters and Forster (1997) reported on a national survey of literacy achievement among Australian school students in Years 3 and 5. The mean literacy achievements of girls were higher at these Year levels than those of boys and the differences were greater for writing and speaking than for reading. We have chosen to use the States' own figures in the *National Report on Schooling* (1997) for a more detailed analysis of this general finding. Each State controls its own assessing of literacy and numeracy and States have assessed in a range of ways. In this section, we have taken data from the two largest States and, as a check on commonality of outcomes across States, from Western Australia. For reporting purposes in this national document, New South Wales undertook traditional testing. Results from both Victoria and WA, by contrast, were offered within their own State curriculum frameworks. These frameworks are developmentally based and recognise six levels of achievement outcomes from the start of school to Year 10.

Table 2.6: Mean test scores for literacy, Basic Skills Tests, government schools, Year 3 (1994-1997) and Year 5 (1996-1997), all students and students in key subgroups, New South Wales

	All students			*Key subgroups*			
Year	*Boys*	*Girls*	*Total*	*NESB (a)*	*NESB (1)*	*NESB (2)*	*Indigenous Students*
Year 3 students							
1994	48	51	49	49			44
1995	48	50	49	48			44
1996	49	51	50	49			44
1997	49	51	50		49	48	45
Year 5 students							
1996	55	57	56	55			51
1997	56	58	57		56	54	51

Note: Definitions used in the determination of key subgroups shown in this table may not coincide with definitions used elsewhere in this national overview

(a) Students from non-English-speaking backgrounds (1994-1996) For 1997, split into two groups: NESB (1): those answering 'yes' to "Does anyone speak a language other English in your home?". NESB (2): those who had lived in Australia for four years or less and never or only sometimes spoke English at home.

Source: National Report on Schooling in Australia, 1996, 1997.

The New South Wales results (table 2.6) are for Years 3 and 5 in specified calendar years. Results can be simply summarised as follows. Since 1995 there has been a two-point gap in favour of girls in average literacy achievement in Year 3. The two-point gap persists in Year 5.

Table 2.7: Achievement in literacy, by percentage of students at Curriculum Standards Framework levels, Years 3 and 5, all students and students in key subgroups, Victoria, 1996 (per cent)

	All students					*Students in key subgroups*		
CSF level	*Boys*	*Girls*	*Total*	*LBOTE (a)*	*Indigenous students*	*Attending rural schools*	*Attending isolated schools*	*Attending disadvantaged schools*
English-Reading, year 3								
Level 1	13.1	8.2	10.7	15.7	31.1	10.0	11.2	16.8
Level 2	39.4	36.1	37.8	42.2	39.4	38.9	38.5	42.1
Level 3	33.1	37.3	35.1	29.9	26.9	35.6	35.1	29.4
Level 4	14.4	18.5	16.4	12.3	2.6	15.2	15.2	11.6
English--Writing, year 3								
Level 1	12.9	5.6	9.3	13.2	32.9	10.2	11.6	15.9
Level 2	45.3	34.5	40.0	42.3	49.3	43.1	44.8	44.7
Level 3	32.9	42.2	37.5	33.2	14.2	35.5	33.4	30.8
Level 4	8.8	17.7	13.2	11.3	3.6	11.2	10.2	8.7
English-Reading, year 5								
Level 2	12.5	7.2	9.9	8.9	31.0	10.4	11.5	16.5
Level 3	32.0	25.7	28.9	27.9	39.4	30.7	32.2	35.7
Level 4	44.7	50.8	47.7	48.9	26.9	46.6	44.1	39.5
Level 5	10.8	16.3	13.5	14.2	2.6	12.2	12.2	8.2
English-Writing, year 5								
Level 2	13.7	5.7	9.8	13.5	31.0	11.8	13.2	16.5
Level 3	30.9	20.0	25.6	29.2	40.6	26.3	26.8	31.7
Level 4	43.0	49.5	46.1	42.3	24.9	44.8	44.8	40.3
Level 5	12.4	24.8	18.5	15.0	3.4	17.1	15.3	11.5

Note: Definitions used in the determination of key subgroups shown in this table may not coincide with definitions used elsewhere in this national overview

(a) Refers to students from a language background other than English

Source: National Report on Schooling in Australia, 1996

The more detailed Victorian and Western Australian data sheds some light on this situation. Taking the Victorian Year 3 and Year 5 data (table 2.7), boys in general do not appear to remain at elementary literacy levels. The data suggests rather that, in primary school to Year 5, considerably more boys than girls simply ‘take off’ more slowly in aspects of literacy and then move through outcome levels at the same pace but a little behind the average girl in relation to their school Year. In Year 3, 87 per cent of boys are achieving at Level 2 or above in reading, compared with 92 per cent of girls. By Year 5, 88 per cent of boys are achieving at least a level higher, at Level 3 or above, compared with 93 per cent of girls. Only 12 per cent of boys are below Level 3 at this point compared with 53 per cent in Year 3. The same general story is repeated in relation to writing. There is continuing satisfactory progress for the great bulk of boys and of girls. The whole process simply starts later for a larger group of boys than girls.

Table 2.8: Literacy achievements by government school students in WA, 1995, Years 3, 7 and 10 (per cent)

Year level	Boys	Girls	*All students*	Outcome level
Students achieving at/above specified levels in reading				
Year 3	88	93		$\geq$ 2
Year 7	94	95		$\geq$ 3
Year 10	84	91		$\geq$ 4
Students achieving at/above specified levels in writing				
Year 3	96	98		$\geq$ 2
Year 7	99	99		$\geq$ 3
Year 10	89	97		$\geq$ 4
Students achieving at/above specified levels in listening				
Year 3	86	91	88	$\geq$ 2
Year 7	93	95	94	$\geq$ 3
Year 10	77	90	83	$\geq$ 4
Students achieving at/above specified levels in expository speaking				
Year 3	86	91	62	
Year 7	93	95	76	
Year 10	77	90	58	
Students achieving at/above specified levels in narrative speaking				
Year 3			95	
Year 7			86	
Year 10			75	
Passes in English at stage 4 or higher				
Years 10	90.6	93.6	92.1	

Source: National Report on Schooling Australia, 1996

Western Australian data gives similar kinds of developmental information as Victorian, but unusually it looks at students in Years 3, 7 and 10. In table 2.8 we have WA 1995 data. In Year 3, 88 per cent of boys compared with 93 per cent of girls were at Level 2 or beyond in reading (a satisfactory grade for their Year). This is almost identical with the Victorian results. By Year 7 we have a result which has important implications if it were found to be true over a number of years: in Year 7, 94 per cent of boys compared with 95 percent of girls were at Level 3 or beyond. Boys had caught up. In Year 10, however, only 84 per cent of boys compared with 91 percent of girls were at Level 4 or beyond. Writing results are in parallel. Slightly more females than males are at level 2 or beyond in writing in Year 3; the proportions of each gender in Year 7 meeting Level 3 requirements are about equal; and then the rate of progress of some boys slows down in the junior secondary school years. Only 89 per cent of them meet Level 4 writing outcome standards by Year 10 compared with 97 per cent of girls.

Taken overall, these results confirm common experience and research findings: a failure to catch on to reading and writing is somewhat more common among boys than girls in the earliest few years of schooling. What are the plausible explanations for this phenomenon? The most popular hypothesis is that developmental delay affects a greater proportion of boys than girls. The average boy develops more slowly physically and neuro-physiologically than the average girl and this means that there are more boys than girls at the age of five and six who are unable to cope with the neuro-physiological demands of literacy. For a while, in the middle primary years, most boys and most girls move successfully through outcome levels in

English and, in the Western Australian data, by Year 7 the very large proportion of boys of whom this is true virtually equals the proportion of girls.

On the other hand, there are almost certainly cultural issues involved as well in boys' performance levels which we will discuss in chapter 4.

Information technology as a form of literacy

One important consideration in relation to gender and literacy is the question of the degree to which the immersion of more boys in, and the apparent greater fascination of many boys with, information and communication technologies (ICTs) is affecting their traditional literacy skills. ICTs offer forms of play which require no speaking or writing interaction with other people and many of them, not incidentally, model violence. Most ICT games do not demand more than minimal capacities in English but require, rather, the capacity to tune in to non-verbal sign systems. Verbal information on the Web tends to be brief and does not ask the reader to follow extended argument or narrative.

But this is to look only at the negatives. The capacity to use information and communication technologies is a form of literacy in itself. It requires learning to recognise and deploy signs, often arbitrary, at levels of increasing sophistication according to the uses to which it is put. This is a crucial literacy for the twenty-first century. In so far as boys claim this literacy as masculine and girls accept this, turning away from learning ICTs at sophisticated levels, girls are handicapped in relation to future life and work. In so far as boys see traditional English literacy as 'boring' and feminine, they are missing out on a crucial form of literacy and are also handicapped in relation to future life and work. How do we tackle student cultures of gender so that these self-limiting consequences become both visible to and rejected by students of both sexes?

Numeracy performance by gender

The style of reporting of the numeracy tables for New South Wales, Victoria and Western Australia follows the same patterns as the literacy tables.

Table 2.9: Mean test scores for numeracy, Basic Skills Tests, government schools, Year 3 –Year 5 (1994-1996) all students and students in key subgroups, New South Wales

	All students			*Key subgroups*			
Year	*Boys*	*Girls*	*Total*	*NESB (a)*	*NESB (1)*	*NESB (2)*	*Indigenous*
Yr 3 students							
1994	52	52	52	51			46
1995	52	52	52	51			46
1996	53	54	54	53			47
1997	52	52	52		52	51	46
Yr 5 students							
1996	60	60	60	60			54
1997	60	60	60		60	60	54

Notes: Definitions used in the determination of key subgroups shown in this table may not coincide with definitions used elsewhere in this national overview. Prior to 1996, the Year 3 and year 5 results cannot be compared as they used separate scales. In 1996, the Year 3 and Year 5 BST results were reported on a common scale from 25 to 80.

- Students from non-English-speaking backgrounds (1994-1996) For 1997, split into two groups: NESB (1): those answering 'yes' to "Does anyone speak a language other English in your home?". NESB (2): those who had lived in Australia for four years or less and never or only sometimes spoke English at home.

Source: National Report on Schooling in Australia, 1996 and 1997

Table 2.10: Achievement in mathematics, by percentage of students at Curriculum Standards Framework (CSF) levels, Years 3 and 5, Victoria 1996

	All students			*Key subgroups*				
CSF level	*Boys*	*Girls*	*Total*	*LBOTE (a)*	*Indigenous students*	*Attending rural schools*	*Attending isolated schools*	*Attending disadvantaged schools*
Mathematics-Number, year 3								
1	7.4	7.4	7.4	10.8	16.8	6.7	7.1	12.3
2	33.1	35.7	34.4	38.0	46.5	32.6	34.3	38.8
3	51.8	50.8	51.3	44.9	31.0	51.4	51.3	43.2
4	7.7	6.1	6.9	6.3	5.6	9.2	7.2	5.6
Mathematics-Chance and Data, year 3								
1	6.1	4.7	5.4	8.2	14.7	4.6	4.6	8.8
2	27.5	25.1	26.3	32.6	37.9	24.6	26.2	31.8
3	53.6	56.2	54.9	50.5	40.9	55.3	53.9	50.4
4	12.8	14.0	13.4	8.8	6.5	15.4	15.3	9.0
Mathematics-Number, year 5								
2	12.3	11.1	11.7	14.1	34.2	12.5	13.7	17.9
3	54.0	55.1	54.5	51.1	55.2	55.9	55.9	57.0
4	25.7	27.1	26.4	26.6	8.1	24.8	23.6	20.7
5	8.0	6.7	7.4	8.2	3.5	6.8	6.8	4.3
Mathematics-Chance and data, year 5								
2	16.2	12.5	14.4	18.4	33.5	13.1	14.5	21.0
3	57.5	59.5	58.5	60.2	55.0	58.7	59.2	59.2
4	21.7	23.6	22.7	18.3	10.8	23.1	21.9	17.1
5	4.6	4.4	4.5	3.0	0.8	5.1	4.4	2.7

Note: Definitions used in the determination of key subgroups shown in this table may not coincide with definitions used elsewhere in this National Overview.

- Refers to students from a language background other than English

Source: National Report on Schooling in Australia, 1996

Table 2.11: Percentage of sample of students achieving at, or above, a specified level in key areas of numeracy, Years 3, 7 and 10, government schools, WA 1996

Student groups	*Yr 3*	*Yr 7*	*Yr 10*
	Level 2	*Level 3*	*Level 4*
Numeracy area-number			
All students	90	93	91
Boys	90	93	90
Girls	90	93	92
Indigenous students	62	70	74
Non-English-speaking background	89	89	90
Geographically isolated	89	93	89
Numeracy area-space			
All students	76	78	62
Boys	73	78	63
Girls	77	78	61
Indigenous students	51	47	34
Non-English-speaking background	71	73	52
Geographically isolated	74	77	54
Numeracy area-chance and Data			
All students	96	97	81
Boys	96	96	79
Girls	95	97	83
Indigenous students	78	83	57
Non-English-speaking background	93	95	70
Geographically isolated	94	95	76
Numeracy area-measurement			
All students	84	95	75
Boys	84	96	74
Girls	85	95	73
Indigenous students	58	79	42
Non-English-speaking background	81	92	68
Geographically isolated	82	95	71

Note: Definitions used in the determination of key subgroups shown in this table may not coincide with definitions used elsewhere in this national overview.
Source: National Report on Schooling in Australia, 1996

New South Wales tables show no differences between girls and boys in achievements in numeracy tests in Years 3 and 5. Victorian data at Year 3 shows minor differences. However the slightly better results for boys in the 'number' strand (a higher proportion of them at higher levels) are matched by slightly better results for girls in the 'chance and data' strand so that overall neither gender shows superiority. By Year 5, a hint of a pattern that is familiar to researchers into gender and achievement is emerging. In both strands there is a slightly higher proportion of boys at the very top level, a slightly higher percentage of girls at the middle two levels, and then a slightly higher proportion of boys at the lowest level.

The Western Australian data, which groups all students who reach or exceed a satisfactory level, shows a higher proportion of girls than boys achieving satisfactorily in the 'Space' strand and both genders achieving evenly across other strands in Year 3. By Year 7, the genders are even across all strands. Year 10 results show slightly higher proportions of females achieving satisfactorily in one strand but this is compensated for by boys doing a little better in others.

This data suggests that gender is not a serious factor in numeracy achievement to the end of junior secondary school. Some of the very small differences in fact may well be aberrations of a particular assessment strategy. The Western Australian data suggests that the one interesting difference pattern (Year 5 Victoria), probably does not generalise across States nor persist into secondary school.

Year 12 performance by gender

As with literacy and numeracy, Year 12 performance in the two largest States, Victoria and New South Wales, whose enrolments make up a large proportion of the national statistics has been chosen, with Western Australian data used as a check on commonality across States.

In Year 12 assessment, the average girl is performing better than the average boy over a larger number of subjects than vice versa in each of the three States we have chosen for illustration. Differences in average performance in major subjects in Western Australia and Victoria tend to be small – less than three per cent in most subjects. Excluding LOTE subjects where enrolments tend to be more erratic from year to year, in Western Australia in 1998 the average male who enrolled in these subjects out-performed the average female in computing, economics, geology, chemistry and physics. The average female out-performed the average male in approximately fifteen other major subjects. In Victoria in 1998 the average boy out-performed the average girl in literature, texts and traditions, music performance, accounting, international studies, chemistry and maths methods (the standard university entrance maths). The average girl did better in 35 other subjects. In New South Wales in 1998, the differences tend to be larger. Furthermore, in NSW the average boy outperformed the average girl only in 2 - unit and 3 - unit computing studies and in 'mathematics in practice'. That is all. The average girl outperformed the average boy in everything else.

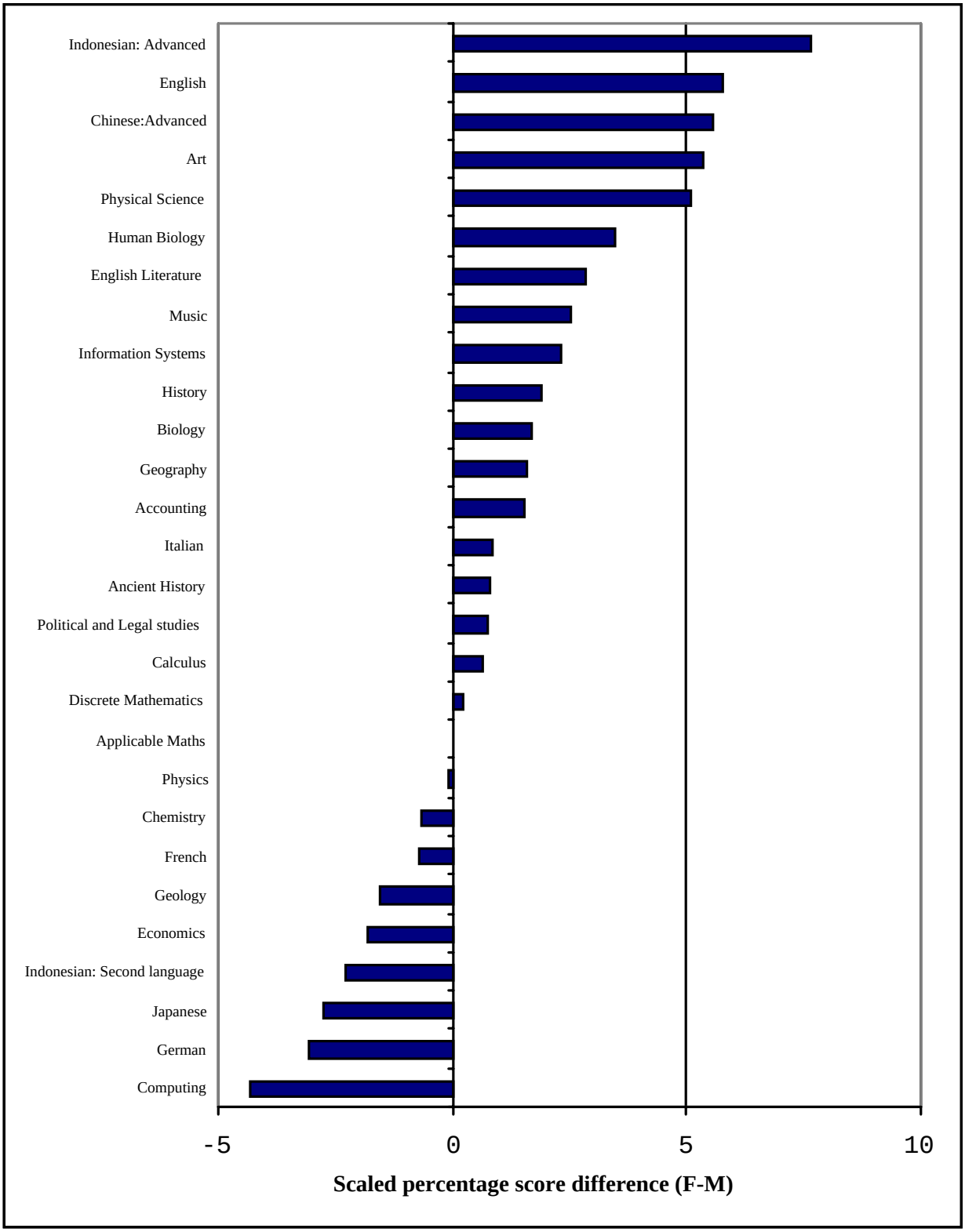
This imbalance in New South Wales has increased noticeably during the 1990s and has been a matter of concerned and heated debate. The data from two other States helps to weigh the extent to which the gender performance pattern in New South Wales is common or aberrant. The answer in relation to the performance of the average student of each gender seems to be that the pattern of the average girl doing better in more subjects is similar across States but that New South Wales has become an exaggerated case. A very recent study of beliefs about competence in mathematics shows that New South Wales male students are starting to believe the popular press rhetoric about their own lesser competence even in that subject (Forgasz & Leder 1999).

It is important to understand clearly what the graphs of average performance mean and what they do not mean. First, in some subjects, the gender doing better on average is doing better simply because it has a more exclusive enrolment (see McCann 1995). This is likely to be the case, for example, in boys' stronger average performance in literature in Victoria in 1998, and in the fact that the average girl out-performed the average boy in information systems in Western Australia that year. The minority of boys who take literature and of girls who take

information systems are more likely to be passionate about it and determined to do well than the average enrollee of the gender with which those subjects are popularly associated.

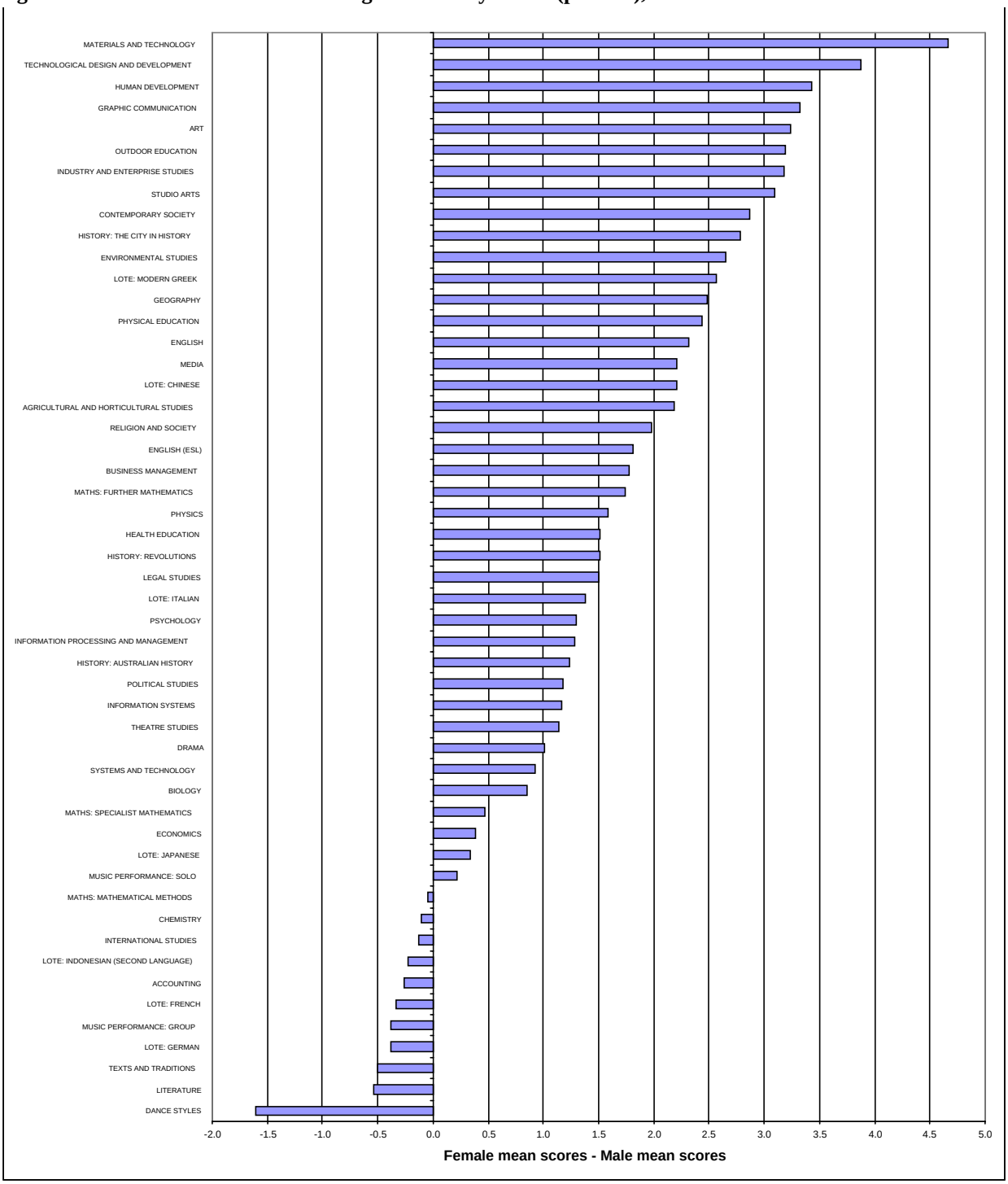
Another major reason for the skew towards girls in the pattern is the tendency already discussed for boys to stick together, over-enrolling in particular high pay-off, and/or traditional subjects. Thus in subjects highly rated by boys there is a tail of boys bringing down the average performance. Girls' broader spread across subjects perhaps indicates a greater inclination to take subjects in which they have shown some talent and in which they are likely to do comparatively well.

Figure 2.6: Gender differences in average performance on Western Australia Certificate of Education (WACE) subjects, WA 1998



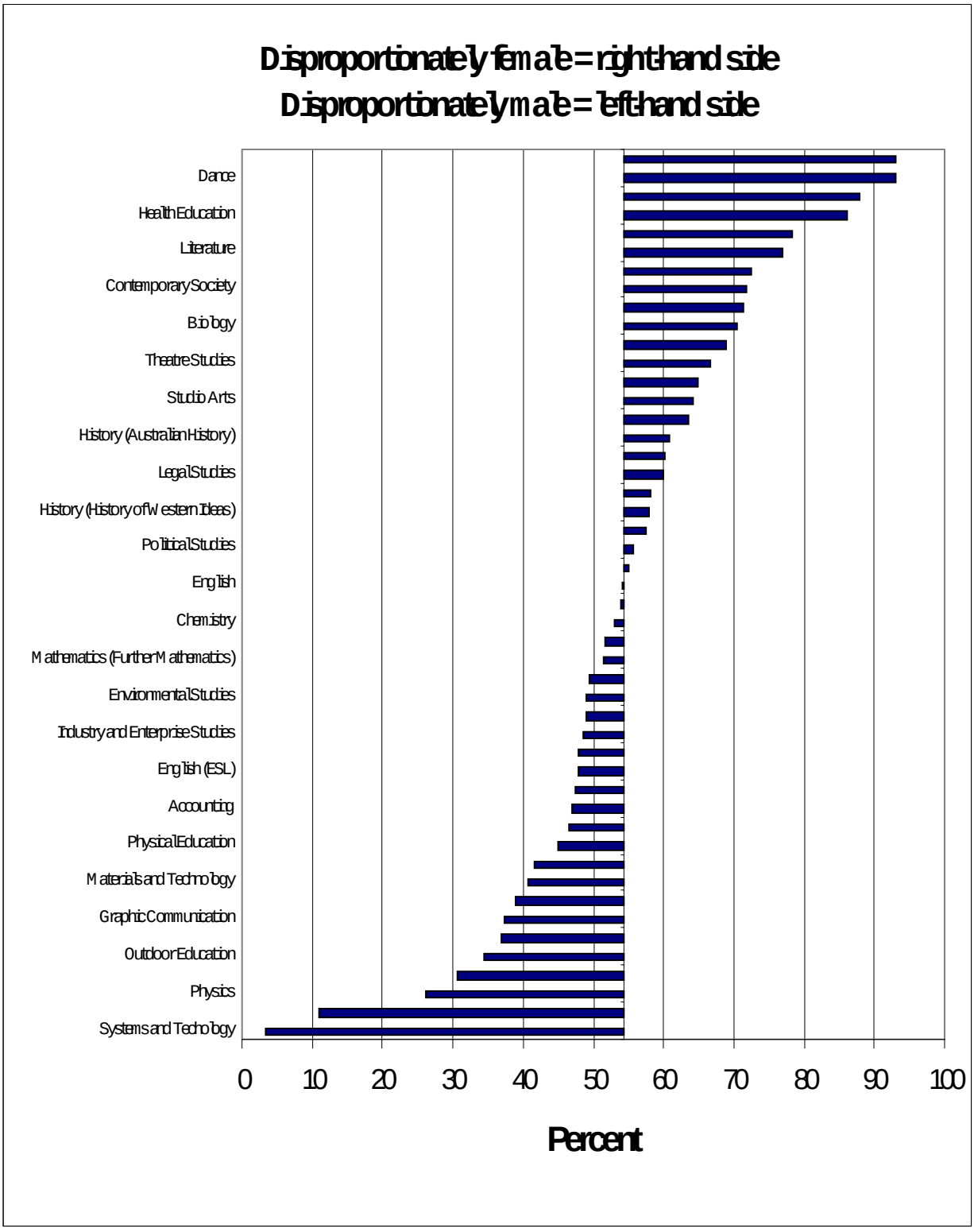
Adapted from data supplied by WA Curriculum Council

Figure 2.7: Gender differences in average VCE study scores (percent), Victoria 1998.



From data supplied by the Board of Studies, Victoria (Higher School Certificate Examination Statistics).

Figure 2.8: Gender differences in performance on HSC subjects, NSW 1998



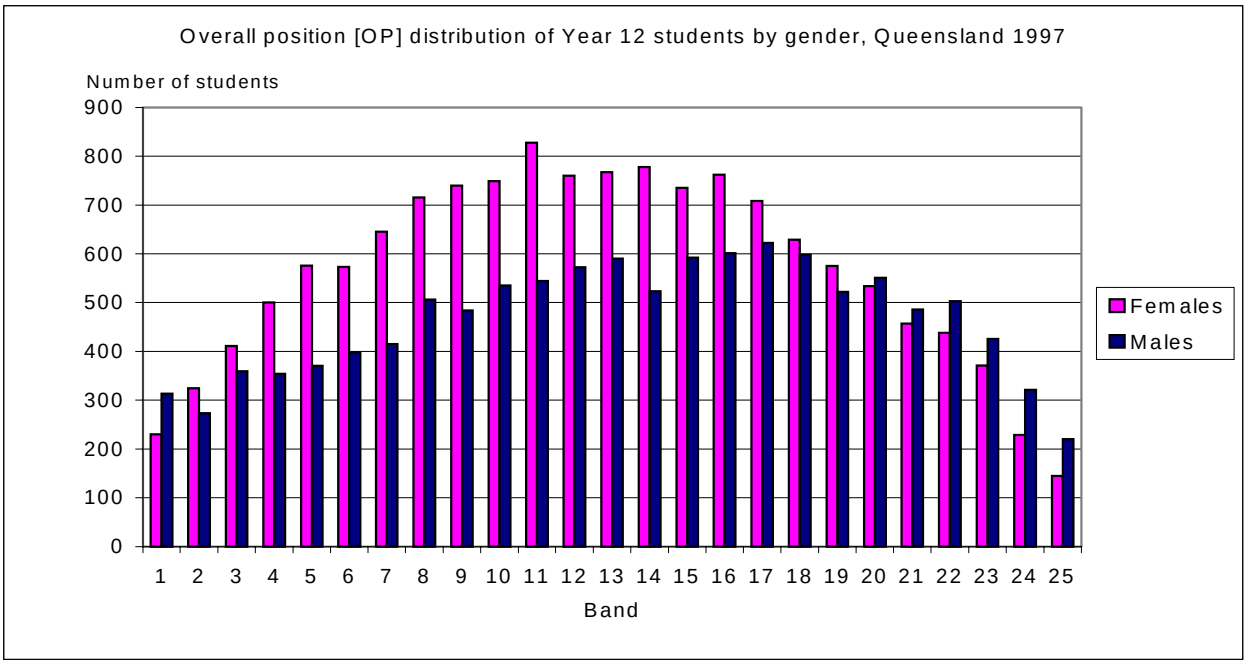
Derived from data supplied by the Board of Studies, NSW. Courses listed have enrolments of over 700.

This raises the issue of which strategy has a long term employment pay-off. Is enrolling in but doing a little more poorly in high-yield subjects (a more common strategy with boys) a better or worse strategy than enrolling in and doing well in subjects with poorer post-school links (a more common strategy with girls)?

Beyond these two general explanations, each subject has its own story. The quality of enrolment may simply differ by gender regardless of the proportions of each sex enrolled, because subjects can have a somewhat different status and meaning by gender. Biology, for example, is taken by a wide range of girls including high achievers. Its lower enrolment of boys, however, tends not to be the high achieving boys who are busy taking the physical sciences.

It is also crucial to remember that statements about the mean performance of males and females are not statements about all males or all females. There are both males and females at all levels of performance in all major subjects. This data tells us only about the exact average performer in each gender group. Queensland's method of Year 12 assessment is particularly helpful in showing us what appears to be the underlying shape of gender achievement and why girls tend to be out-performing at the mean. Queensland students sit only one centrally-set test, the Queensland Cores Skills Test (QCS). The results of the QCS locate students in one of 25 performance bands from Band 1, the highest, to Band 25, the lowest.

Figure 2.9: Overall position [OP] distribution of Year 12 students by gender, Queensland 1997



Note: Data collected after closure of appeals process: Visa students included in these figures
Source: Queensland Board of Senior Secondary School Studies

This result is one part of a package of information, much of it school-based, used for tertiary entrance and employment purposes. The QCS is a test of generic cognitive skills and capacities taught across subjects in the Queensland Year 12 curriculum. Its value to us is that it gives a sense of relative achievement and 'capacity' for further study free of any particular subject choices. The QCS shows a gender pattern familiar in research into gender achievement in a number of countries. First, in the top band of the QCS (the top four per cent) there are disproportionately more boys than girls. In the next two bands (from the fifth to the twelfth percentile) the proportions of girls and boys are the same. In the following fourteen bands (bands four to seventeen, from the thirteenth to the sixty-eighth percentile), there are proportionately more girls than boys. Boys and girls are equally represented in the next two bands (bands eighteen and nineteen). Finally, boys are over-represented in the

bottom six bands, from the seventy-seventh percentile to the hundredth. In sum, proportionately more boys do really poorly, proportionately more girls are bunched towards the centre and just above the centre of the pack, and boys continue to do very well at the very top alongside girls. There are indeed, proportionately more boys in the stratified heights. This general pattern is commonly found in gender comparisons. It was found in detailed comparisons of Year 12 HSC performance in New South Wales in 1995 (McCann 1995).

Differences between the sexes are still negligible among the most able in New South Wales. Both maths and English KLAs in New South Wales offer a range of Year 12 subjects with different degrees of challenge for students. In both these KLAs, the subject with the greatest academic challenge (4-unit maths and 3-unit English) have comparatively small performance differences between the genders. Differences in the average performance of males and females in the other subjects which tend to attract high fliers of both genders, chemistry, physics and 3-unit computing studies, are also small.

The within - State patterns suggest that achievement - and subject enrolment - is also related to gender cultures within school systems nested within States as different cultures and polities. The two traditional male heartland clusters of maths/physical science and industrial technologies appear to give similar gender signals across Australia, the former propped up by university entrance procedures. But other subjects such as economics, geography and accounting have different curriculum histories and gender nuances by State which affect who takes them and the effort put in. These nuances can and do change over time.

The time series data on differences between the average scores of females and males in New South Wales (figures 2.10 to 2.13) in ten subjects suggests a culture shift in that State during the 1990s among males, at least below the highest performing male group. In this case, it is a culture shift affecting more than just one or two subjects. More males below the high fliers, from ability groups which formerly made an effort at a wide range of subjects, seem to be making somewhat less effort to do well. This is, indeed, a matter for concern.

Figure 2.10: Time series of difference in female and male average percentage scores in HSC English subjects, NSW 1991-1998

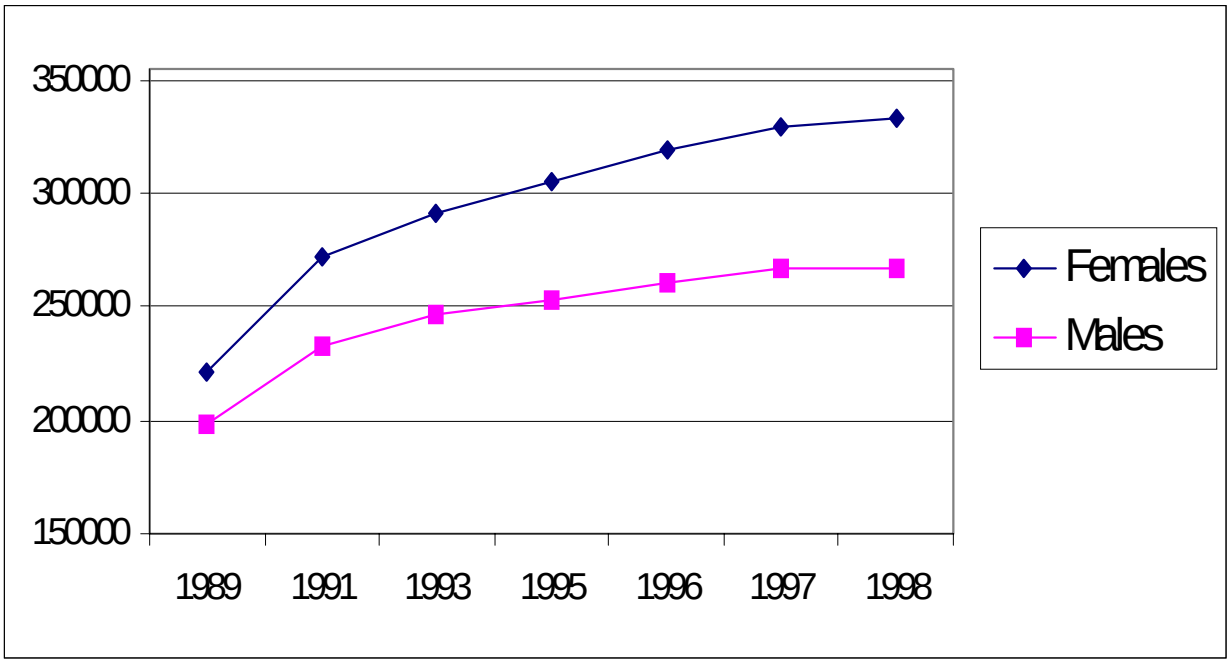
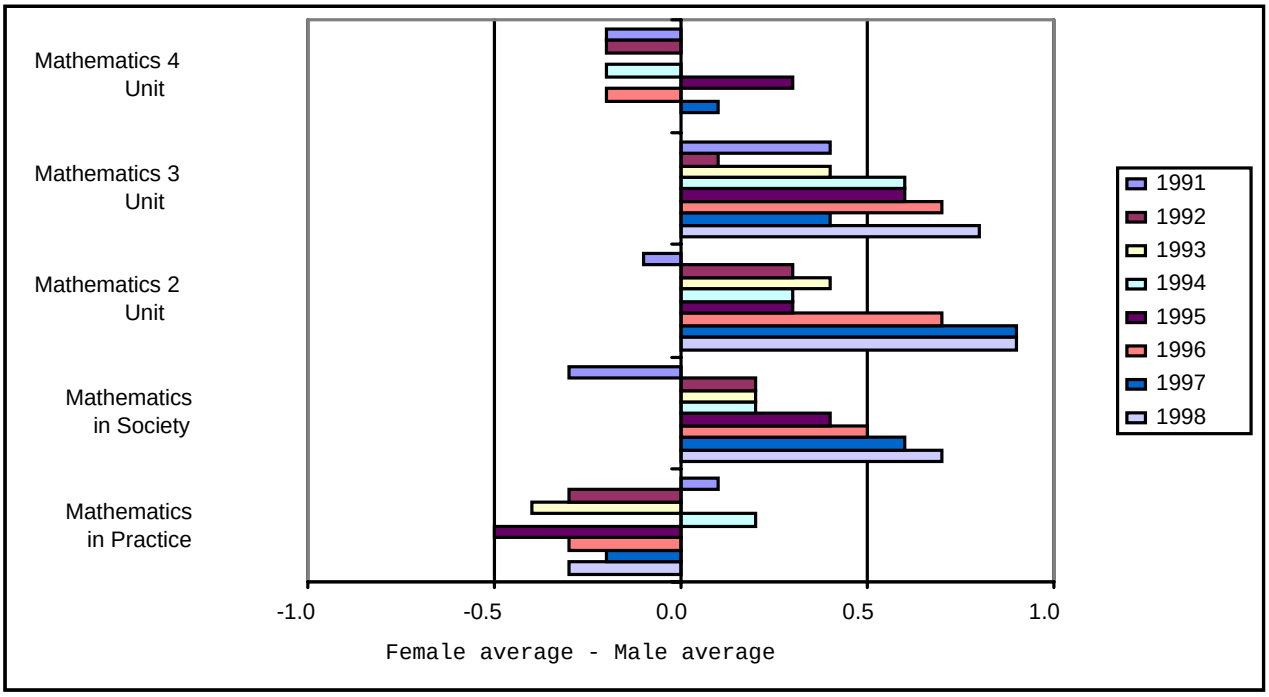
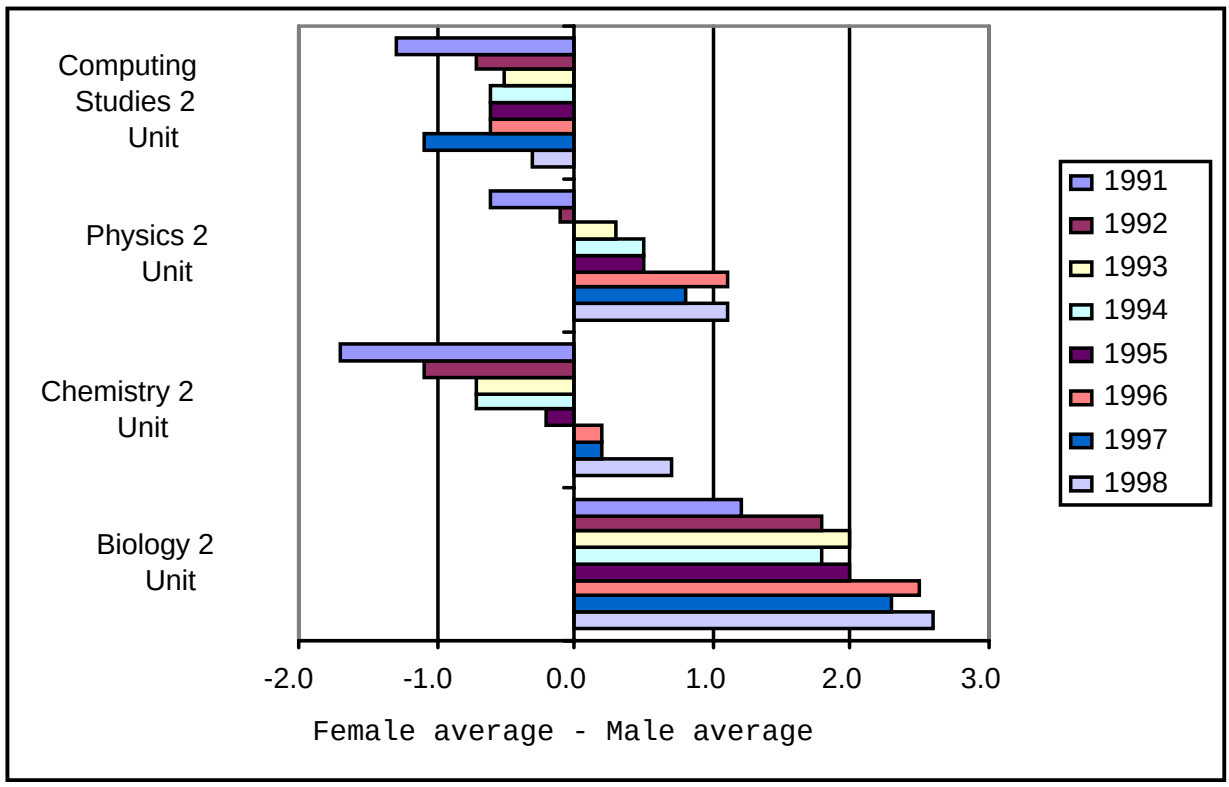


Figure 2.11: Time series of difference between female and male average percentage scores (F-M), HSC mathematics subjects, NSW 1991-1998



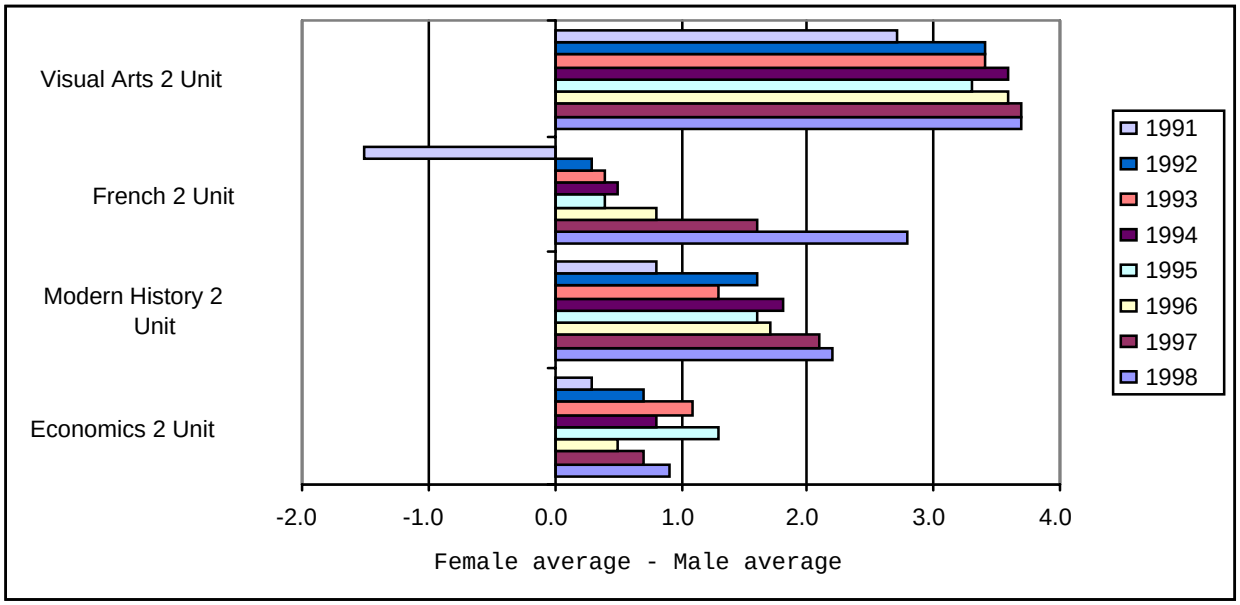
Source: Adapted from data supplied by NSW Board of Studies

Figure 2.12: Time series of difference in female and male average percentage scores in selected HSC science/computing subjects, NSW 1991-1998



Source: Adapted from data supplied by NSW Board of Studies

Figure 2.13: Time series of difference in female and male average scores in selected HSC subjects, NSW 1991-1998



Source: Adapted from data supplied by NSW Board of Studies

International Trends

One way of attempting to think more clearly about what is happening to girls and boys in Australia is to look at their participation and performance at school in the broader international perspective. Are there similar trends world-wide? Are there similar issues and problems?

The most recent comparable data available is as follows. In the majority of OECD countries, girls' participation in education has increased significantly over the past 25 years, and women and men in these countries now receive approximately the same number of years of schooling (OECD, 1998). In terms of achievement, there are numerous studies documenting improvements in girls, overall performance at school (Arnot, David, & Weiner 1999, Dwyer & Wyn 1998, Erskine 1999, Powney, 1996, Weiner 1998). In relation to the UK, Arnot, David et al (Arnot *et al* 1999) found that examination results have changed dramatically as girls have 'caught up' and sometimes overtaken boys. They explain the narrowing gender gap in terms of wider social, political, cultural and economic changes during the l980s and l990s. In addition, there are a number of reports documenting differences in achievement at different stages of schooling. For example, a recent British OFSTED report (Arnot, Gray, James, Ruddock & Duveen 1998) identifies patterns at key stages, (early years, GCSE, A Levels) and in different subject areas (Reading, English, Mathematics At Key Stage 1 early primary school, students aged 7). The authors found that girls 'get off to a better start in Reading than boys' (Arnot *et al* 1998, p. 5); in science, after making comparable starts, 'boys have begun to pull ahead of girls by Key Stage 2; in Mathematics 'boys and girls have recently begun performing at very similar levels in Key Stage tests' (Arnot *et al* 1998, p. 7). These patterns were largely repeated in the GCSE results, with girls overall out-performing boys 'in terms of the proportions obtaining five or more higher grade passes' (Arnot *et al* 1998, p. 10). These international comparisons suggest that the Australian data is largely in line with experiences in other OECD countries. Looking more broadly – a first way of trying to think more clearly about what the data means – suggests a world-wide change in comparative performance between the genders and implies that part of the explanation lies beyond national borders.

Which boys? Which girls?

A second way to understand what is happening is to recognise that not all boys or girls are having problems and to take a direct focus on those who do. While there are general and worrying trends in relation to what performing as 'masculine' and as 'feminine' is coming to mean for young males and females in our schools, and these need to be addressed with long-term programs, it is also clear that some males and females are much more heavily affected in terms of participation, performance and outcomes than others. From this line of argument comes the view that, to understand and address disadvantaged youth of both genders, data needs to be disaggregated more carefully and focused more sharply on those who are really disadvantaged. The next chapter turns to the question of what the databases that look at background characteristics tell us about which boys and which girls are having difficulties with participation and performance in school.

Top

3. WHICH BOYS, WHICH GIRLS?

Introduction

All recent major statistical and other studies on topics germane to this *Report* have either implicitly or explicitly pointed to the limitations of considering the issue of educational performance through simple comparisons between all girls and all boys, or primarily around questions of 'over and under-representation and participation' and 'balance'. Simple binary, zero - sum, 'mirror image' (Yates 1997) and 'competing victims' approaches have been shown to be flawed. These studies show that earlier investigations over-simplified the issues and in so doing masked the more significant information needed to permit a proper diagnosis of the problems and development of suitable intervention strategies. Specialist studies show that many analyses have obscured the ways in which education differentially distributes life chances and choices according to differences within, as well as between, the genders (see Epstein 1998, Dwyer 1997, Teese 1995, Davies *et al.* 1995). These analyses make clear that we must adopt a 'which girls, which boys?' approach to gender-related under-performance and disadvantage. Let us consider what new understandings such an approach brings to the field.

In the recent debates about the education of boys and girls, under-performance has been understood in terms of over- and under-representation and balance. In other words, in each level of achievement, if one gender is over-represented at any one level, the other is said to be over- or under-performing. In other words, each has become the yard-stick for measuring the other's performance at each level of achievement. A similar logic has been applied to participation. The genders are said to be over or under-participating if they are not equally represented in the post-compulsory years and in particular learning areas. In the latter instance, for example, boys are said to be under-participating in the humanities, the arts and the social science areas. Girls are said to be over-participating in such areas.

Concern about imbalance in performance and participation often translates into arguments about disadvantage. So, for instance, claims are heard that boys are disadvantaged because girls are over-represented in the senior years at school or because girls regularly out-perform them in English. Such an approach to the issues has the benefit of being tidy and easily understood and action can readily be read off from the figures. So, again, if boys are disadvantaged because girls regularly out-perform them in English, then their disadvantage can be addressed by improving their performance in English. Presumably one would not wish to go too far with this remediation program for, as soon as they started to out-perform girls, then girls would be understood as under-performing and disadvantaged and would then require remediation to restore the balance. In such formulations, promoting gender equity is understood as a delicate balancing act: some success is good so long as it does not put at risk other people's entitlement to success. Implicitly this suggests that too much success is not a good thing.

There are several paradoxes and problems with this approach to educational equity. These are best represented through a series of questions. Firstly, if one gender were to be out-performing and out-participating the other at the top of the range, does this constitute under-performance and participation by the other gender at the top? Does this constitute disadvantage? If this is understood as disadvantage, then how does that compare with those males and females at other levels of performance? Who is disadvantaged, the gender being

out-performed at the top or the gender out-performing others at lower levels of the performance hierarchy? Or the gender being out-performed at each level? Are they all disadvantaged equally? Or, are both genders at the bottom particularly disadvantaged in comparison with those further up? If this is the case, then how should the 'what about the boys?' issue be redefined?

Such questions alert us to the problem of how one understands disadvantage and advantage. We need to consider the issues of *relative advantage* - the popular way of reading the data - and *cumulative* disadvantage, the compounding interaction effects between different kinds of disadvantage. Both need to be addressed. How does gender interact with other kinds of educational disadvantage related to, for example, disability, rural and isolated location, non-English-speaking background (NESB), aboriginality, or socio-economic background? One of the purposes of this chapter is to outline some new questions and issues in relation to understanding educational performance and disadvantage.

Educational disadvantage is often understood as poor performance in all school learning areas, and particularly in certain 'key' school learning areas. But perhaps it is also best understood as being unable to convert one's schooling into further training, education or secure work or indeed into other aspects of a meaningful life. It is difficult to discuss educational disadvantage without reference to what students can do now and later with the capital they accrue through education – be it human, cultural or social capital [6]. Indeed, one might argue that a student's cultural and social capital needs to be as well developed through schooling as their human capital and that anyone who is only developed in one area is disadvantaged.

Such formulations lead to more questions. Who and what constitutes the 'top'? Is it those who perform well in all learning areas or is it those who perform well in certain 'key' learning areas or certain strategic combinations of learning areas? How is it judged? By status? By the capacity to maximise a TER score and thus access the most prestigious faculties and universities and later the most prestigious and powerful professions? Given that such a group exercises power disproportionate to its numbers, should it be weighted additionally if one is considering relative advantage between the top and the rest?

On the other hand, who and what constitutes the bottom? Is it those who perform poorly and leave school early (ie before completing Year 12) or those who perform poorly and stay on at school? If those who leave early nonetheless gain ready access to other training and full–time work, are they more disadvantaged than those who stay at school until the end of Year 12 but find on completing Year 12 that they do not easily access training and full–time work?

In this *Report*, the most disadvantaged are defined as those who, on leaving school early or after Year 12, are unable to gain ready access to other training, education or full-time work. Their likely profile is that they will spend their working lives going from casual job to casual job when their preference is for more stable and perhaps full-time employment, or they may be unemployed or out of the labour market altogether. This constitutes both educational and social disadvantage and the latter cannot easily be separated from the former.

6 We are following here a distinction among types of 'capital' put forward by Martinez, (1999).

The 'which boys and which girls?' profile is of this doubly disadvantaged group. What does the data tell us on this topic? This question is not easily answered. With regard to the statistics there are difficulties associated with breaking down the global categories of girls and boys. Take some examples. There are debates associated with the adequacy of different ways of defining SES for the purposes of data collection. Also, the use of such categories as rural and remote and urban can obscure differences between rural wealth and poverty within specific regions and between regions. Similarly the use of the category NESB obscures ethnic minority differences (Guerra & White 1995) and 'disability' does not distinguish between physical, sensory, mental health and intellectual disability let alone among their many crucial differences in relation to educational needs (Yates and Leder, 1995). So, while it is acknowledged that such analysis is vital and infinitely preferable to earlier bifurcated analyses, it is also recognised that such modes of analysis still have some way to go in offering the nuanced picture which is required. Improved data are now being collected, however, and this helps to piece together the patterns of the gender jigsaw.

The ways in which some aspects of the scenario fit together for differently situated boys and girls can now be described, although it does not easily allow the stories of the most disadvantaged boys and girls to be told. The next section of this chapter uses data from the *Data Collation and Analysis Report* to examine the relative impact by gender and other factors of SES, disability, language background and indigeneity. As noted, data for these factors is not always available. The chapter concludes with an overview of this information.

School participation: The interaction of background variables and gender

School completion rate is the construct often used for analyses of comparative advantage/disadvantage by background factors such as gender, socio-economic status and location. It is usually defined as the proportion of a school cohort still at school in August of Year 12, the month in which students in Year 12 apply for State Year 12 certification. (The number of students in the cohort who had been there in a specified preceding Year of schooling, often Year 10, is defined as the original cohort number, that is, as a 100 per cent). But the term may have different meanings by State, or for different researchers, so this term and its statistics must be treated with caution.

Socio-economic background

Lamb (1996) has shown that the effects of the 1991-92 recession on school completion varied by socio-economic status. The effects were especially heavy on boys from unskilled backgrounds (see table 3.1). The Lamb study took Year 10 enrolment as a base and calculated the percentage of Year 10 students who were still at school in August of Year 12.

Table 3.1: Differences in school completion rates, Year 10 to Year 12, by socio-economic status and gender, 1990-91 and 1994

	1990-91			**1994**	
	Males	Females		Males	Females
Professional	90.5	95.4		88.6	94.9
Intermediate non-manual	85.0	91.2		81.0	86.5
Skilled manual	75.5	85.0		71.0	79.7
Unskilled	72.4	73.7		59.2	68.7

Source: Lamb (1996)

Between 1990-91, just before the recession, and 1994 (in the middle of the post-recession downward slide in Year 12 retention rates), the rate of school completion fell only two per cent for professional males; the rate of school completion for males from business/sales backgrounds and from skilled manual backgrounds fell four per cent; while for males from unskilled backgrounds school completion rates fell 13 per cent. The rate for professional females hardly faltered over the same period, while the rate for the three other categories of females fell evenly, about five per cent. These statistics show that the structural relationship between family background and the labour market directly affects school completion decisions and life chances and especially so for boys from low SES backgrounds who, unlike girls from such backgrounds, have available to them tempting full-time work possibilities at particular points in the economic cycle.

Location and completion rates

The gap between the genders in completion rates grew in both urban and rural localities from 1984 to 1996, and in 1996, was ten per cent in urban (up from six per cent in 1994) and 16 per cent in rural localities (up from eleven per cent in 1984). The gender gap in remote areas remained steady at around 13 per cent. The *Data Collation and Analysis Report* has information on school completion in relation to location[7] and gender (*Data Collation and Analysis Report*, table 1.13).

Rurality has a considerable effect on the chances of boys completing school, but less effect on girls' chances. The chances of rural males completing school in 1996 were eleven per cent lower than for urban males and the chances of males from remote localities were 19 per cent less than urban males. Rural males are considerably more affected by locality than rural females. Rural girls were only five per cent less likely than urban girls to complete school. However remote girls were 16 per cent less likely than urban girls to complete. Remoteness, then (taking urban locality as the comparison) impacts more heavily than gender on the chances of completing school, although these figures can only be generalised across year cohorts with caution because the remote category comprises only three per cent of the 15– to 19–year–old population.

Table 1.14 of the *Data Collation and Analysis Report* shows that there are considerable State–by–State variations. In Queensland, where Year 12 completion is a matter of meeting a State-specified range of requirements and school-based judgment of a satisfactory grade, there are no rural–urban differences in school completion rates for males or for females. Inside both rural and urban locations in Queensland, there is a gender difference (with more female completers) of around ten per cent. By contrast in Victoria, where there is a mixture of school-based and external assessment, there are large rural/urban differences in school completion for both sexes: between males there is a difference in favour of urban males of 20 per cent, and between females there is a difference in favour of urban females of seven per cent. Indeed, in Victoria rural females are outstaying urban males by seven per cent.

The literacy data from Victoria in the previous chapter (table 2.7) has comparative figures for rural and isolated schools. Students from both groups were performing slightly but not

[7] 'Location' is used as a term to indicate an urban/rural dimension which is sometimes divided into urban, rural and remote categories and sometimes (particularly in State data) into metropolitan, provincial city, town and rural categories. There are other variations also.

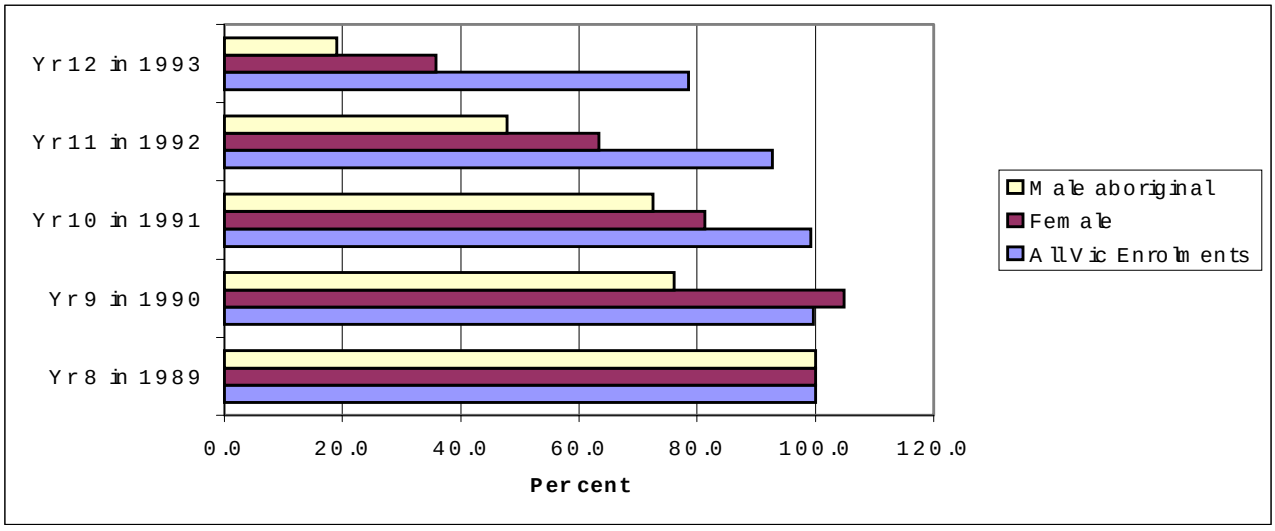
seriously behind the Victorian average in Years 3 and 5. In relation to mathematics (table 2.10) both groups are performing at approximately State average levels.

Aboriginal and Torres Strait Islander identified

None of these differences – gender, SES and locality – are in the same league as the differences between indigenous and non-indigenous youth in rates of school completion. In 1997, the most recent Commonwealth figures available, only 1870 indigenous Australians were enrolled in Year 12. This compares with 7395 in Year 8, already a depleted rate of participation for the age cohort of indigenous young people if we take the 1997 Year 1 enrolment of 10345 as an approximation for the Year 8 cohort's original school start numbers (*Schooling in Australia* 1997). The apparent retention rate for indigenous students in 1997 was 30.9 per cent compared with an overall Australian apparent retention rate of 72.9. The 1994 *Statistical Annexe to the National Report on Schooling* broke enrolment statistics down by gender and gave the following figures for official enrolment across the States and Territories for indigenous students: in 1994 there were 4532 Indigenous males and 4284 females enrolled in Year 1, 3362 males and 3203 females enrolled in Year 8, and 870 males and 910 females enrolled in Year 12. Queensland accounted for around half of the male and female Year 12 enrolments.

Gardiner (1997) looked at the retention rate to Year 12 of Victorian indigenous students in the cohort who finished in 1993 compared with all Victorian enrolments in that cohort (Gardiner 1997). Figure 3.1 is reproduced from his paper. It shows that Year 12 retention for male indigenous students was one quarter of the overall rate while the retention rate of female Indigenous students was just under half the overall rate. The 1994 national figures do not suggest this kind of gender disparity nationally, but rather around a 27 per cent retention rate for both sexes (about two percent under for males and about two per cent over for females). This is in line with the 1996 figure also quoted above. Part, but not all, of this gender disparity in the Victorian indigenous figures reflects the overall comparatively large retention rate disparity between the genders in Victoria. The greater than a 100 per cent female retention to Year 9 (from Year 8) presumably reflects, in part, in-migration of Aboriginal families from other States.

Figure 3.1: Apparent retention through secondary school male and female indigenous students, Victoria 1993, Year 12 cohort



Source: Australian Bureau of Statistics, Schools Australia 1993

The data on English and mathematics in Victoria presented in chapter 2 (tables 2.7 and 2.10) include figures on Indigenous students' levels of attainment. In relation to English, three times the percentage of indigenous students than the Victorian average are still in Level 1 for both reading and writing in Year 3. Year 5 shows them well behind average, but moving ahead after their slow start. They are, for example, well over twice as likely as the average boy to be still in Level 2 for reading and writing. They are also well behind in their progress through the outcome levels in mathematics (table 2.10).

Disability

All differences between social groups noted so far are more visible than those between disabled young people and those not so identified. There are four types of disability, namely, physical, sensory, intellectual and psychiatric (mental health). The ABS publication, *Disability, Ageing and Carers* (1999) sets out data showing that 66.6 per cent of children aged 5 to 14 known to have disabilities which affect schooling are males. In the 15 to 24 age bracket, 58 per cent of those known to have disabilities which affect schooling or employment are males. The Gatehouse project at Melbourne's Centre for Adolescent Health has been exploring school-aged boys' greater mental health morbidity (especially their higher successful suicide rates) and its relationship to social interaction patterns seen among peer groups as masculine (Glover *et al.* 1998).

Zubrick *et al's* (1997) comprehensive report on the relationship between education, health and competence among Western Australian children and adolescents is the major Australian source of further information on mental health disabilities. This recent survey of households with children found that almost nine per cent of school students at that point were reported by parents to be limited in the type or amount of school work they could perform because of physical, emotional or learning problems. This overall figure broke down into eleven per cent of males and six per cent of females. Seventy-two percent of these young people were reported as having had this limitation for more than two years. The same report (pp. 11-12) gave the following figures for children's use of special education at some point in their school careers so far: 10.6 per cent of children had received remedial educational services, 1.8 per cent had received visual or hearing difficulties services, 1.4 per cent had received help for emotional and behavioural problems, and another half a percent had received special educational help for intellectual disability.

A gender analysis of some aspects of the Western Australian Child Health Survey carried out for this *Report* showed that four times as many boys as girls were referred to special education services for emotional difficulties, and twice as many males as females were referred for remedial education. Significantly more males than females were seen (both by themselves and by others) to have a serious emotional or behavioural problem. Looking across age levels, significantly more boys than girls have signs of mental health morbidity[8] from the ages of 4 to 7; there is an evening up from the ages of 8 to 16; and, by the age of 16, both genders have about the same proportion of members with mental health morbidity issues. Boys, when younger, seem to be more evidently and publicly affected by stressors in their environment. Up to the age of 16 considerably more boys than girls are affected by mental health problems. By the upper years of schooling however, girls' rates of mental health

[8] Mental health morbidity was defined as one or more of the following factors: withdrawn, attention problems, aggressive, social problems, thought problems, somatic problems, anxiety/depression problems, delinquency problems.

morbidity have increased and are on a par with boys' rates. A recent report, *Australia's Young People - Their Health and Wellbeing (Moon et al 1999)* found that rates of depressive orders are three times higher for young females than for males, while the rate of substance abuse disorders for males is twice the rate for females (Moon et al, 1999, p. xi). Overall, the report found that the major burden of disease (measured as a combination of the effect of mortality and disability for the age group 12-24 is from mental disorders, clinically recognisable symptoms of behaviour associated with stress and interference with personal functions (Moon et al, 1999, p.x). It is important to note that all mental health morbidity factors except anxiety/depression were associated with poorer academic competence and that effects were multiplicative. High academic competence was associated with, and may be masking, anxiety/depression.

These findings match the ABS data cited above. They suggest that part of the explanation for the extra weight of boys at the lowest end of achievement is that boys predominate among a very particular group of children: those with physical and sensory disabilities, intellectual disabilities or mental health morbidities. Little appears to be known about the school careers of such students. Somewhere between primary and tertiary education many students with disabilities leave education, but it is not known what percentage leaves, where they go, or for what reasons.

Year 12 subject participation: The interaction of background variables and gender

Lamb re-analysed his ACER work with Ball (Lamb & Ball 1999) for this *Report*[9]. At our request, he broke down the gender analysis of subject cluster choices (presented as table 2.4 in this *Report*) by socio-economic status, by location, and by language background.[10] There are fascinating complexities of relationships between subject choices, background variables and gender.[11] Table 3.2 highlights some particularly telling clusters of SES, location and language background, three sets of subject 'groups' and the subject choice clusters they contain.

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9 The authors wish to thank Dr Stephen Lamb for re-analysing his ACER research for this report. Copyright is retained by Lamb, and permission must be granted for use of this material outside of DETYA.

10 In this analysis, socio-economic status is defined by occupation of both mother and father and professional/managerial occupations were coded as highest, clerical and related non-manual work as upper-middle, skilled manual as lower-middle, and unskilled manual as lowest. Location is broken down simply into rural and urban (city and metropolitan), and NESB refers to the place of birth of parents: Australia, other English-speaking country or non-English-speaking country for both parents. We are aware of the extent to which an NESB category elides a babel of cultures and their differences.

11 These are set out more fully in the *Data Collation and Analysis Report*.

Table 3.2: Participation in Year 12 science and mathematics,: males & females (column%)

a) by socioeconomic status and gender *

Subject Group	Lowest		Lower middle		Upper middle		Highest	
	M	F	M	F	M	F	M	F
SCIENCES AND MATHS								
Maths and physical sciences	15.8	6.0	15.8	5.6	23.4	10.5	27.2	9.4
Maths,chemistry,biology,other science,computing	4.4	5.2	4.4	7.3	6.6	9.7	3.8	8.5

b) by rural or urban place of residence and gender *

	Males		Females	
Subject group	Rural	Urban	Rural	Urban
SCIENCES AND MATHS				
Maths and physical sciences	20.5	18.1	6.6	8.2
Maths,chemistry,biology,other science,computing	4.4	5.2	7.4	7.0

c) by parents' country of birth and gender *

	Males			**Females**		
Subject group	Australia	Other-English	Non-English	Australia	Other-English	Non-English
SCIENCES AND MATHS						
Maths and physical sciences	17.5	19.3	24.8	5.7	11.7	16.0
Maths,chemistry,biology,other science,computing	5.5	1.1	4.1	6.9	5.1	9.2

* English was excluded from the analysis because it was studied by the majority of students, irrespective of subject grouping.

Note on maths: 'Maths' represents a university-qualifying level of maths study.

Source: Tabulations from *Australian Youth Survey* based on the 1990-94 16-year-old samples and follow-up surveys (unweighted N=6052; weighted N=1189846). Unpublished data. Produced by Stephen Lamb, ACER, from AYS data for this study. Sample is as for Lamb, S. and Ball. K. (1999).

In the sciences and mathematics subject group, our major interest is in the maths/physical science cluster which attracted 19 per cent of male students overall and eight per cent of female students (see table 2.4). Looking by SES, it is clear that this cluster is chosen by a large group of boys from every SES background. The size of the group from each SES background steps down in three steps from highest SES (27 per cent of all boys in this category), upper-middle (23per cent) to lower-middle and lowest at the same percentage (16 per cent). The boys' three-step gender pattern contrasts with a two-step pattern for girls: only ten per cent of highest and upper middle SES girls chose this cluster, while an even lower six per cent of girls from lower middle and lowest SES backgrounds chose it. This data shows clearly that this cluster is understood by high SES males to be the high status cluster and by boys from all SES backgrounds to have a pay-off which makes the risk of taking it a good gamble. Note that even the highest SES girls, who must be aware of the cluster's pay-off, take this combination considerably less often than the lowest SES boys (the ratio is 5:8 and the ratio of the highest status girls to highest status boys is around 1:3).

The reputation of this cluster as the route to pay-off is illustrated further by its power to attract NESB students of both genders. Twenty-five per cent of all NESB males and 16 per cent of NESB females take this cluster. Interestingly, rural males are more likely than urban males to take the maths/physical science route, perhaps in part because these subjects are available as a protected upward mobility route in rural schools with a more limited range of subject choice than urban schools.

Table 3.3: Participation in Year 12 Vocational Education and Technology (column %)

a) by socio-economic status: males & females *

Subject group	Lowest		Lower-middle		Upper- middle		Highest	
	M	F	M	F	M	F	M	F
VOCATIONAL EDUCATION AND TECHNOLOGY								
Technical drawing, technology,gen. maths,computing	7.6	1.1	7.0	0.5	4.9	0.3	1.9	0.0
Agriculture,craft,technology,gen. maths,health,gen. Science	6.6	0.3	7.1	1.0	3.0	0.3	3.3	0.7
Typing,sec. studies,gen. maths, home ec., app. comp.	1.3	7.1	1.0	5.6	1.6	3.9	0.5	3.9
Maths,industrial arts,industrial technology,tech. Drawing	7.9	0.8	6.0	0.7	3.6	1.1	5.6	1.1

b) by rural or urban place of residence and gender *

	Males		Females	
Subject group	Rural	Urban	Rural	Urban
VOCATIONAL EDUCATION AND TECHNOLOGY				
Technical drawing, technology, gen.maths,computing	9.4	4.4	0.6	0.3
Agriculture,craft,technology,gen.maths,health,gen.science	8.9	4.3	1.4	0.3
Typing,sec. studies,gen. maths, home ec., app. comp.	1.5	0.9	5.4	5.3
Maths,industrial arts,industrial technology,tech. Drawing	5.6	6.1	1.0	0.7

c) by parents' country of birth and gender *

	Males			**Females**		
Subject group	Australia	Other-English	Non-English	Australia	Other-English	Non-English
VOCATIONAL EDUCATION AND TECHNOLOGY						
Technical drawing, technology, gen.maths,computing	6.5	4.6	3.0	0.4	0.7	0.7
Agriculture,craft,technology,gen.maths,health,gen.science	6.6	5.7	1.1	0.7	0.7	0.0
Typing,sec. studies,gen. maths, home ec., app. comp.	1.2	1.1	0.4	5.9	6.6	2.3
Maths,industrial arts,industrial technology,tech. Drawing	5.6	2.3	8.3	0.9	0.0	1.0

* English was excluded from the analysis because it was studied by the majority of students, irrespective of subject grouping,.

Note on maths: 'General maths' represents the least academically demanding level of maths (including subjects such as maths in Society).

'Maths' represents a university-qualifying level of maths study.

Source: Tabulations from *Australian Youth Survey* based on the 1990-94 16-year-old samples and follow-up surveys (unweighted N=6052; weighted N=1189846). Unpublished data. Produced by Stephen Lamb, ACER, from AYS data for this study. Sample is as for Lamb, S. and Ball. K. (1999)

The three 'masculine' vocational education and technology clusters in table 3.3 will be discussed primarily as a group. We already know that 16 per cent of boys from lowest SES and lower middle SES backgrounds take the maths/physical science cluster. Vocational education and technology routes account for another 20 per cent of these two SES groups (table 3.3a). This means that two out of twenty subject clusters accounts for comfortably over a third of boys from these lower SES backgrounds. Among the upper middle and highest SES boys, participation in vocational education and technology clusters is negligible. They do not appear to be part of a culture which sees vocational education and technology clusters as a real choice (there are two odd exceptions – see Table 3.3a – one for each SES group). These three clusters of vocational education and technology are almost exclusively male terrain. Girls are not quite, but almost entirely, absent. They are present in the typing, secretarial studies and home economics cluster but not disproportionately in relation to other options. More girls from the lower two SES groups than from the upper two choose that cluster. With the exception of the highest SES group of boys, there are enough boys taking this cluster for it to register on a percentage scale.

Rural males are attracted to the two non-industrial male technology clusters at more than twice the rate of urban males and are not far behind urban males in their enrolment in the industrial cluster. Rural and urban girls do not split in this way in relation to the typing /home economics etc cluster. Although a greater proportion of NESB males are attracted to the industrial technology cluster (followed by Australian males and then other - English background males), they are under-represented in the other two technology pathways. NESB girls are also under-represented in the typing /home economics enrolments.

Table 3.4: Participation in Year 12 science and humanities clusters

a) by socio-economic status: males & females (%) *

Subject group	Lowest		Lower-middle		Upper- middle		Highest	
	M	F	M	F	M	F	M	F
SCIENCES AND HUMANITIES								
Maths,chemistry,literature,music,french,history,art	0.3	4.4	2.5	4.3	2.3	3.3	4.7	6.0
Gen. maths,biology,history,geography,health,art	8.2	14.2	8.3	15.5	4.9	10.8	5.2	6.7
Maths,biology,history,geography,art,LOTE	4.4	8.5	5.0	9.4	6.3	11.3	6.6	15.6

b) by rural or urban place of residence and gender (%) *

	Males		Females	
Subject Group	Rural	Urban	Rural	Urban
SCIENCES AND HUMANITIES				
Maths,chemistry,literature,music,french,history,art	3.4	2.2	2.7	4.9
Gen. maths,biology,history,geography,health,art	6.8	7.1	14.4	12.6
Maths,biology,history,geography,art,LOTE	3.4	6.2	11.3	10.4

c) by parents' country of birth and gender (%) *

	Males			**Females**		
Subject group	Australia	Other-English	Non-English	Australia	Other-English	Non-English
SCIENCES AND HUMANITIES						
Maths,chemistry,literature,music,french,history,art	2.6	2.3	2.3	4.4	2.2	4.3
Gen. maths,biology,history,geography,health,art	7.5	10.2	3.8	13.4	11.7	10.8
Maths,biology,history,geography,art,LOTE	5.6	3.4	4.9	10.8	13.1	7.8

* English was excluded from the analysis because it was studied by the majority of students, irrespective of subject grouping.

Note on maths: 'General maths' represents the least academically - demanding level of maths (including subjects such as maths in society).

'Maths' represents a university-qualifying level of maths study.

Source: Tabulations from *Australian Youth Survey* based on the 1990-94 16-year-old samples and follow-up surveys (unweighted N=6052; weighted N=1189846). Unpublished data. Produced by Stephen Lamb, ACER, from AYS data for this study. Sample is as for Lamb, S. and Ball. K. (1999)

Girls' choices spread more evenly across all 20 clusters than boys'. Of girls' choices, table 3.4 sets out the two most popular clusters (middle and bottom). Both these clusters contain a wide spread of subjects across the KLAs. The table shows SES differences among girls in the choice of these clusters with a greater proportion of highest SES girls taking the more traditional academic cluster and a greater proportion of lowest and lower middle SES girls taking the lower status cluster. Both clusters enjoy some support from boys too, and this is interestingly class inflected.

Locality has almost no effect on girls' choices. NESB has complex interactive effects for both sexes. A smaller proportion of NESB girls choose the higher status option compared with English-speaking-background (ESB) girls.

Taken together, tables 3.2, 3.3 and 3.4 tell stories about subject clusters and their different meanings to students from different cultural backgrounds. These backgrounds—of socio-economic status, location, and background in English—each have their own nuances of gender culture. In general terms, boys' gender cultures evident through subject choices, tend to vary more than girls across SES, locality and almost certainly language background. A disproportionate number of higher status SES males tend to stick to the known maths/physical science route while for lower status SES males there is evidence of a culture which sees a choice between two routes depending perhaps on a cultural construct of 'brightness'. In general terms, a greater proportion of rural boys takes more traditional clusters within the Australian system. SES is somewhat evident in girls' popular choices and so is NESB in the sense that NESB girls are less likely to choose the high-status-subject-spread option. A greater proportion of NESB students of both genders exhibit more upwardly mobile choices. A finer picture of the effect of NESB would be obtained, of course, if the data discriminated between the different countries of origin. How this affects these students' futures, and their 'life chances' will be explored in chapter 5.

Year 12 subject achievement: The interaction of background variables and gender

The purpose of this section is to get a sense of how the background factors of SES, location and language background interact with gender and achievement in Year 12 assessment.[12] To create the databases for these analyses, Teese and Charlton used the 1996 Year 12 results from Victoria and Queensland.[13] This data is considerably more up-to-date than the earlier data used for the analysis in *Who Wins at School*? (Teese, Davies, Charlton & Polesel 1995). Most importantly, 1996 was the first year of the current steady pattern of retention after the 1991-92 recession. This fact makes 1996 data more reliably like immediately current patterns of participation and achievement.

Four subjects in Victoria - chemistry, maths methods (which is the non-calculus, university-entrance-level mathematics subject), English and information technology - are examined here. Some comments are made on other material in the *Data Collation and Analysis Report*. The analysis pulls out the proportion of those from various backgrounds in the top 20 per cent and in the bottom 20 per cent in Victoria's norm referenced system. In Queensland, the data takes the top two and bottom two of five categories of achievement in a standards- based system where many cluster in the middle category.

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12 Teese and Charlton have kindly provided for this report, analyses by of SES, location and language background of gender and Year 12 achievement of requested subjects. Copyright for this material is retained by Teese and Charlton, and permission must be obtained from them for any other use of their material.

13 *Victorian survey 1996*. All government secondary schools in the Loddon Campaspe Mallee and the metropolitan South Eastern regions were asked to participate. All independent schools also were invited to take part. Ninety-six government and 38 independent schools responded giving a total sample of 12351. There was no systematic bias in the characteristics of schools that responded with regard to variables that might influence results.
Queensland survey 1996. Schools in the Queensland (Capricornia region excepted since these schools were surveyed in 1995) were asked to participate. Completed Year 12 survey forms were returned by 113 government schools. Twenty-seven Catholic and 10 independent schools also participated.

Chemistry

Chemistry has become a fairly standard subject for the better achievers of both sexes. Its pattern of achievement by gender and other background variables is therefore of significant interest, showing as it does the complexity of gender patterns of achievement when that achievement is examined by socio-economic status, location and language backgrounds (figures 3.2–3.5).

Looking by SES and gender at chemistry results in Victoria, we can say quite clearly, from the overall pattern of results, that social class is having stronger effects than gender. In general, students from backgrounds regarded as higher up the social scale out-perform students from lower SES backgrounds and this effect is much stronger than any gender effects. Indeed, there is an almost identical proportion of males and of females from professional/managerial backgrounds in the top 20 per cent of school achievers. From each of the other three SES backgrounds (business/sales, skilled, and unskilled) there is a greater proportion of males than females in the top 20 per cent . Looking at the other performance end among the bottom 20 per cent , the failing group, there are considerably higher proportions of males than females from the three SES backgrounds of professional/managerial, business/sales and skilled, while in the unskilled background category there is a notably smaller proportion of males than females. If one uses, as the criterion of those with the greatest school performance problems, the group most likely to fail among the eight groups of four SES backgrounds by two gender backgrounds, the answer is that those most in trouble are girls from unskilled backgrounds.

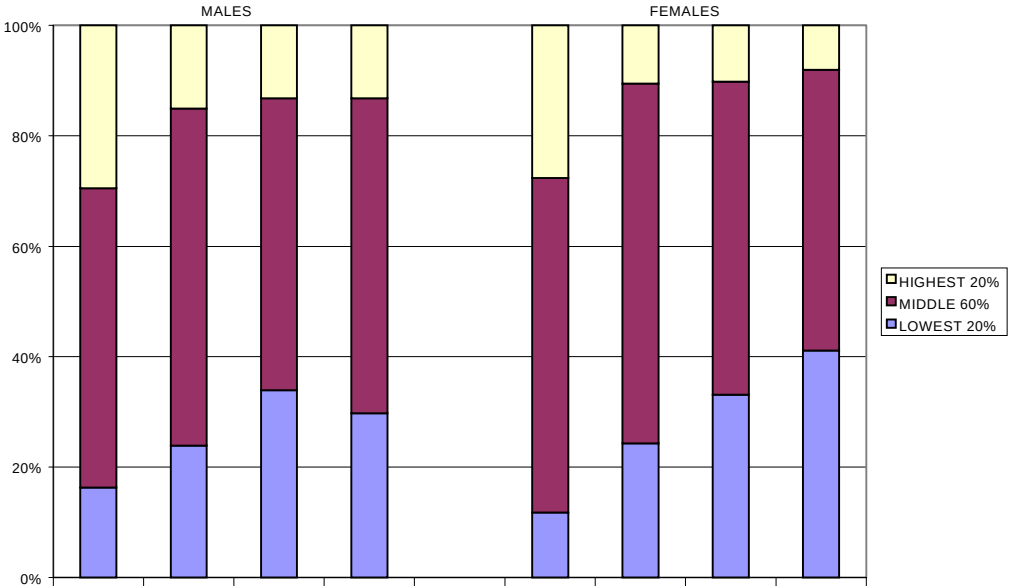
Looking by home location (rural/urban on as fine a scale as the size of groups statistically allows), very different patterns are found in Victoria and Queensland. In Victoria, provincial city males have the greatest proportion in the top 20 per cent followed by provincial city females who also have the fewest in the bottom 20 per cent . In Queensland, the provincial cities and small cities are doing rather worse than metropolitan Brisbane students, but students from rural schools are doing comparatively well.[14]

Looking by language background (a simply binary of English-speaking/non-English-speaking backgrounds) and gender, there are few differences of any kind between the four categories.

Overall then, socio-economic status has the greatest impact on achievement with the higher SES groups of both sexes out-performing the lower in a predictable chain. Professional males and females show the fewest within-group differences in achievement. This pattern is true in most subjects, although the better achievement in chemistry of unskilled males than skilled males is an exception and not unusual in traditional university entrance subjects. Location patterns show some variability by State suggesting differences in the cultural emphases placed on certain subjects by location within States.

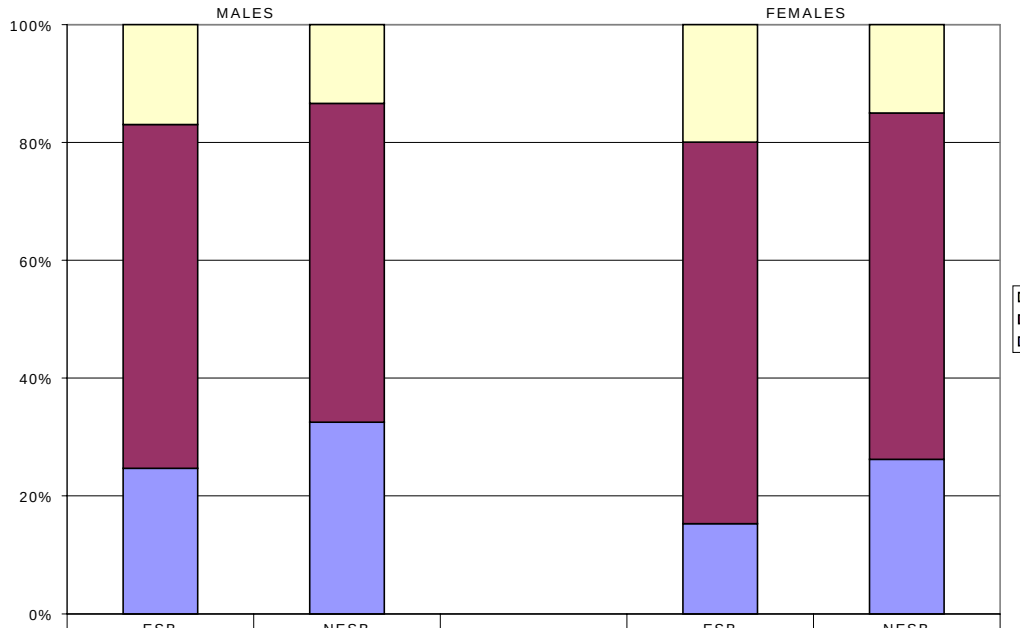
[14] The Queensland data looks at the proportions of males and females who were in the bottom two, middle one, and top two bands of achievement in standards based (*not norm-referemced)* system.

Figure 3.2: Achievement in VCE chemistry, Victoria, 1996 by socio-economic background and gender



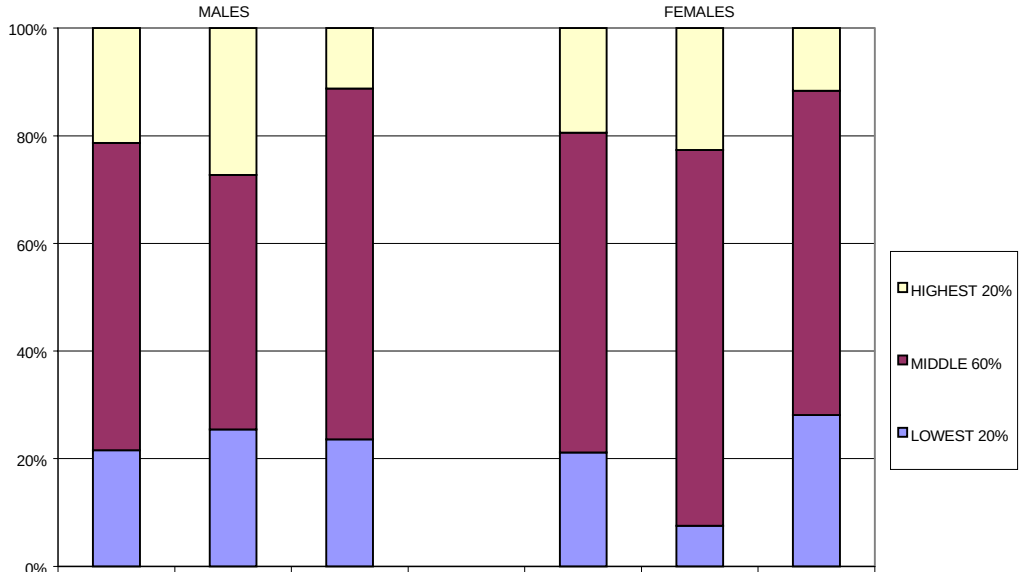
	PROF/MAN	BUS/SALES	SKILLED	UNSKILLED		PROF/MAN	BUS/SALES	SKILLED	UNSKILLED
HIGHEST 20%	26.56	15.08	13.21	13.22		27.66	10.5	10.19	8.06
MIDDLE 60%	48.8	61	52.9	57		60.5	65.2	56.7	50.8
LOWEST 20%	14.69	23.93	33.96	29.75		11.8	24.31	33.12	41.13

Figure 3.3: Achievement in VCE chemistry, Victoria,1996 by language background and gender



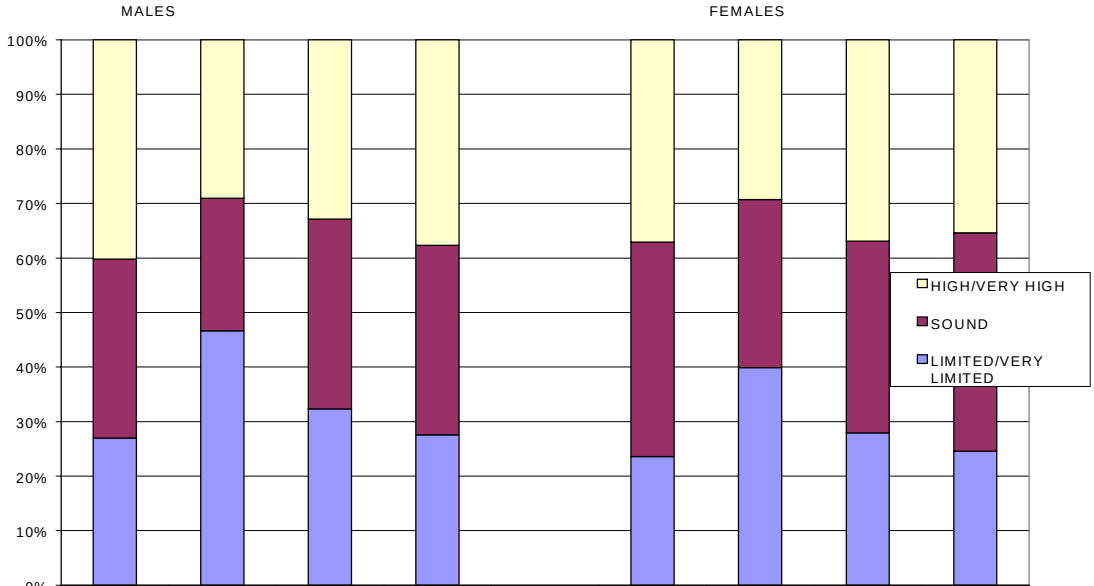
	ESB	NESB		ESB	NESB
HIGHEST 20%	16.95	13.4		19.97	15.02
MIDDLE 60%	58.34	54.1		64.7	58.7
LOWEST 20%	24.7	32.52		15.33	26.24

Figure 3.4: Achievement in VCE chemistry, Victoria, 1996 by location and gender



	MELBOURNE	PROVINCIAL CITY	SMALL TOWN/RURAL AREA		MELBOURNE	PROVINCIAL CITY	SMALL TOWN/RURAL AREA
HIGHEST 20%	21.31	27.27	11.18		19.43	22.64	11.59
MIDDLE 60%	57.1	47.3	65.2		59.4	69.8	60.04
LOWEST 20%	21.59	25.45	23.6		21.17	7.55	28.02

Figure 3.5: Achievement in Board chemistry, Queensland, 1996 by location and gender



	BRISBANE	CAIRNS/TOWNSVILLE/TOOWOOMBA	SMALLER CITY/TOWN	RURAL AREA		BRISBANE	CAIRNS/TOWNSVILLE/TOOWOOMBA	SMALLER CITY/TOWN	RURAL AREA
HIGH/VERY HIGH	40.2	29.1	32.9	37.7		37.1	29.3	36.9	35.4
SOUND	32.76	24.32	34.79	34.69		39.37	30.83	35.21	40
LIMITED/VERY LIMITED	27	46.7	32.3	27.6		23.6	39.9	27.9	24.6

Maths methods

In 'maths methods', the standard university-entrance mathematics subject in Victoria, within every SES group, more males than females are in the top 20 per cent and fewer females than males are failing (figure 3.6). Again, socio-economic background has considerably more effect than gender. Locational data shows females from provincial cities having the lowest proportion of failures while metropolitan males have the highest proportion of those in the top 20 per cent (figure 3.7). Language background data suggests that students of both sexes from non-English-speaking backgrounds are out-performing students of both sexes from English-speaking backgrounds (figure 3.8).

Clearly much more than any natural 'talent' is involved in such results. We are dealing with SES cultures and with gender cultures within each SES group. This conclusion is confirmed by looking at the groupings of males and females who attempt different levels and 'labels' of mathematics courses (see *Data Collation and Analysis Report*).

English

Looking at crucial university subjects from a gender perspective, achievement in English is the subject with the most strongly gendered overall results. Analysis by other background variables is therefore especially important (figures 3.9-3.11).

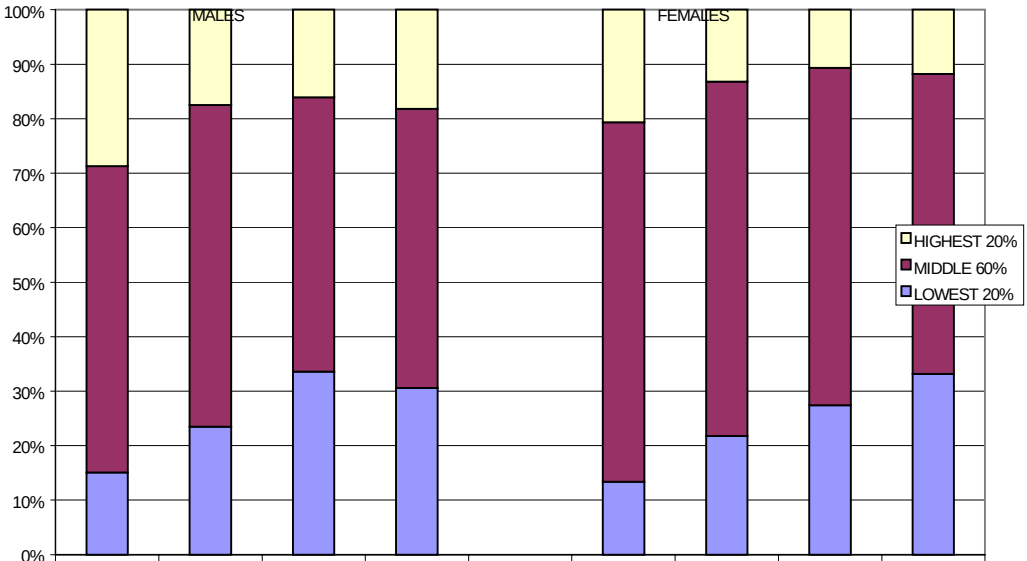
Beginning with the SES analysis, gender is particularly important in relation to failure rates. Within every socio-economic group, females out-perform males in both having a higher proportion in the top 20 per cent and in having a considerably lower proportion in the failing group. Overall, gender matters almost but not quite as much as socio-economic background in English results. Moving to analyses by other background variables, females out-perform males in all locations. English is also the one subject in which being from a non-English-speaking background is clearly a disadvantage. English-speaking background females do best, but English–speaking males out-perform non-English–speaking females who in turn out-perform non-English–speaking males.

Information technology

Achievement in information technology has been of special interest because in New South Wales it has become a subject dominated by boys, and in all States there are more boys than girls enrolled. In Victoria, females are doing better than males within each socio-economic group and therefore overall (figure 3.12). However, once again, socio-economic status is more important than gender in determining achievement. The locational data (figure 3.13) may be interpreted as suggesting that students from the Melbourne metropolitan region are doing somewhat better than male students from outside that area. The high achievement of non-metropolitan girls is a less reliable statistic as a predictor of the situation in 1999 because of the small numbers of girls (270) taking this subject in the non-metropolitan region of this sample in 1996.

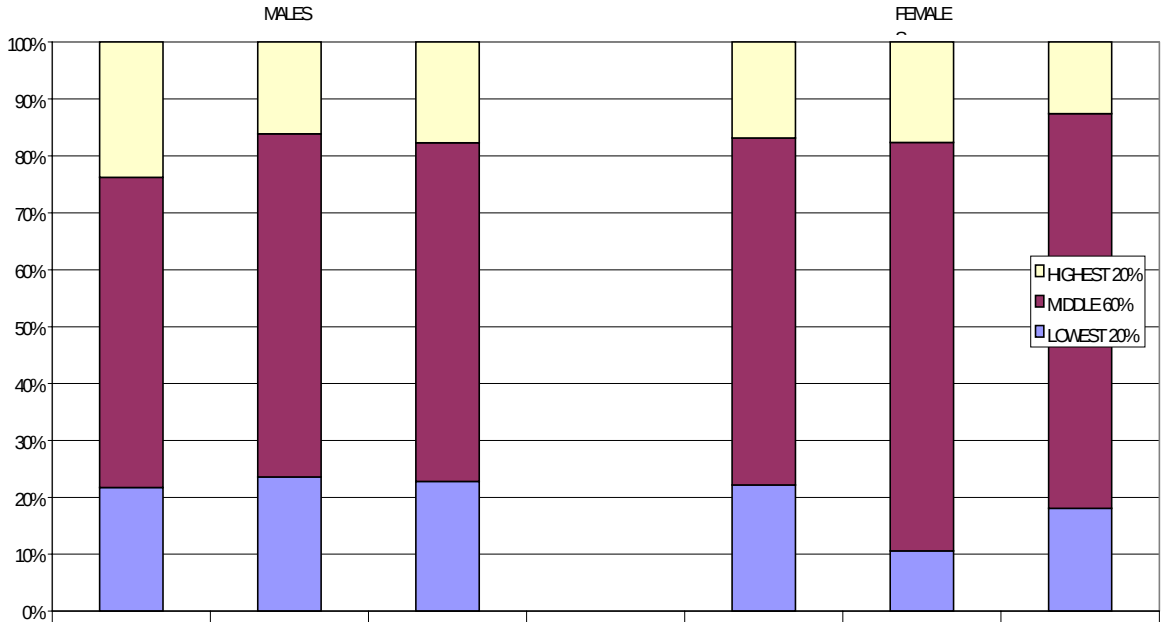
Indeed, information technology generally illustrates the importance of keeping in mind the relative participation and selectivity of each sex in a subject when considering achievement. Information technology is a subject taken by noticeably more males than females in Victoria even though males do not dominate as overwhelmingly as they do in New South Wales.

Figure 3.6: Achievement in VCE maths methods, Victoria, 1996 by socio-economic background and gender



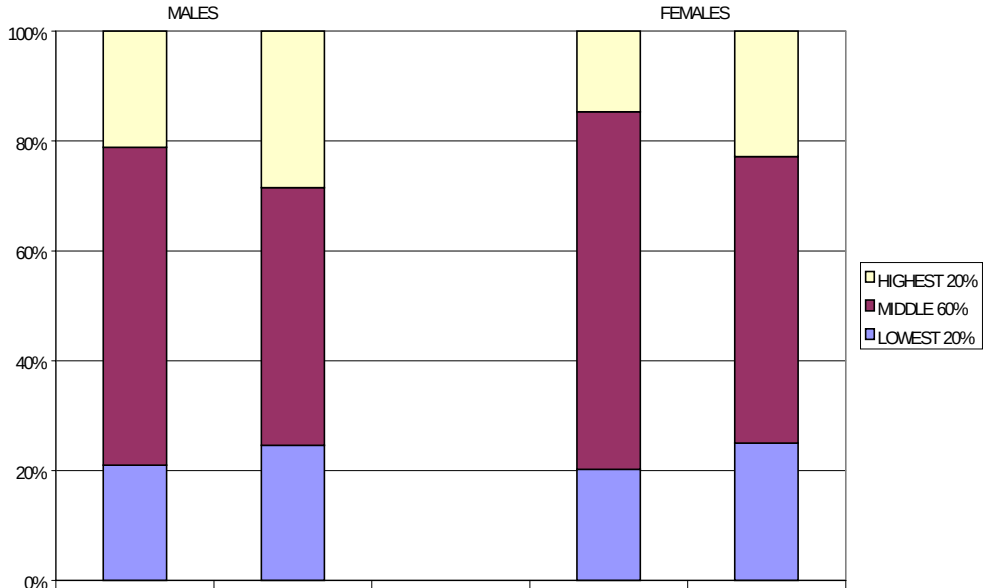
	PROF/MAN	BUS/SALES	SKILLED	UNSKILLED		PROF/MAN	BUS/SALES	SKILLED	UNSKILLED
HIGHEST 20%	28.66	17.46	16.04	17.67		21.51	13.22	10.65	11.76
MIDDLE 60%	56.3	59.1	50.4	49.8		68.6	65	61.9	55.1
LOWEST 20%	15.04	23.46	33.58	29.7		13.87	21.82	27.42	33.16

Figure 3.7: Achievement in VCE maths methods, Victoria, 1996 by location and gender



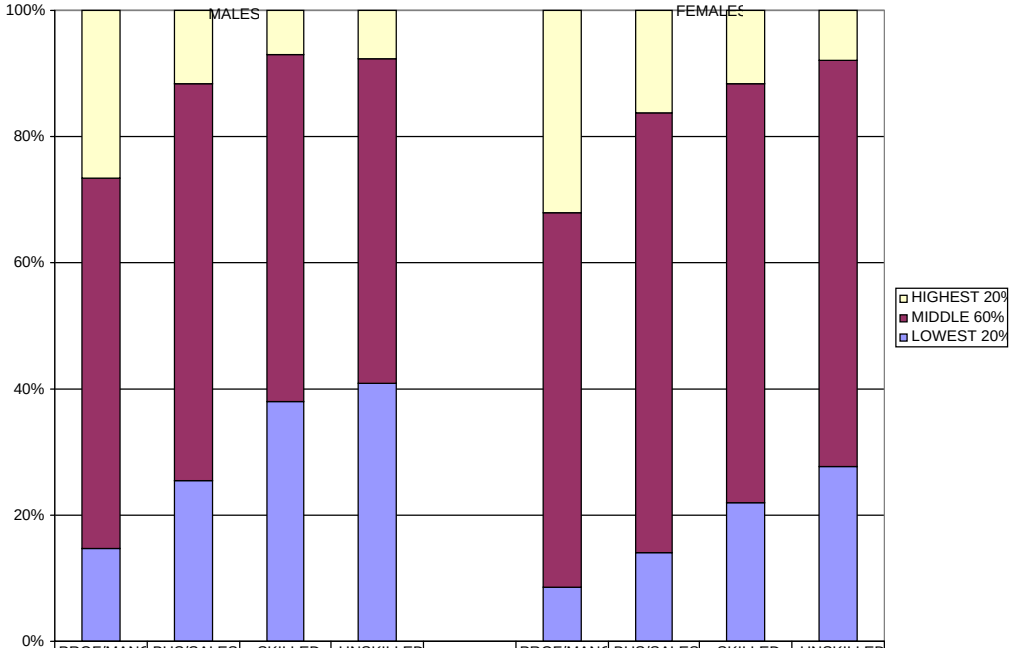
	CAPITAL CITY	PROVINCIAL CITY	SMALL TOWN/RURAL AREA		CAPITAL CITY	PROVINCIAL CITY	SMALL TOWN/RURAL AREA
HIGHEST 20%	23.77	16.05	17.72		16.85	17.65	12.58
MIDDLE 60%	54.5	60	59.5		61	71.8	69.4
LOWEST 20%	21.7	23.46	22.78		22.16	10.59	18.06

Figure 3.8 : Achievement in VCE maths methods, Victoria, 1996 by language background and gender



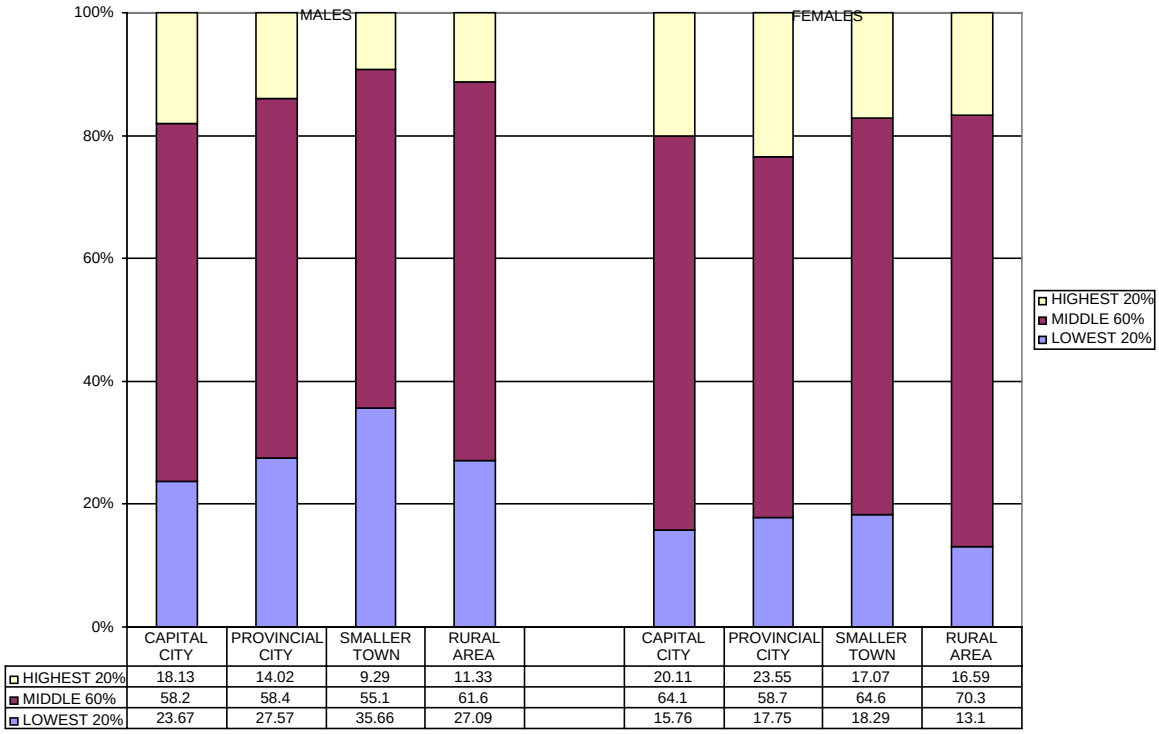
	ESB	NESB		ESB	NESB
HIGHEST 20%	21.13	28.48		14.67	22.83
MIDDLE 60%	57.9	46.9		65.1	52.2
LOWEST 20%	20.99	24.61		20.22	25

Figure 3.9: Achievement in VCE English, Victoria, 1996 by socio-economic background and gender



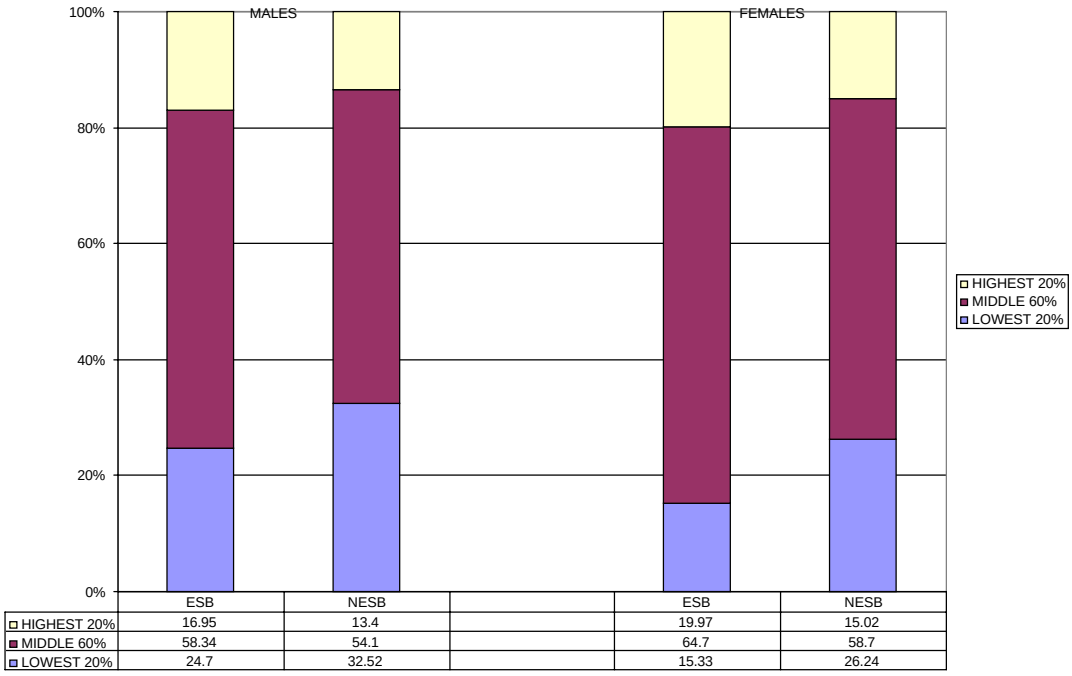
	PROF/MANG	BUS/SALES	SKILLED	UNSKILLED		PROF/MANG	BUS/SALES	SKILLED	UNSKILLED
HIGHEST 20%	26.56	11.65	6.97	7.59		32.12	16.27	11.7	7.98
MIDDLE 60%	58.7	62.8	55	51.6		59.2	69.6	66.3	64.4
LOWEST 20%	14.73	25.56	37.98	40.81		8.66	14.15	22.05	27.58

Figure 3.10: Achievement in VCE English, Victoria, 1996 by location and gender



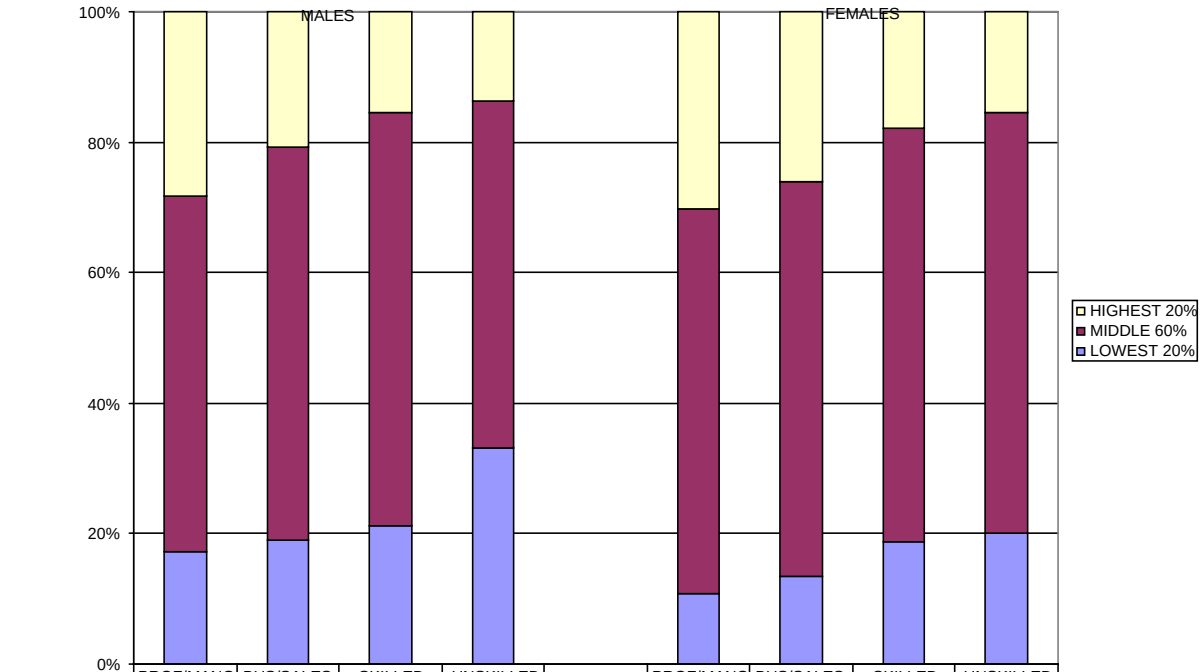
	CAPITAL CITY	PROVINCIAL CITY	SMALLER TOWN	RURAL AREA		CAPITAL CITY	PROVINCIAL CITY	SMALLER TOWN	RURAL AREA
HIGHEST 20%	18.13	14.02	9.29	11.33		20.11	23.55	17.07	16.59
MIDDLE 60%	58.2	58.4	55.1	61.6		64.1	58.7	64.6	70.3
LOWEST 20%	23.67	27.57	35.66	27.09		15.76	17.75	18.29	13.1

Figure 3.11: Achievement in VCE English, 1996 by language background and gender



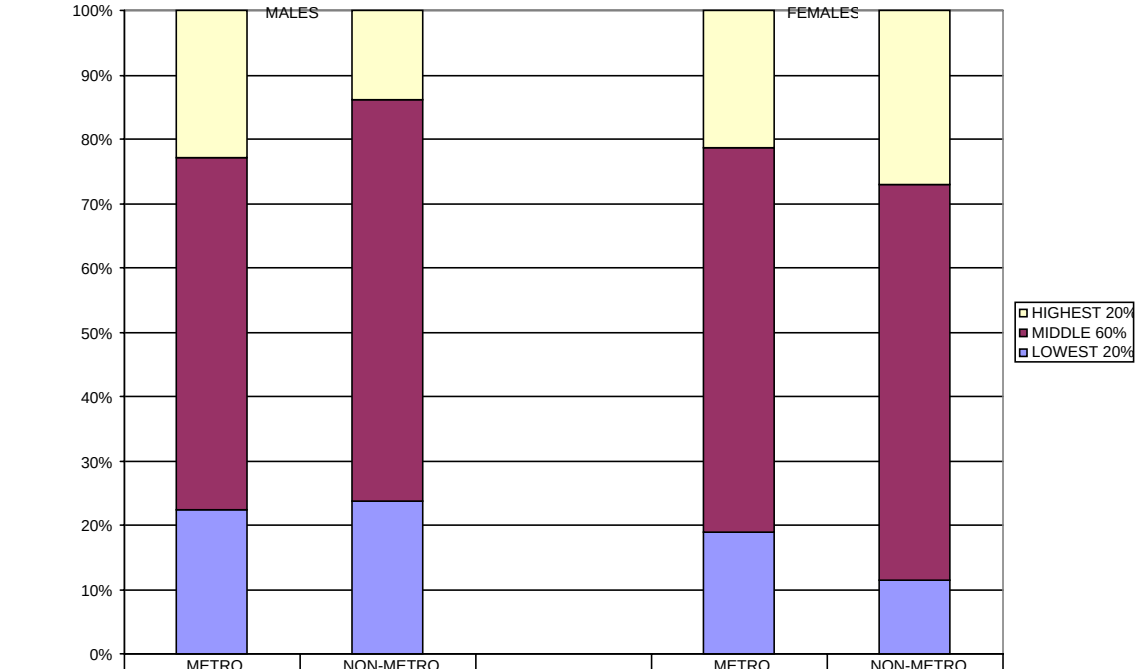
	ESB	NESB		ESB	NESB
HIGHEST 20%	16.95	13.4		19.97	15.02
MIDDLE 60%	58.34	54.1		64.7	58.7
LOWEST 20%	24.7	32.52		15.33	26.24

Figure 3.12: Achievement in VCE information technology, Victoria, 1996 by socio-economic background and gender



	PROF/MANG	BUS/SALES	SKILLED	UNSKILLED		PROF/MANG	BUS/SALES	SKILLED	UNSKILLED
HIGHEST 20%	28.14	20.7	15.52	13.75		30.18	26.04	17.9	15.52
MIDDLE 60%	54.1	60.22	63.22	53.14		58.91	60.42	63.32	64.36
LOWEST 20%	17.16	19.09	21.26	33.13		10.91	13.54	18.78	20.11

Figure 3.13: Achievement in VCE information technology, Victoria, 1996, by location and gender



	METRO	NON-METRO		METRO	NON-METRO
HIGHEST 20%	22.9	13.79		21.32	27
MIDDLE 60%	54.63	62.5		59.67	61.59
LOWEST 20%	22.47	23.71		19.01	11.41

Summary of background factors and Year 12 achievement

Overall then, socio-economic background has a greater influence on Year 12 achievement across all subjects, including English, than gender in Victoria (and in Queensland, see *Data Collation and Analysis Report*). Whether there are greater proportions of males or of females in the top performance group within each socio-economic status grouping varies by subject. Fewer females tend to fail (ie be in the bottom 20 per cent) compared with males in their socio-economic group, in most subjects.

Overall urban/rural location also has an influence but its influence is somewhat idiosyncratic. In a number of subjects - accounting for example—students from provincial cities do best. Across location by State, the pattern of achievement becomes even more idiosyncratic. The Queensland chemistry locational data is included to illustrate this.

Overall, and taking all students from non-English-speaking backgrounds as one group, both NESB genders tend to have more students in the top 20 per cent than the grouping of students from English-speaking backgrounds. Subject English is the one exception. However, there also tend to be slightly more NESB students who fail subjects than students from English backgrounds.

From analyses such as this one, it is clear that concern about under-achievement and disadvantage needs to address more than gender on its own. There remain important issues in relation to gender as a single dimension in the social structure. These were examined and analysed in chapter 2. But, attempts to deal with equity need to account for these in relation to the fact that gender cultures are lived out and embedded in other cultures – of SES, location and language background, at the least. The policy problem is how to deal with this complex jigsaw of advantages and disadvantages.

One argument is that sub-groups in real trouble should be targeted for tailored assistance. Recent modelling analysis by Kelly and Lewis (1999) highlights the importance of this argument for the immediate alleviation of social injustice. Their research on youth unemployment patterns in metropolitan Perth shows clearly that the heavily disadvantaged of both sexes are often visible and easy to find. Indeed, they can be located geographically by census districts (neighbourhoods of around 250 houses). Kelly and Lewis found that the most important determinant of unemployment among youth is simply the overall level of adult unemployment in the neighbourhood. This is particularly worrying because of the growing concentration of the urban poor into neighbourhoods. It also suggests a potentially important role for schools in these neighbourhoods as they could be targeted sites for tailored assistance. Kelly and Lewis (1999, p. 18) conclude that:

> Clearly, youth unemployment is not a general problem which can be addressed by macro level solutions, such as stimulating aggregate demand. The analysis of youth unemployment needs to address the role that neighbourhood characteristics are playing in determining youth employment and unemployment.

Policy makers need to consider whether circumstances in relation to educational disadvantage are in parallel with the circumstances in relation to unemployment. In so far as this likely parallel holds true, then aggregate solutions to educational disadvantage are likely to be less

effective than solutions which are localised and able to ‘address the role that neighbourhood characteristics’ play.

Top

4. EXPLAINING DIFFERENCES IN PARTICIPATION AND PERFORMANCE

The purpose of this chapter is to analyse the literature that seeks to explain differences in educational retention, participation and performance. The factors considered include gender identities and relationships, intersecting identities—'foregrounding background', individual biology, psychology and health, educational structures, processes and practices and school cultures and subcultures.

This chapter begins by drawing together the key lines of argument that have been developed in this *Report* thus far and by elaborating some key conceptual matters. The first main part of the chapter offers a review of the literature directly relevant to current patterns of retention, participation and performance and to their causes and consequences for disadvantage. However, such literature must be complemented by drawing out those aspects that attend more broadly to gender–related differences and disadvantages in school education and that seek to explain them. The final section of the chapter thus offers an overview of the literature that can be found in the accompanying *Bibliography*.

In chapter 2, boys and girls were taken as general categories and a broad comparative picture of their somewhat different travels through schooling with regard to retention, participation and performance was drawn. In that chapter, it was shown that boys' and girls' patterns of retention, participation and performance have altered over time and that they differ between the States of Australia. The question was asked: 'When do such general differences become disadvantages?' At the same time, the general dissatisfaction with generalisations about 'all girls' and 'all boys' was raised. In chapter 3, the analysis moved beyond the general categories of 'boys' and 'girls' and considered the manner in which other variables combined with gender impact on school retention, participation and performance. Data permitting, the ways in which SES, location, ethnicity, aboriginality and disability come together with gender to result in particular differences and disadvantages were examined. In so doing, the questions 'which differences matter most?' and 'which girls and which boys are most disadvantaged?' were addressed.

While a focus on data concerning retention, subject choice and performance can indicate the results of disadvantage for specific groups of boys and girls, it cannot reveal the factors which combine in the lives of the most disadvantaged students, to influence retention, subject choices and performance. This chapter will pursue these themes. Drawing from the literature, it will offer explanations about why such differences exist and why they result in disadvantage. The general categories of boys and girls as well as gender's intersections with other social and cultural differences will be attended to. In so doing, it is suggested that poor retention, restricted participation and inferior performance be understood as second–order disadvantages and that there are first–order disadvantages which must be attended to if such disadvantages in retention, choice and performance are to be properly addressed.

The conceptual framework that informs this *Report* was introduced in chapter 1. The argument was made that any strategy designed to address differences in performance outcomes needs to be sufficiently comprehensive to address disadvantages which arise from the unequal distribution of material resources and those which arise from the unequal distribution of recognition and respect. Addressing social and economic inequalities and

cultural and discursive inequalities is the core business of equity policies and programs in education.

We indicated in chapter 1 that Australia is becoming socially polarised. This point bears further elaboration here. The gap between the rich and the poor is expanding in terms of income and wealth and in terms of basic 'capabilities to function', and such socio-economic polarisation is evident spatially. Risk and opportunity have geographic dimensions. Some rural, remote and urban localities are deprived of the socio-economic and public service infra-structure which are necessary to provide the next generation with hope and a secure future. *Unequal in Life*, the recent Vinson report (Millard, 1997, Danby, 1998,Davies, 1993) for the Jesuit Social Services, shows localities of poverty suffer cumulative social deprivation which includes higher than normal mortality, unemployment, child maltreatment, childhood injuries, psychiatric admissions and crime; and lower than normal birthweight, educational outcomes and income. Australia is also becoming culturally fragmented and intolerant as multiple claims for recognition spill over into racism and gender fundamentalism.

We showed in chapter 1 that social and economic inequalities include economic exploitation, marginalisation and deprivation. Cultural and symbolic inequalities include cultural domination, non-recognition and disrespect. It is important to add here Fraser's (1997) elaboration that some social groupings suffer injustices that are primarily economic but which may also have a cultural devaluation component. The poor fit into this category. Other social groupings suffer injustices that are primarily cultural but which may also have economic derivatives, of which those of minority ethnicities are an example. So, too, are homosexual groupings. Redistributive strategies largely suit the poor and recognition strategies largely suit those with stigmatised sexualities or ethnicities.

In addition, there are also some social groupings whose inequalities arise from both economic and cultural inequalities. Women and indigenous groups fit into this category. Both are structurally subordinate in the economy and both are culturally devalued – women through gender fundamentalism or androcentricism, and Aboriginal and Torres Strait Islanders through racism. They require both redistributive and recognition remedies. Australian youth in general, this *Report* argues, could also fit into this category since they, too, are subordinate in the economy and are culturally devalued (Eckersley 1988, White & Alder 1994).

Education has long been regarded as a means by which young people can gain access to the 'primary goods' or 'capabilities' necessary both to avoid socio-economic injustices and to develop the ethical and other resources necessary to enable them to work towards a fairer society for themselves and for others. Credentials for social mobility and the knowledge gained in pursuing such are understood as the enabling primary goods which education provides. But education is also understood to distribute such 'primary goods' in an unequal manner.

Education has also long been regarded as a means by which the culturally subordinate can challenge cultural domination, have their identities recognised and respected and gain a voice. Yet education is also understood to participate in cultural domination and to marginalise the culturally vulnerable. We will now turn to some of the explanations about how and why this happens.

Focusing on retention, participation and performance

Retention

Although the literature on school retention focuses largely on the post–compulsory Years 11 and 12, it also includes those students who leave school once they are legally entitled to do so at age 15 (16 in Tasmania) and those who leave prior to the legal leaving age. Any who leave earlier are categorised as 'early school leavers' or 'under–age school leavers' and are also usually understood as disadvantaged with regard to opportunities for further study, training and secure work. For example, the Commonwealth Minister for Education, Training and Youth Affairs, the Hon Dr David Kemp MP observed in 1996 that among 19-year-olds, those who had not completed their schooling and had no vocational qualification had an unemployment rate close to 27 per cent, those who had completed secondary school had an unemployment rate close to 18 per cent, and those who held a vocational qualification had an unemployment rate of 7 per cent (Kemp 1996, also see tables 5.9 and 5.11 in chapter 5). The Minister then argued:

> The senior secondary curriculum clearly needs to respond to the needs of the students for whom an academic course is not attractive. To provide opportunities for these students it is essential that schools offer pathways to training and employment and just as importantly that students think of schooling as providing that pathway (Kemp 1996, p. 2).

This is the logic behind major government policies directed towards ensuring that students stay at school up to the end of Year 12. Such policies include curriculum reform, the enhancement of vocational education in schools, and adjustments to various youth and family allowances and unemployment schemes**.** The overall effect of such policies has been that remaining at school through Years 11 and 12 has become the norm. Leaving early is automatically understood as problematic – particularly if in Year 10 or earlier. But how does retention link to gender?

Girls' rates of retention have steadily increased and boys' appear to have fluctuated in accordance with the ebbs and flows, highs and lows of the economy. Currently boys are leaving school earlier than girls. However, since boys who leave school early are better able to access work and training than are girls, they are also more likely to be classified as 'unemployed' than the girls who leave early. Girls tend to be included more in the 'out of the labour market' figures as we explain further in chapter 5.

Leaving school early is thus not always problematic for all boys but is particularly problematic for some. It is usually problematic for girls. However, it is likely to be particularly problematic for 'under-age school leavers' of both sexes. Brooks *et al.* (1997) note that the figures about this group are ambiguous. Nonetheless, they estimate that those who leave between the ages of 12 and 14 years old could amount to one to four per cent of the total age group (roughly 20000); that at least twice that number are at risk of becoming under–age school leavers; and that there are heavy concentrations of such students in poor geographic areas. They do not however break these figures down by gender.

Why, at this age, do boys leave school earlier than girls? Conventional wisdom is that the 'pull of the labour market' is stronger for boys – particularly in times of economic down-turn as we noted in chapter 2. An embellishment of this argument is that males have more identity

investments in paid work than do females. Many commentators account for the relatively stable participation of girls in terms of the structure of the labour market – fewer apprenticeships available for girls, and girls more at risk of unemployment than boys. However, there are many additional explanations. Some attend to the subtleties involved in both males' and females' relationship to school subject clusters and the connections these have to further training and paid work. They also attend to what it means to be young in contemporary youth labour markets. Such explanations suggest that the meaning of retention has altered in recent times and that schooling may have different use - value and thus holding power for girls than for boys. This will be more fully explained in chapter 6. However, it is important to observe that such explanations have their limits. They tend to focus on older secondary school students, and also tend to be somewhat reductionist.

There are other pull-push factors involved. Indeed, there are many factors that are often inter-related. Dwyer and Stokes (1998) and Brooks *et al.* (1997) identify the factors influencing young people's decisions to leave school and, importantly, the barriers to their return. These include, the economic climate (employment and unemployment), poverty, and the perceived unsatisfactory nature of schooling. Students leave to take up employment opportunities; they are forced out of school by non-educational circumstances such as shifts in income support arrangements, family conflict and breakdown and/or homelessness; they are discouraged by poor performance; they are alienated by the school culture, including poor student-teacher and poor peer relations, inflexible curriculum arrangements and teaching strategies, various forms of expulsion and exclusion and truancy. They can also include disaffection with, and disengagement from, schooling.

Boys' declining patterns of retention and performance have prompted a body of research into what has come to be understood as boys' disengagement from schooling – particularly in middle school. For instance Hill, and Russell (1999) document disaffection, alienation and disengagement from productive learning among students, especially boys. They argue that: 'The mapping of student learning progress across the compulsory years of schooling revealed that there was virtually no growth during the middle years in reading, writing, speaking and listening'. Boys, they argue, are consistently more negative than girls in their attitudes to school, and generally student enjoyment of school declines during the middle years. However, Dwyer and Stokes (1998) point out that young women who leave early also claim negative experiences of school culture and organisation. The reasons why young women leave early require more research, especially given the largely negative consequences for them.

As indicated in chapter 3, other differences matter when it comes to retention. SES was a more significant factor than gender and low SES students' completion rates compare most unfavourably with those of other SES student groupings. In Victoria, the rates of Year 12 completion for male indigenous students are about a quarter of the state average and for indigenous girls about half of the state average (Gardiner 1997). Although the picture is uneven across the States, in general, rural and remote males tend to stay at school for less time than urban males, and rural females. This *Report* cannot canvass fully the reasons why such students are disadvantaged when it comes to completion but it is important to emphasise two main factors. The first is economic, and the second to do with education's cultures and structures.

Poverty in all localities pulls young people away from school and pushes them towards the labour market - even if the labour market does not provide them with full-time, secure work. Further, as schools become more expensive to attend as a function of the user–pays principle,

people in poverty find they are less able to support their children at school in the post–compulsory years. They do not find it easy to pay the costs but they also find it difficult to sacrifice a possible income. The structures and cultures of schooling are often unsympathetic to students from other cultural groupings – in particular, the poor, the homeless and Indigenous students. Adams (1998), for example, focuses on Aboriginal and Torres Strait Islander child poverty and associated levels of educational disadvantage. The covert racism and discrimination experienced by indigenous students often leads to their alienation from school systems.

In addition, as Brooks *et al* (1997) indicate, age is a most important risk factor here: the younger the student who leaves, the more he or she is at risk. Brooks *et al* (1997) suggest that primary school experiences and the transitions from primary to secondary school should be investigated. In addition, the role of gender in such experiences and transitions also requires investigation.

Participation

The literature on school participation focuses largely on the post–compulsory Years 11 and 12 and on the curriculum choices students make. Data in chapter 2 addresses which subjects and which combinations of subjects girls, boys and particular groups of girls and boys choose. As chapters 2 and 3 indicate, the senior school curriculum remains strongly gender segmented, despite the gains girls have made in terms of increased enrolments in formerly male–dominated subjects, such as certain maths and chemistry and in school completion. Chapter 5 shows that this gender-segmentation persists in patterns of enrolment in vocational and higher education and in labour market participation. The data also shows that, while low SES students' choices differ by gender, they choose in common, subjects and combinations of subjects that lead to lower-status work. Students whose parents have unskilled or low–skilled occupations tend to select school subjects and subject clusters that pay significantly differential dividends with regard to post-school destinations. Indeed, as demonstrated, current research has revealed correlations between curriculum choice, combinations of subjects studied and post-school pathways (Lamb & McKenzie 1999, in press). The emphasis here is not simply on achievement in a single subject; rather it is on the higher education and career pathways made possible or restricted by the combination of subjects studied in Year 12. Curriculum choices, the literature suggests, are the 'critical filter' to post–school opportunities.

Two questions arise here: first, why does such segmentation happen, and secondly why does it matter? There are several sets of arguments about why it happens. The most common is that through their choices girls and boys are largely living out their gender identities and fulfilling their gender destinies. Teese (1995) argues that girls make choices on the basis of interest and personal and social relevance while boys are more influenced by utilitarian considerations. Put in more abstract terms, boys are more intent on developing their human capital while girls are more intent on developing their cultural and social capital. In their report, *Improving the School Performance of Boys,* Ludowyke and Scanlon (1997) suggest that boys have traditionally selected studies which potentially deliver significant vocational dividends at the expense of subjects that may better prepare them for other aspects of adult life (Ludowyke & Scanlon 1997). Boys continue to select gender - traditional studies in technology, science and higher mathematics and are under-represented in LOTE, arts and personal development studies (Ludowyke & Scanlon 1997).

Others construct the issue somewhat differently and talk about gendered perceptions of the relevance of schooling. They suggest that girls are more likely than boys to perceive wider benefits accruing from extended engagement in schooling. Ainley and Malley (1997) argue that the meanings and significance of participation in post–secondary education have changed over time for girls and boys and that in current times it is regarded as less relevant for boys than for girls – especially by boys themselves. The merit of these arguments will be assessed in the next two chapters after an examination of how, and the extent to which, school education converts into post–school opportunities. At this point, though, it should be noted that girls depend on Year 12 education to get paid work much more than do boys. Given that girls depend on Year 12 and further education to enhance their post-school options, the argument that their choices are not instrumental is unpersuasive. They may well be just as intent on developing their human capital as are boys – they just do it differently and with different labour markets in mind.

As the above arguments imply, there do appear to be gendered perceptions of 'what matters' when making curriculum choices (Teese *et al* 1995). A key question here is, should gender- and SES-based preferences for certain fields of study be affirmed or challenged? Indeed, why does the gender- and SES–based segmentation of the curriculum matter? There are several possible responses. The most compelling concerns the extent to which students' gender and their social background should ultimately determine their destinies—particularly when their destinies are unfortunate and unequal. Indeed, what is the purpose of Years 11 and 12 if this is so? Should education not provide students with the opportunities to move beyond the constraints of gender and SES? Should it not, for instance, encourage boys to invest in their cultural and social capital as well as their human capital? Martinez (1999, p. 6) defines social capital as 'the outcome of social processes which link people together in groups and communities. Productive social capital can be understood as processes that generate trust and lead to social bonds and cohesion and sense of common purpose across *different* social groupings.'

In the light of these concerns it is relevant to note the work of ACER and Ainley *et al* (1998, p. 56) on 'the 'social development of young Australians'. The Ainley data refers to students in Years 5 and 10 and shows that some boys have learned as early as Year 5 that being concerned about others is not their sphere of duty. Boys in Year 5 on average rate community well-being considerably lower in importance than girls and the gap widens by Year 10.

Education has the potential to challenge the identification of certain types of knowledge and work with any one particular social grouping. It also has the potential to encourage students to consider the full range of work possibilities without feeling or being constrained by their gender or other aspects of their 'background'. The role of education must surely be strongly to encourage girls and boys to see themselves as agents in constructing their own futures. The message that 'your gender, race and class do not *control* your destiny' is absolutely central if they are to construct their futures differently.

Of course, students' futures are not simply a matter of options and choice. Life circumstances mean that certain groups of students certainly have more choices available to them than others as we indicated in Chapter 3. Those struggling against poverty, isolation, disability and racism, for instance, have their choices restricted in different ways. The picture is further complicated by the range of other factors which put significant constraints on choice, such as the collapse of the full-time teenage labour market, the formal and informal work practices which restrict progress in many sorts of work, the allocation of training and work according to

academic outcomes, and the constraints that family-related workplace on paid work. Choice is also constrained by the cultural norms and values associated with gender, race and class and the ways in which these help to produce an individual's sense of desirable life-lines. It is no simple thing for students (or anyone, for that matter) to choose to be someone other than who they have learnt to be. To suggest otherwise places too much emphasis on free will and too little on constraint. Overall, to focus too much on choice suggests a certain innocence about society, culture and the world of work.

Performance

Over recent times performance has come to equate with measurable outcomes, with a major focus on Year 12 results and university entrance scores. Another focus has emerged which attends to measurable outcomes at different stages of schooling in what are regarded as the key learning areas of literacy and numeracy. In chapters 2 and 3, we showed that overall, the scenario is more complicated than is usually assumed and that it is 'neither so bleak for boys and nor so rosy for girls' (Weiner, Arnot & David 1997).

It is now widely recognised that it is necessary to disaggregate data according to other variables. Chapter 3 showed some of the more important findings that emerge when gender is considered together with other variables and underscores the crucial nexus between SES and educational performance. Low SES is the major variable that influences school performance. The data presented, based on Teese *et al* (1995) examine the strong impact that socio-economic status has on participation and performance, especially in the key subject areas of mathematics (high prestige, 'masculine') and English (compulsory and 'feminine'). A number of striking conclusions are drawn: 'the higher up the scale of socio-economic status, the more the disadvantages faced by girls in maths and sciences decline and the more the disadvantages faced by boys in English decline. Gender relativities, in other words, are weakest where individuals enjoy the greatest cultural and material advantages, though they are by no means absent, even here'. The study also challenges the widely held assumption that girls overall are gaining more success through their schooling than boys, as it indicates boys rely less on school because they have stronger vocational educational pathways outside it. Girls' patterns of subject success and choice offer them less tertiary study and career pay-off than those of the elite boys because they are less coherent, less vocational and less mutually supporting *but* these patterns actually prepare girls better for 'life' more broadly. Teese *et al* also argue that:

> Boys, too, are disadvantaged. Their school careers, on the whole, seem to be less successful, to terminate earlier, to be characterised by failure at an earlier point in time, and to be more frequently accompanied by motivational and behavioural problems (1995, p. 108).

However, the significant point is then made that the gender gap narrows the higher up the socio-economic scale and the differences 'become sharper the more socially disadvantaged their parents.' They conclude by arguing that 'the real question is not whether girls as a group or boys as a group are more disadvantaged but which girls and which boys?' (Teese *et al* 1995, p. 109).

On the topic of literacy and numeracy, the data chapters are largely consistent with the conclusions of *The National School English Literacy Survey* (Masters & Forster 1997). Children from high socio-economic backgrounds achieve at significantly higher levels than children from low soci-economic backgrounds, and the survey found that this was the largest

differentiating factor in terms of achievement. The mean achievement of girls in literacy is higher than the mean achievement level of boys, and students from non-English-speaking backgrounds have lower levels of literacy in English than those from English-speaking backgrounds. 'Gender differences in literacy achievement are larger for Writing and Speaking (the expressive modes of literacy) than for Reading, Listening and Viewing (the receptive modes) with the greatest gender difference occurring for Writing and the least for Viewing. This gender difference in achievement does not widen significantly between Year 3 and Year 5. The differences between boys' and girls' levels of literacy achievement are greater among students from low socio-economic backgrounds than among students from other socio-economic groupings' (Masters & Forster 1997, p. viii).

How are such differences in performance to be explained and again which differences matter and why? What is the relationship between the curriculum, low SES and gender? Both questions focus on the nature of the curriculum and on assessment practices, and will briefly be considered before the discussion turns to the literature on gender differences in performance.

Explanations about the connections between low SES and lower educational performance usually have structural and material components. It is observed that education systems value and reward performance in certain subjects more than others. The performance considered most prestigious is associated with the status of the subjects that are taken. The high - status subjects are the 'hard' sciences of physics and chemistry, and the higher levels of mathematics, including calculus. Such subjects are usually prerequisites for entry into tertiary education for training relating to certain high status careers, like medicine, engineering and some sciences. Valued educational performance is associated with other sets of values too. The mental is valued more than the manual, the mathematical, scientific and technological more than the artistic, historical, literary or sociological; the physical more than the emotional; public knowledge over private knowledge; and high culture over mass culture. Merit is distributed thus and state–based examination systems and tertiary entrance scores are organised accordingly. Credit, and later, material status and power rewards are accrued and distributed correspondingly. Across time, there are regular winners and losers. The constant losers are a complicated but predictable blend of SES, gender, indigenousness and 'disability' (Kenway & Willis with Blackmore & Rennie 1997)**.**

The focus on the connections between social and cultural difference and curriculum has taken many directions and includes discussion of assessment. Gipps, for example, argues that we need to resist the pressure to focus on examination outcomes and identify instead the values and processes informing curriculum and assessment (Gipps 1995). She maintains that assessment is not an objective, straightforward measure of competence; and that a number of questions need to be asked in order to ascertain if assessment practices do in fact promote equity: 'What knowledge is being assessed and equated with achievement? Are the form, content and mode of assessments appropriate for different groups and individuals? Is this range of cultural knowledge [of women, of people of colour] reflected in definitions of achievement? How does cultural knowledge mediate individuals' responses to assessment in ways which alter the construct being assessed?' (p. 5). Gipps is not proposing 'equality of outcome'; instead she is arguing for equity in assessment in such a way that 'implies that the assessment practice and interpretation of results should be fair to all groups' (Gipps 1995, p. 6). Further comments on gender and assessment follow in the next section of this chapter.

These arguments are relevant also to developing a full understanding of the impact of cultural, ethnic and racial difference in education. For example, there has been some important discussion of Aboriginal learning styles, and what curriculum and assessment might look like once these matters are seriously considered (Mooney 1998). Although this matter will not be pursued further here, it is pertinent to note that the Socratic method is not necessarily best for all students.

The gender, curriculum and performance literature currently seeks either to explain boys' under-performance in general or boys' poor performance in literacy and in subject English. The most common-sense view circulates regularly in the press and in some circles of teachers and educational administrators. This usually ignores the above arguments about the vocational pay-off of certain subject clusters and the high status of those learning areas most associated with high–status males. Instead, their lines of reasoning mirror those that were mobilised in the 1970s and 1980s with regard to girls and maths and science, only the focus and logic is now reversed. The curriculum, assessment, pedagogy and/or the learning environment are seen to be feminised and thus to be 'unfriendly' to boys (Matters, Pitman & Gray 1997). For instance, subject matter and teaching approaches, contexts and applications are seen to favour girls' interests, concerns and learning styles. This, combined with the proclaimed feminisation of the teaching service is seen to doubly alienate boys. Schooling is now seen to have little appeal for them. While such arguments are popular they are not usually considered persuasive in the research literature, as will be demonstrated shortly when we consider the research on boys, literacy and English.

Why the feminine alienates boys or whether it is acceptable that it does so, is not usually a matter under scrutiny in the populist discussions on boys and curriculum. However, as some of the literature on masculinity shows (McLean 1997) the masculine is not only constructed in opposition to the feminine, this opposition may also descend into a contempt for the feminine and an associated fear of being construed as feminine. This literature indicates that it is such views which both lead certain boys to avoid feminine identified subjects and to take considerable steps to demonstrate their maleness through their activities at school. This contrasts strongly with the literature about girls and maths and science (Kenway 1993). At issue when that literature was at its peak in the late 1980s and early 1990s, were questions of unequal access to the educational and economic power and status made available through such prestigious fields of knowledge. Such feminine–identified subjects as English and the arts (eg music, art, dance, drama) do not usually provide their students with equivalent power and status resources, particular among their male peers –although clearly literacy is a foundational skill. So it is possible that, although the broad debate includes the range of curriculum areas, the core issue is that girls' performances are challenging those of boys at the most prestigious end of the educational spectrum in the high–status knowledge domains which high–status males have historically kept to themselves. On the other hand and most importantly as we showed in chapter 2, it is clear that current performance and knowledge hierarchies seriously disadvantage some groups of boys, encouraging them to avoid 'feminine' subjects and to over-enrol in mathematics and 'hard' science and hence to under-perform. The real curriculum challenge is to teach both males and females to see more clearly how gender and power relations impinge upon and constrain their life options. As a consequence, they would then be in the position to make informed, rather than socially–constructed, decisions about what they want to learn and achieve.

There are numerous explanations offered to account for boys' relatively weak performance and engagement in English, including the cultural construction of English as a feminised

subject, a phenomenon which is alienating for boys and at odds with their adolescent and developing sense of masculine identity (Martino 1994). Another central theme in research on boys and literacy is the importance of using English as a curriculum area in which boys can examine the construction of their masculinity, and come to an understanding of the social conventions and constrictions they inhabit (Davies 1997, Gilbert 1997). Gilbert argues it is unlikely that educators will make any difference to the boys and literacy issue, 'unless a close and careful examination of the social and embodied practices of masculinities, and of the social construction and value of school forms of literacy and literacy testing, become part of classroom learning. Boys deserve access to knowledge about their social construction as gendered subjects, about the curricular processes they are inserted into, and about the ways in which they might position themselves differently in a range of social contexts' (Gilbert 1997, p. 22). Rather than support calls to 'masculinise' the literacy classroom with more male English teachers and the inclusion of stereotypically masculine activities into the curriculum, Gilbert calls for a complete reworking of the interplay between masculinity, literacy and schooling, as part of the democratic reform of education (Gilbert 1997).

A further question is whether part-time work has an impact on young people's educational performance. Australia has high levels of part-time youth employment, with many 15-19-year-olds engaged in full-time school and part-time work [see Chapter 5] (Dwyer 1998). A recent report (Robinson 1999) found that in general, part-time work did not have an adverse effect on school completion or academic performance in Year 12. However, there was evidence to suggest that students working more than ten hours per week in Year 11 were slightly less likely to finish year 12 and had slightly lower results than non-workers. There was also a marked gender difference in the type of work that school students did, with twice as many females as males working in sales, and males working in labouring jobs much more often than females.

It is evident from the research literature that the meaning of educational performance has narrowed to equate with measurable outcomes - Year 12 examination results and/or university entrance scores. These are of course important data; nevertheless, as Arnot *et al* observe in their recent British study of gender and educational performance: 'Performance, broadly defined, should go beyond the common criteria of examination passes and should cover the education of the whole child' (Arnot *et al* 1998, p. 1). A focus on educational performance as examination performance shifts attention away from addressing the broader experience and process of schooling, and away from examining the many crucial factors that shape curriculum choice and fields of study - decisions which have serious consequences for post-school outcomes and labour market participation (Lamb & Ball 1999, Teese *et al*. 1995). Further, a focus on end–of–school results captures the educational performance of only relatively successful students, those who have made it through school, and not those, for whatever combination of factors, have not completed school (Yates & Leder 1996).

Gender differences and disadvantage

There are various explanations for gender differences and disadvantages in school retention, participation and performance, and indeed in experiences of schooling. No single explanation is satisfactory alone. Gender differences and disadvantages are caused by many factors that often operate uneasily together. Explanations include those that focus on:

- gender identities and relationships;

- intersecting identities – foregrounding background;
- individual biology, psychology and health;
- educational structures, processes and practices; and
- school cultures and subcultures.

Gender identities and relationships

In most of the recent literature on gender and schooling, gender is understood as a socio-cultural construction that is subject to change and not inevitably the expression of conventional sex-typed traits or biologically determined predispositions (Nayak & Kehily 1996, Davies 1989, Connell 1995). 'Gender' is a global term that covers femininity and masculinity. These are also understood as socio-cultural constructions that nonetheless have significant implications for students' identities and behaviour. During the 1990s, there has been a considerable amount of research, first on the construction of femininity, and, more recently, masculinity (Connell 1995, Kenway & Willis 1995). In terms of masculinity, boys and education, several substantial overviews of the field have been made (Fletcher 1997, West 1995, Kenway *et al* 1997, Yates 1997).

There is a tendency in common parlance and in some of the literature to understand femininity and masculinity as bipolar, almost competing constructions. In some sense, masculinity and femininity are poles apart and indeed maleness and femaleness have to maintain elements of 'oppositeness' to sustain their existence. In addition though, the more sophisticated literature also recognises their inter-relationship given that they depend on the other for their sense of self. Each is constructed in opposition to the other. To be 'feminine' is to be not 'masculine' and the reverse. In much feminist analysis, this opposition is also seen as constructed hierarchically, with the masculine side afforded more power and value than the feminine (eg Davies 1989 a & b). However, members of the recent men's and boys' movement make the reverse argument – claiming that feminism's success has altered this and that now masculinity is undervalued and males have lost power to females (Biddulph 1995). Such claims and counter–claims point to the challenges that feminism has posed to the traditional gender order and also to the possibility that gender relations are particularly in flux in current times.

As the data in chapter 2 shows, students' gender has an important impact on many aspects of their engagements with schooling. The gender patterns are evident, although complicated and dynamic, and explanations for this vary. However, much of the recent research on the construction of gender identifies the different discursive fields that shape masculine and feminine attitudes, values and behaviours. Schooling practices, curriculum, forms of assessment, out-of-school activities, children's and youth culture are all seen to be coded by the gender polarities, inter–relationships and hierarchies noted above – fluid as they are. For example, English and literacy are sharply inscribed as 'feminine' (Martino 1994, Martino 1999, Gilbert & Gilbert 1998). Competitive contact sport is coded masculine (Hickey, Fitzclarence & Matthews 1998, West 1998) as are certain VET subjects - mechanics and electronics for example. Such discourses are seen to 'invite' appropriately male and female students to identify with the gender codes they offer. Students are understood to respond to these invitations in various ways that are patterned by gender (Blair, Holland, & Sheldon 1995, Connell 1997). If they do not, they are likely to be marginalised and perhaps stigmatised. This all points to the complex interplay of factors which shape the relationship between gender and educational performance. Let us elaborate a little with regard to English and literacy.

Boys are inducted into a culture of masculinity as early as pre-school, if they have not already been inducted in the home. Much literature suggests that the build up to boys' association between femininity and reading begins early (Millard, 1997; Danby, 1998; Davies, 1993) and that evidence of known adult males' reading habits and acceptance of reading as 'masculine' are crucial (Nichols, 1994). This literature, then, raises questions about the degree to which biology is responsible for developmental delay in boys' taking off in reading in the early school years.

Cultural issues are most starkly revealed in the research and literature on boys' dropping back in literacy achievement compared with girls in junior secondary school. The literature suggests that boys' poorer results at this level are related to a reluctance to achieve in English and to a 'lack of interest'. This is a cultural issue adding to the evidence that 'masculinity is a performance' (Gilbert, 1998, p. 205) and that literacy is not currently in the script. Boys indicate in study after study that they see reading in particular as feminine. They also see the subject 'English' with which reading is associated as feminine. There is considerable evidence that to be good at English can make a male student a homophobic target for 'macho' males in schools (Gilbert, 1997; Hall, 1997; Martino, 1994; Martino, 1994; Martino, 1998; Rhodes, 1994).

Intersecting identities – foregrounding 'background'

During the 1990s, greater attention has been paid to addressing the way in which gender intersects with the other social and cultural factors that make up individual identity – class or socio-economic status (SES), ethnicity, locality, indigeneity, sexuality, disability and age - leading to a strong awareness of the need to examine differences within – not only between - the two gender groups (Gilbert & Gilbert 1994, Rizvi 1995, Tsolidis 1996, Yates 1998). In turn, this has led to examinations of the impact of intersecting or hybrid identities on educational performance and outcomes.

This analytical trend has disrupted the analysis of gender noted immediately above and has led researchers to develop more nuanced data–gathering practices and explanations of gender–related differences in retention, participation and performance, such as the data presented in chapter 3 of this *Report* and in the *Data Collection and Analysis Report*. There is now an impressive body of qualitative research that examines the impact of students' multiple identifications on their lives at school.

Equally, this focus has led to more careful consideration of what constitutes disadvantage and in what circumstances. In their analysis of 'gender and disadvantage', Gilbert and Gilbert argue that we need to understand the full dimensions of disadvantage as 'a process of production of discursive positions and material circumstances' (Gilbert & Gilbert 1994, p. 15). They conclude that 'it is the interplay of these discourses [of masculinity and femininity, of class and geographical location etc] and how they contradict and accentuate each other that explains how disadvantage is constructed, interpreted and experienced in particular sites' (Gilbert & Gilbert 1994, p. 20). This argument resonates strongly with Fraser's case that we need to attend to the unequal distribution of material resources and discourses of recognition.

An emphasis on 'intersecting of factors' is evident in studies of Aboriginal and Torres Strait Islander people. A study by Gardiner (1997) in Victoria revealed that the general school retention problem was particularly acute amongst young Koorie males with only one in five

completing their schooling compared to a state average of four out of five. Gardiner makes connections between indigenous boys' contact with the juvenile justice system and low rates of school completion, indicating that educational and social alienation are creating extreme disadvantage for indigenous youth in general, and males in particular. In the context of high rates of deaths in custody for young Aboriginal men, Gardiner argues that the school system needs to develop strategies to hold on to its Koorie youth (Gardiner 1997, p. 61). Addressing the issue of why gender is a factor here, and how it might interact with Aboriginal identity, is crucial to addressing school completion rates amongst indigenous youth (Gardiner 1997). In interviews with indigenous students, Herbert (1995) found that while many groups of students identified racism rather than gender as a major barrier to equitable education outcomes, issues of gender were also important. For example, she found that indigenous girls had a strong preference for separate classes when dealing with gender issues; and indigenous boys identified a lack of male Indigenous teachers with whom to discuss gender issues. An understanding of the differential impact of race on girls and boys is necessary.

The literature points to differences in the way that gender interacts with location, particularly for remote and isolated students, but also for those students in poor urban areas (Jones, 1999). Many rural youth share limited access to a range of resources. 'In rural areas, if the school system does not offer a resource, chances are it is unavailable' (Wyn, Stokes & Stafford 1998, p. 17). Lack of part-time jobs for rural students engaged in any form of education is another issue. Further, social and cultural factors including gender relations are seen as a serious issue for rural young people, with the systematic subordination and marginalisation of young women (especially those not in a relationship with a boy) presenting problems for their health and well-being (Fraser 1997). Intolerance of homosexuality in rural communities also leads to challenges for young women and men, and Wyn's study links this to high suicide rates for young rural men (Wyn, Stokes & Stafford 1998). Wyn sees schools as an important public health resource in rural communities and she recommends a number of initiatives that could be used to improve young people's health and well-being.

The relationship of gender to other factors is raised in several studies of ethnic-minority young people and education (Guerra & White 1995, Tsolidis 1996, Pallotta-Chiarolli 1997). Tsolidis (1995) points out that there are significant cultural differences in relation to educational expectations and engagement, particularly differences in relation to girls. NESB or minority cultures' expectations of girls' and boys' education is often different. Pallotta-Chiarolli notes in particular the lack of research into the intersection of ethnicity and constructions of masculinity. She calls for urgent attention to the needs and issues relevant to boys from non-English-speaking backgrounds, not only in order to provide culturally relevant and positive educational experiences for them, but also to make a positive contribution to the educational experiences of girls from non-English-speaking backgrounds (Pallotta-Chiarolli 1997). Tsolidis suggests that a breakdown of NESB origin and subject choices would show interesting variations, say between Greek-Australian boys and Chinese-/Malay-Australian boys, and again some differences between Chinese- and Vietnamese- Australian boys. Such questions suggest the dangers in commentaries about boys *per se*.

There is a small but significant body of contemporary qualitative research addressing the intersection of class and gender in shaping academic outcomes. For instance, Power and Whitty examine the construction of masculine identities in relation to academic achievement in the UK (Power *et al* 1998). In some schools, academic success was highly prized and congruent with masculinity, whereas in other schools male academic success was more fraught and even stigmatised. On the basis of their qualitative data from schools, Fitzclarence,

Green and Bigum (1995) argue that 'the social divisions between students appear to be increasing. On one side are those students with the support networks designed to help integrate them into institutions beyond school. On the other side are the students without the cultural supports needed to help make sense of current changes.' Considering the social class differences amongst girls can also yield interesting results, as Weiner argues. She says it is mistaken to see the declining gender gap as the result of an overall improvement in educational outcomes for all girls (Weiner 1998). Rather, Weiner argues that the 'overall gains being made by British girls in terms of examination, participation and performance, could be interpreted as the consequence of a particular movement or shift of a relatively discrete group of girls' (Weiner 1998, p. 204). Weiner suggests that shifts in the national gender gap are the consequence of transformations in one particular group; that of 'white children from upper working class or lower middle-class families' (Weiner 1998, p. 200).

A severely under-researched area is the educational experiences and outcomes of male and females students with disabilities and special needs. However, Hastings (1995) offers a moving account of the educational experiences of girls with disabilities, pointing to issues associated with physical and intellectual accessibility and to the problem of not belonging. Boys are reported as present in special education programs in greater numbers than girls with the exception of programs for gifted children (Pickering & Szaday 1990). According to teachers in the special needs area, boys exhibit emotional/behavioural problems, are disruptive and inattentive, and suffer from anxiety and low self-esteem in greater numbers than girls. Children in rural areas are particularly neglected in terms of special education, and there are more students in low-SES schools with higher levels of need (Pickering & Szaday 1990).

Rizvi argues that when considering factors of disadvantage, an organising principle is required to avoid each being viewed as equivalent to the others (Rizvi 1995). He suggests that poverty is such a principle for it intersects with all the other disadvantaged groups to bring into effect 'most disadvantaged' groups. Poverty's intersection with cultural disadvantages helps to identify those who are most disadvantaged and most in need of gender equity strategies. Drawing on Fraser (Fraser 1996, 1997), this *Report* develops Rizvi's organising principles for assessing the relative importance of such explanations through the recognition that both economic and cultural disadvantages provide a comprehensive picture of disadvantage and program for reform.

It is crucial to understand the extent and effects of poverty in Australia (Fincher & Nieuwenhuysen 1998). Foster and Hawthorne (1998) have assessed whether equity initiatives over the past 20 years have improved educational opportunities for those on low incomes and living in poverty . Overall, they suggest that educational reform has been concerned with diminishing disadvantage for all, and consequently there have been insufficient policies targeted at specific disadvantaged groups. Attention has been paid to increasing overall rates of retention and participation, but '[t]here has been little emphasis, however, on measures specifically targeting the needs of the 'poor', and there has been some criticism that some measures perceived as having particular relevance for poor students have been less effective because they have been used by others'. Austudy is an example of this (Foster & Hawthorne 1998, p. 206). Foster and Hawthorne conclude that 'successive governments have failed to break the nexus between inferior levels of education and poverty' (Foster & Hawthorne 1998, p. 218).

Individual biology, psychology and health

There is a body of literature that emphasises the impact on students' progress through schooling of both biological determinants, including neuro-physiological and cognitive dispositions, and psychological processes and developmental norms. Over time such work has focused on differences in girls' and boys' learning styles, aptitudes, interests, preferences and skills. For example, Murphy and Elwood (1998) consider the impact of early out-of-school activities on later perceptions of competence. They argue that, from an early age, girls are identified as strongly interested in personal relations and as having a preference for particular styles of reading, such as fiction and creative narratives. Boys, on the other hand, are said to be more interested in mechanical things and to prefer non-fiction. Therefore, while girls and boys might be equally competent at certain tasks, different aspects of the task, or ways of writing about it, are deemed relevant by girls and boys. Girls tend to be more focused on the detail and social context of problems, whereas boys have a preference for abstractions and for generalising (Murphy & Elwood 1998).

These sorts of arguments are sometimes linked to arguments about different stages of emotional, psychological and physical development. Gender differences in such things as self-esteem, motivation, anxiety and various learning disorders are also explored as we noted in chapter 3. While such work was popular in the 1970s and 1980s, it had declined in influence until quite recently, with a renewed focus on boys' learning difficulties, behavioural, motivational and emotional problems (Murphy & Elwood 1998, West 1995, Ludowyke & Scanlon 1997, Theobold 1998).

A different body of work focuses on issues associated with students' health and well-being and the impact these have on their progress through schooling; and indeed the impact of their progress through schooling on their health and well-being. Research here addresses such matters as students' physical and mental health in the context of their life-styles and educational experiences. Issues such as diet, illness, substance abuse, physical, sexual and emotional abuse, suicide and early pregnancy are often discussed in the context of material deprivation, transience, family trauma and homelessness. This literature is particularly influential at the moment as the problems seem to intensify, as evidence about such matters accumulates and as students and schools increasingly grapple with such problems as they relate to young people generally and to specific groups of young people. For instance, Hillier *et al* (1998) offer a valuable analysis of the sexuality, health, and well-being of same-sex-attracted young people.

Gender and other differences arise in this context. Prominent concerns include the high incidence of youth suicide, especially for males, and particularly for males in rural areas, and male Aborigines and Torres Strait Islanders. The National Advisory Council for Suicide Prevention (1998) found that the suicide rate in indigenous communities may be 40 per cent higher than for non-indigenous people, and the majority of indigenous people who suicide are under 29 years of age (NACSP 1998). The possible connections between the pressures, difficulties and disappointments of schooling and youth suicide have not been explored sufficiently. Other prominent concerns include the impact of youth homelessness (Noble 1999) and teenage pregnancy and parenting (Milne-Home, Power & Dennis 1996, Probert & McDonald 1999). Teenage pregnancy and parenting experiences have a fundamental impact on the capacity to participate in schooling. Milne-Home found that pregnant adolescents and young mothers disappear from schools, often neglecting to inform authorities of the reason. She suggests that lack of accessible day-care places and prejudicial attitudes within school

can effectively 'expel' pregnant students who may otherwise wish to remain in school in order to increase their chances of career success (Milne-Home, Power & Dennis 1996). Interestingly, the Blair government in the UK has recently introduced a major set of educational programs designed to 'reduce the rate of school exclusions resulting from pregnancy and the barriers to employment, education and training posed for teenage mothers' (Bullen, Kenway & Hey, in press).

Educational structures, processes and practices

The impact of particular educational practices and processes on different students' travels though schooling is another area under research. Matters of curriculum, pedagogy and assessment figure prominently here. Particular learning areas and modalities are seen to favour either one sex or the other, as well as to privilege the cultural resources of white, middle-class, British-based, urban Australia as we will shortly explain with regard to the case of assessment. Mainstream curriculum is seen to marginalise indigenous students or students from non-English-speaking backgrounds. The manner in which curriculum areas are identified with certain gender and social-class groupings and steer students towards predictable destinies is a feature of analysis. A long-standing focus for research here has been girls' relationship to maths and science' (Parker, Rennie & Fraser 1996, Hatchell 1998, Woodward & Woodward 1998). More recently, the focus has been on boys and literacy and the various literacies which might lead boys to disengage and engage. Other focuses include the manner in which vocational curricular and career counselling appear to steer low-SES students towards low-SES futures. Take the case of assessment and gender.

It has been known for a generation that fair assessment is not just a technical issue. The debates on intelligence testing and race in the early 1970s taught us that there are no 'neutral' assessments. Assessment has become a major gender issue since the mid 1980s and it is still unresolved. The argument in relation to gender is that girls and boys have very different out-of-school experiences which result in their school learning actually beginning at different starting points (Hildebrand, 1996). The genders, it is said, are socially taught to favour different styles of communication, and assessment is necessarily a communication exercise. Girls have been portrayed as more cautious and 'teacher dependent', as reading for meaning, and as wanting to place particular learning in context. In relation to assessment particularly, they are said to prefer more routine tasks and are better at extended writing tasks. Boys have been portrayed as more adventurous and risk-taking, as better at creative and innovative tasks and as better at the interpretation of diagrams. In relation to assessment in particular, boys do better at short-answer and multiple-choice questions. Teese, 1995; Gipps, 1996; and Murphy and Elwood 1998 p.110, have recently summarised aspects of this style issue in terms of girls being more focused on the detail and social context of problems and boys preferring abstractions and generalisations. Their analysis of GCSE and A Level results in England concludes that:

> Students' learned styles of communication and ways of working combined with their preferred choice of reading material exert a powerful influence in the solutions and forms of response they consider to be appropriate (Murphy, 1998 ,p. 171).

Research in Australia (Whitehouse, 1992; Teese, 1995) has shown that certain types of assessment do indeed disproportionately favour boys or girls in Year 12 assessment (Teese, 1995). Teese's work shows that the average girl did better in all types of English questions

except short-answer or multiple-choice. The extended answers traditional to this subject favoured girls. Mathematics and physical science, which Teese described as 'high yield' subjects (in contrast with English) because of the assumptions built into the higher-education-entrance scoring systems of a number of Australian States, favoured boys in the styles of assessment questions asked as well as in question content. He suggests that one solution might be to, as much as possible, frame questions in which the content was of particular interest to boys in a format that favoured girls and vice versa in all subjects.

The extent to which the assessment debate continuously slips into a discussion of girls and boys as homogeneous groups is troubling in the light of our discussions in chapter 3 about gender and diversity. Gender cultures are powerful and all girls and boys are affected by the particular version to which they are exposed. While certain assessments have been shown to shift the marks of the average girl and the average boy up or down, once again we need to remind ourselves that there are girls doing well in all subjects in a range of assessment conditions and boys likewise. Alongside good data, stereotypical versions of masculinity and femininity have clearly inserted themselves into the descriptions of girls and boys 'preferred styles' of tackling learning in the literature summarised above. It is clearly the case that diverse ways of being male and female exist in a multicultural society and, indeed that some girls and some boys have resisted the gendered cultural teaching referred to above by Hildebrand (1996). Although popular stereotypes of the average girl and average boy may well be supported by such research, research on gender and assessment must now carefully attend to diversity amongst members of both sexes. It must also attend to matters that are more systemic and structural as the following example from the UK illustrates.

In her analysis of examination results in the English GCSE, Elwood observes that we also need to consider differences at point of entry (Elwood 1995). More girls than boys enrol in the GCSE, and Elwood suggests that this is in part due to 'lower attaining boys not being entered while girls of similar performance levels are' (Elwood 1995, p. 9). A common explanation of girls' superior performance in GCSE is that coursework components favour girls, an argument which has a strong resonance in Australia where the shift from examination only to combinations of coursework and exams at Year 12 assessments is widely assumed to have advantaged girls and (therefore) disadvantaged boys. But Elwood reports that 'the influence of coursework tends to vary depending on the subject and the culture surrounding the subject' (Elwood 1995, p. 19). A more important factor in accounting for girls' superior performance is the system 'tiered entry'. In this system, students enrol in a core subject (maths, English, science at one of three levels: foundation (grades E-G) intermediate (grades B-F) and higher (grades C-A). Although more girls than boys obtain grade C, they do so from the intermediate level. 'Differentiated entry is interacting with teachers' beliefs that girls are anxious about failure in terminal examinations' (Elwood 1995, p. 15). This can have a particularly negative impact on the number of girls enrolling in high level maths. Elwood concludes that tiered entry systems 'are interacting in a negative way with gender and performance' (Elwood 1995, p. 19). There is a need for research on Australian States' and Territories' systems of assessment and examination that similarly attends to the 'behind the scenes' context of results and the influence of teachers' gendered assumptions of student competence.

The extent to which the gender and assessment debate grips parts of Australia, New South Wales in particular, is problematic for the reasons listed and for others too. An assumption seems to exist in some circles that it is legitimate and indeed possible to line students up in a single line and then distribute justice by cut-off points. It is extremely difficult to value diverse approaches to bodies of

knowledge in students from different cultural backgrounds, inside the above assumption. The issue, then, is how to ensure justice in such a context. Teese's suggestion is one small step in that direction. It is worth observing that Queensland's school-based Year 12 assessment system, in which teachers who know students can evaluate their potential, perhaps offers a greater chance of being culture-fair in assessment methods than any centrally-based, single number line system. Such school-based systems (which can and do include examinations set by the school as well as other assessments) operate in Germany, the United States, and many other OECD countries. It is also interesting that New South Wales, where the debate about gender and assessment is the most intense and where gender differences appear most manifest, has the most syllabus- and exam-driven courses of all Australian States. All other states leave more up to the teacher. In Australia there is need for more systematic and comparative analysis of the data available on the impact of particular State and Territory curriculum and assessment practices on boys' and girls' and different groups of girls' and boys' educational achievement.

Let us return to the other research literature on educational structures, processes and practices. Other literature here focuses on the constructions of students' learning identities at critical stages of schooling (eg. early childhood and middle school) and on the critical transition periods from one stage of schooling to another. A recurring theme is the influential role of primary schooling, often viewed as a kind of crucible of formative experience, enduring well beyond its immediate effects (Kamler *et al.* 1994, Alloway 1995, Adams 1998). In their qualitative study of boys and girls in the first month of 'prep', Kamler *et al* illustrate how children's learning is not 'gender-neutral', and that the gender-based differences in the ways in which girls and boys begin to learn and are treated starts from the first day of school (Kamler *et al.* 1994).

There has been much interest recently in the implications of early school success and failure for later success and failure. We noted the research on middle school earlier. There is also a strong, often gender-based, difference in the relative impact of success in literacy and numeracy, the competencies commonly used as key indicators of student performance (Lamb 1997). Lamb's research shows that students who acquire strong literacy and numeracy skills in early secondary school are likely to be successful academically and within the labour market. In terms of school completion, poor literacy skills were a significant factor against boys completion of secondary school, while for girls, (generally more likely to complete school than boys) weak numeracy skills provided a more significant risk of early school leaving than weak literacy skills. This pattern is repeated in terms of entry into higher education with high numeracy skills more of a determining factor in girls' successful entry, and strong literacy skills a significant determining factor for boys. Entry to TAFE and participation in apprentice/trainee-ships had participants drawn from a larger range of skill levels, with male participants more often drawn from average achievers and participants in apprenticeships more often drawn from the pool of low to very low achievers in both literacy and numeracy as measured at age fourteen.

Writing from the perspective of indigenous education, Adams argues that the main focus of change in indigenous education should be the early years of schooling (Adams 1998). Moreover, she suggests that the status of early childhood education and the first years of schooling should be raised, as this would also raise the status of women and young children. Raising the status of early childhood education would also, in turn, she argues, attract males into the sector, a situation that would then promote positive and cooperative partnerships between males and females involved in education (Adams 1998).

School institutional cultures and subcultures

A great deal has been written about the messages schooling conveys to students about who and what is worthwhile and who and what is not. The unequal distribution of awards, rewards, ranking, respect, expectations, resources and space explicitly and implicitly identifies winners and losers and 'tells' students where they 'belong' in the educational status hierarchy. Poor, indigenous and disabled students, both male and female, do not fare well in this distribution of 'valuing', which has implications for their learning identities and, consequently, the quality of their performances and the directions they take through and beyond schooling. These groups of students are recognised as particularly vulnerable in devolved systems of schooling.

Much recent research focuses on student peer cultures and friendship and reference groupings and the implications these have for students' experiences of, attachment to, and engagements with, schooling. Peer power is often seen to be as influential as the message systems alluded to above. Indeed, it has been shown that some boys gain standing amongst their peers as a function of their oppositional responses to the authority structures and value systems of schooling. Belonging to an anti–school peer group is likely to negatively influence students' educational outcomes (Connell 1997).

A feature of school cultures and subcultures is the prevalence of aggressive behaviours, violence and gender-based harassment, including both the harassment of girls by boys and boy/boy harassment and violence (Fitzclarence 1994, Browne & Fletcher 1995) and emerging research on girls' harassing behaviours towards other girls. Harassing behaviour has a demonstrably negative impact on the quality of boys' and girls' experiences of school and their educational directions and performance (Milligan *et al.* 1992, Collins *et al* 1996). Recent Australian and international studies confirm the high (and often hidden) incidence of violence and harassment (Artz 1998, Hart 1998). These studies also highlight the difficulty of working to combat these practices and resolving grievances.

There is also an increased interest in the incidence, form and effects of sexuality-based harassment in schools, often linked to the persistence of sexism, homophobia and particularly to forms of hegemonic masculinity (Smith 1999). As the collection of essays, *Schooling & Sexualities* concluded, 'Institutional and system wide support must be given to the eradication of sexism, homophobia and compulsory heterosexuality in our schools' (Laskey & Beavis 1996, p. ix). The prevalence of homophobic attitudes and intolerance has also been identified as particularly strong in rural communities (Wyn, Stokes & Stafford 1998). Nayak and Kehily have examined the 'everyday' nature of homophobia amongst young men in schools, describing its persistence and 'naturalness' as cause for concern (Nayak & Kehily 1996).

Another important debate centering on the effects of gender difference is that on the relative merits of single-sex and co-education, a topic that was more popular during the 1980s than it is in the 1990s. Both the day-to-day experience of being in either setting, and the impact each has on educational performance are explored. Despite the many confident popular defences of either of the settings as the superior one or as preferable for girls, conclusions from the actual research are, at best, mixed and more often inconclusive. For example, there is evidence to suggest that girls' self-esteem is stronger in single-sex schools, and counter-evidence documenting the less pleasant and co-operative aspects of all-girls schooling (Leonard 1995).

Recent research in Australia has investigated the allegedly detrimental effects of co-educational learning environments on the education of females, especially in mathematics and

science (Parker, Rennie & Fraser 1996, Parker & Rennie 1997). Parker and Rennie's research involved the implementation of single-sex science and/or mathematics classes in ten coeducational secondary schools (Parker & Rennie 1997). In terms of student outcomes, the classes were seen to hold the most benefit for specific groups of girls who were experiencing a great deal of harassment from boys in mixed-sex classes and to have the least benefit for high achieving girls and boys, and for boys in some classes who were particularly difficult to discipline (Parker & Rennie 1997, p. 122). Further, Mael reviews research in support of both types of schooling, and discusses it in light of questions concerning their impact on student's socio-emotional development and academic achievement (Mael 1998). Mael concludes that 'while the predominance of research certainly shows a role for single-sex schools (as an option not a norm), much additional research is needed to clarify which individuals or target populations would gain most from such schooling' (Mael 1998, p. 121).

Other research has found that school type has a greater impact on performance in examination than whether the school is single-sex or co-ed (Cuttance 1995, Leonard 1995). A range of research points to a strong correlation between high soci-economic status and successful educational performance and outcomes: the inverse correlation was also reported (Dwyer 1997, Lamb & McKenzie1999, Teese *et al* 1995). These correlations are confirmed in research on the different patterns of outcomes arising from type of school attended – government, non-government, Catholic, selective and non-selective (Cuttance 1995, Evans & Kelly 1999, Graetz 1990).

In a review conducted for the NSW Department of Education, Cuttance (1995) found that while girls out-perform boys in the majority of courses examined, there are significant differences in performance according to type of school attended. The report is based on an analysis of results from single-sex and co-education schools, and refined again by comparing results from selective and non-selective schools within both categories. Cuttance (1995) considers the selective or non-selective status of the school to be a far stronger factor than single-sex or co-ed in influencing performance. Therefore, the higher patterns of achievement in single-sex compared to co-educational schools does not necessarily indicate the 'relative effectiveness of the different types of school' as single-sex schools as a group have 'more advantaged intakes of students than co-educational schools overall' (Cuttance 1995, p. 31).

Evans and Kelly compared outcomes from government and non-government schools, and found that, after making adjustments for the advantageous family background of private school students,students in non-Catholic private schools 'do better': that is, they have higher rates of secondary education completion, university entrance and degree completion, than students in government schools (Evans & Kelly 1999). Such findings are also often conflated with the presumed advantages arising from single-sex schooling, due presumably to the fact that, in Australia, the great number of single-sex schools (and certainly those with prestigious reputations and a record of successful examination outcomes) are either selective or non-government. As noted above, in assessing the relative impact on performance of single-sex or co-education against the selective or non-selective status of a school, the latter factor is more important (Cuttance 1995).

There is a long history of educational research which points to the connections between curriculum and social class, with the major Australian study being Connell *et al* (1992). An important recent body of ethnographic research (eg Comber, Hill *et al* 1999) shows how cultures of poverty in Australia intersect with classroom practices and cultures to produce disadvantage for students in poverty. Some of this research indicates the implications for

schools where infrastructural support for dealing with students in poverty diminishes. As Thomson (1998) explains, they suffer high staff turnover, lack of equipment, especially IT, and poor facilities and curriculum resources. Students from such schools also frequently suffer such location–based difficulties as few jobs, restricted work placements, poor transport and lack of public services. She argues that educational in/equity is produced by the particularly located school mediating, through its curriculum, pedagogy and institutional practices, inequitable social relations (race, class, gender, able bodiedness, sexuality)'. Such difficulties are also mediated through biographies, and local narratives and social practices of survival.

Finally, Kenway and Willis *et al* (1997) documented those school cultures which are amenable to gender reform and, by implication, improved educational experiences and performances, and those that are not. These are presented below in dot-point form.

The schools which were amenable to gender reform:

- were open to and refreshed by new ideas and encouraged energetic intellectual exchange and change 'from below' (from new and junior staff) as well as from outside;
- supported, encouraged and celebrated difference and the entitlements of all students but did not support differences built on dominances or entitlements based on those structures of power noted above;
- recognised the importance for learning and identity of the head, the hand and the heart;
- encouraged all students to accept responsibility for their behaviour and to take initiatives for change;
- recognised that schools owe girls and boys the right to feel welcome, cared for and safe as well as the right to be educated about life as it is and as it might become if it were to fulfil their best hopes;
- recognised the importance of changing teachers practices and themselves; and
- modelled a better society.

The schools which were not amenable to gender reform:

- were insular and actively subscribed to traditional and hierarchical versions of power and of masculinity;
- were structured in such a way as to endorse the culture of male entitlement and indicated by their priorities and practices that the needs of males were more important than those of females and that the needs of some males were more important than those of others;
- operated mainly at the level of hyper-rationality, discipline and control, avoiding empathetic and affiliative behaviours;
- were repressive in their teacher/student relations and did not offer their students opportunities to develop wise judgments or to exercise their autonomy in responsible ways; and
- operated in such a way as to marginalise and stigmatise certain groups of students and of staff.

Top

5. POST-SCHOOL DESTINATIONS

The broad argument developed in this chapter is that no single explanation of gender differences in retention, participation and performance is satisfactory alone. Gender differences and disadvantages are caused by many factors that often operate uneasily together. However, the case was made that poor retention, restricted participation and inferior performance should be understood as second–order disadvantages and that certain first–order disadvantages must be addressed before disadvantages in retention, choice and performance can be ameliorated properly. Poverty is the major first–order disadvantage.

Introduction

In this chapter, we turn our attention to gender differences in post-school outcomes. Our specific focus is *initial destinations*, which has been defined earlier. That means we examine, for example, patterns of enrolment in higher education but not rates of completion. In previous chapters, we have emphasised the importance of attending to differences both between and within the genders and we have addressed the relative and intersecting impact of other background factors on performance.

We concluded that in terms of schooling and performance, SES was a stronger factor than gender in determining educational success or failure. However, some major *gender reversals* are evident once we consider the data on initial post-school destinations. If we return to thinking in undifferentiated male/female terms, and if we look at overall patterns of participation in the tertiary sector and the labour market, then more females than males have constrained choices and are not faring well, and there are more females than males without, or with restricted access to, a salary or wage. This is despite laudable improvements in girls' performance at school. There are, for example, differences in the range of industries and occupations in which males and females are concentrated, and strong gender-based patterns in the numbers of males and females in the full- and part-time work, unemployment and 'out of the labour force' (Wooden & VandenHeuvel 1999).[15]

Overall picture

It is important to begin with an overall picture of what happens to males and females once they leave school. Understanding how gender affects the immediate consequences of school transition is a key question for this *Report*. In summary, and on the basis of our data search, we can conclude that gender matters more than any other background factor in explaining differences in post-school outcomes and experiences.

[15] There are some interesting parallels in the UK where it has been found girls' achievement at school (in terms of GCSE results) has improved throughout the 1980s and 1990s and more girls are staying on at school than boys. However, more boys than girls are starting a full-time job or entering youth training schemes(Payne, Cheng, & Witherspoon, 1996).

Table 5.1: Labour market and education participation of 15- to 19-year-olds 1996, proportion of population of age group

	Males				Females				Persons
	15	16-17	18-19	Total	15	16-17	18-19	Total	Total
1996 population	132 300	258 900	260 000	651 200	126 000	244 000	251 600	620 700	1271 900
Proportion in education	95%	80%	52%	72%	95%	86%	52%	74%	73%
Proportion in full-time employment	2*%	9%	26%	24%	1%	7%	20%	10%	12%
Employed part-time	1*%	3%	7%	4%	1*%	5%	12%	7%	5%
Unemployed	2*%	6%	12%	8%	2*%	2%	8%	5%	6%
Not in the labour force	1*%	2%	3%	2%	2*%	2%	8%	4%	3%

Source: Derived from McClelland, McDonald, McDonald 1998, p. 107
Notes: * These estimates have a standard error of 25 percent or more and hence may be unreliable.
+ Estimates of population have been rounded to the nearest hundred. Proportions have been rounded to the nearest per cent.

Table 5.1 has 1996 data. It shows that there were slightly more females than males in the 15- to 19-year-old age bracket in educational institutions. There are more males than females in full-time work in the 16 to 17 year-old age bracket (9 per cent: 7 per cent) and considerably more in the 18 to 19 year old age bracket (26 percent:20 per cent). A greater percentage of females than males are in part-time work (7 per cent females: 4 per cent males); a greater percentage of males are registered as unemployed (8 per cent of males: 5 per cent of females); while double the percentage of females are estimated to be not registered in the labour force (4 per cent of females: 2 per cent of males). These patterns are confirmed by most data sources.

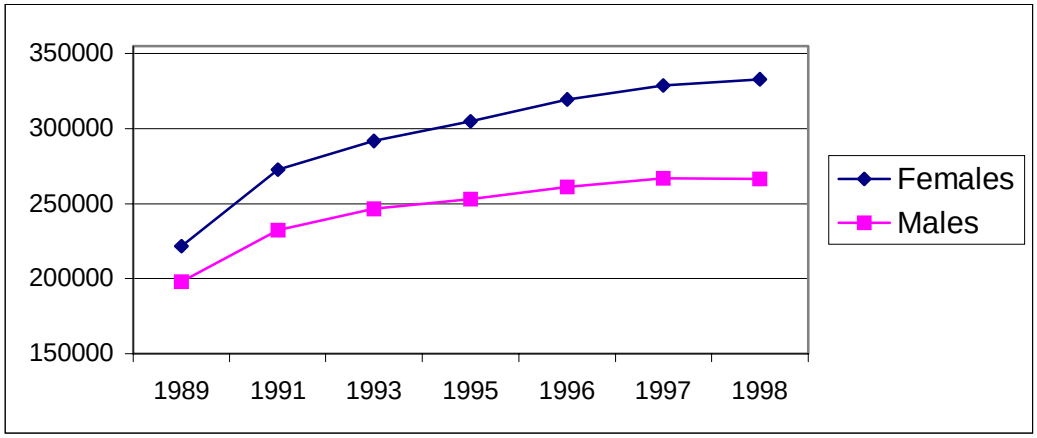
Let us now examine this overall picture in more detail. We begin by considering the data on higher education. This is followed by data on vocational education and training, the labour force and school leaving and transition to work.

Higher Education

Higher education participation varies substantially between the States, with the highest rates in the ACT, Victoria and SA, and lower participation in Tasmania and NSW. Overall, as figure 5.1 shows, there are more female than male enrolments in higher education by a considerable margin, a margin which has grown continuously since 1989 and is only now showing signs of easing off.

Further, the differences in enrolment are largely differences in the rate of 20- to 29–year–old females and males commencing higher education courses of all kinds and levels, rather than differences in the proportions of male and female school leavers proceeding on to university. This is because the importance of Year 12 results as a means of university entrance has declined. In 1998, school results were the route to university entrance for just under 42 per cent of male undergraduate commencers and for just over 42 per cent of female commencers. If we look only at those who used school results for immediate post-school entry to higher education, only 34.1 per cent of all male undergraduate commencers and 35 per cent of all female undergraduate commencers in 1998 left school and were accepted into a university course on the basis of their Year 12 results (same–year or one–year deferral school-leaver entrants).

Figure 5.1: Higher education enrolments by sex, 1989-1998



Source: Derived from data provided by DETYA

Alongside overall gender differences in higher education enrolments, there are differences in the share of enrolments and graduation rates by gender according to the field of study. As Table 5.2 illustrates, for example, engineering continues to have a low rate of female enrolment. Health and education continue to have low rates of male enrolment (see also figure 9.5 in the *Data Collation and Analysis Report*). But, significantly, within many broad fields, higher education is more balanced in enrolment than either Year 12 or VET.

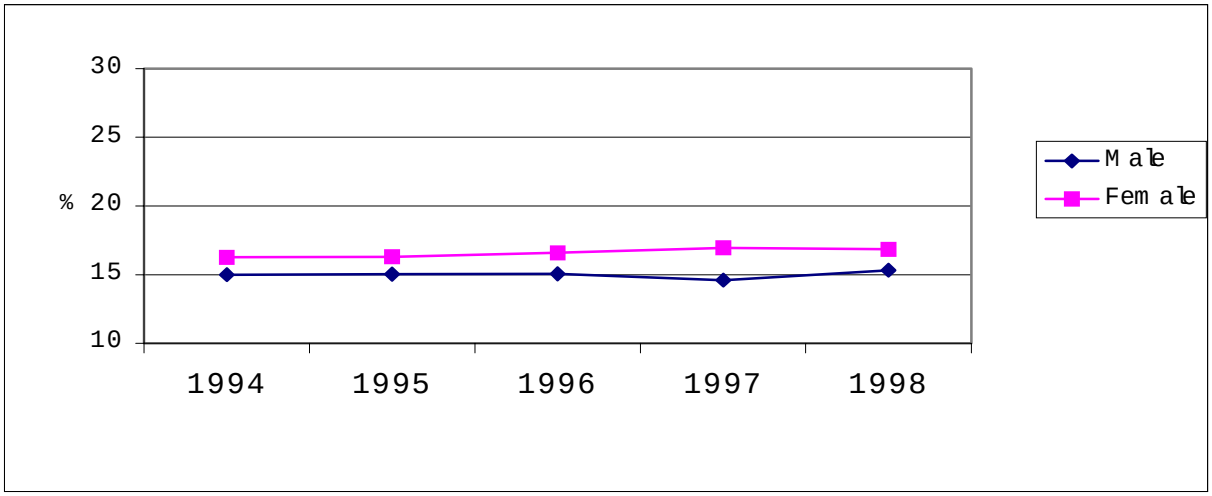
Table 5.2: Higher education graduates by broad field of study, 1987 and 1990-1996

Field of study	1987	1990	1991	1992	1993	1994	1995	1996	Female share in 1996
Business etc.	11,829	16,856	19,915	24,136	27,365	28,692	29,924	33,170	45.0
Arts/Human/SS	17,137	19,607	22,406	25,434	27,244	29,262	29,759	30,503	68.7
Education	22,779	22,808	25,063	24,657	25,316	24,067	23,234	22,262	73.1
Health	7436	10,955	13,145	16,173	18,719	20,068	20,066	20,095	78.1
Science	10,075	12,086	13,844	15,294	16,999	18,712	19,122	19,910	42.5
Engineering	4703	5156	5392	6051	6909	7520	8110	8336	13.6
Law etc.	2895	3231	3494	3965	4846	5163	5140	5601	47.0
Architecture	1580	1966	2181	2461	2576	2715	2741	2945	34.9
Agriculture	1502	1602	1753	2010	2474	2348	2401	2153	37.0
Veterinary Sci	321	354	368	402	412	407	449	358	58.1
Total	**80,257**	**94,621**	**107,561**	**120,583**	**132,860**	**138,194**	**140,946**	**145,333**	**56.5**

Business includes Economics, Administration and Management, Arts/Human/SS refers to Arts, Humanities and Social Science courses. Engineering includes Surveying. Law includes Legal Studies. Architecture includes Building.
Source: Marginson 1998, p. 180.

In preceding chapters, we have examined the relative effect on performance of background factors both other than gender and intersecting with gender. The following series of figures plot some significant patterns of differences in higher education enrolment by school-leaver commencers completing Year 12 in the same or previous year. The data records the enrolment share of students with particular background characteristics in relation to all school leavers continuing directly on to higher education. The categories are low-SES; non-English-speaking background; rural; isolated; and disabled students. Each category registers male and female share of enrolment.

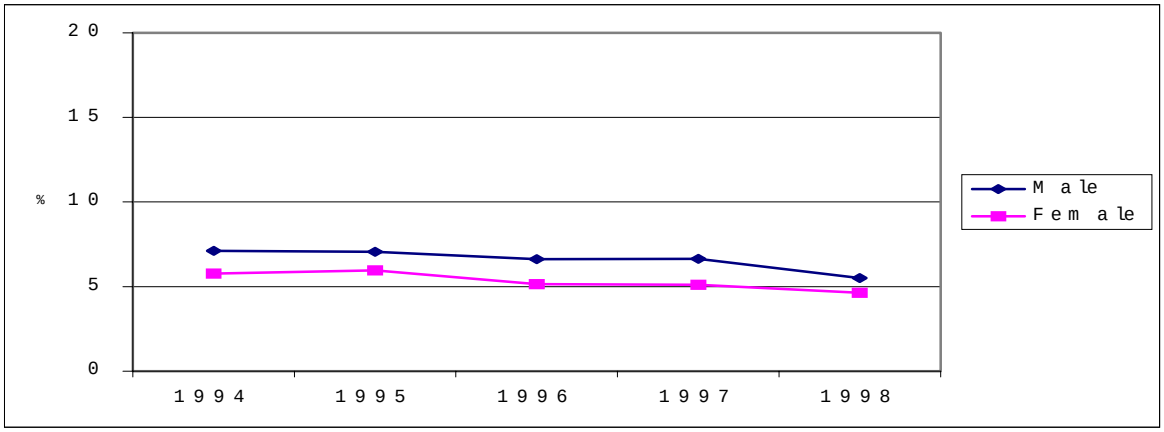
Figure 5.2: Share of enrolments in higher education of low SES 15-19 year old students among school-leaver commencers who completed Year 12 in the same or previous year, by gender, Australia, 1994-98



Source:Derived from data provided by DETYA

Figure 5.2 looks at the enrolment share of students from low socio-economic status backgrounds. This share of enrolment has remained constant for the past five years for both sexes. The share by low–SES females of female enrolment (around 16 per cent) is consistently slightly higher than the share of low–SES males of male enrolment (around 15 per cent). Marginson (1998) argues that overall there may have been 'a general regression in the socio-economic composition of the student body' in higher education.

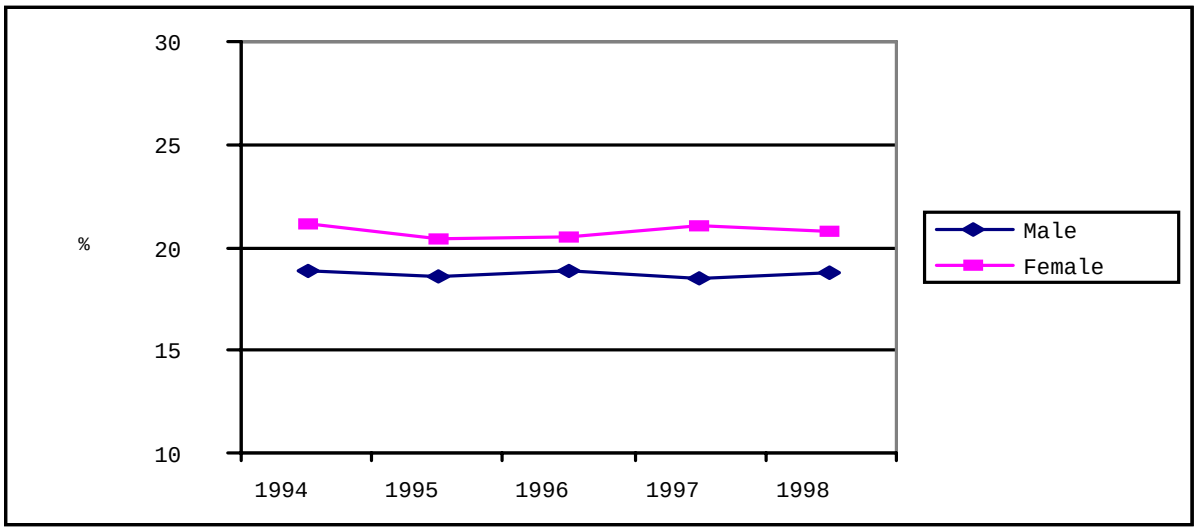
Figure 5.3: Share of enrolments in higher education of non-English speaking background students among school-leaver commencers completing Year 12 in the same or previous year, by gender, Australia, 1994-98



Source:Derived from data provided by DETYA

Males from a non-English- speaking background continuing directly to university are a higher share of all continuing-on males than female non-English speaking background students are of continuing-on females. The percentages for both are small, however, and have fallen slightly in the past five years (from seven to just above five per cent for males and from six to just below five per cent for females).

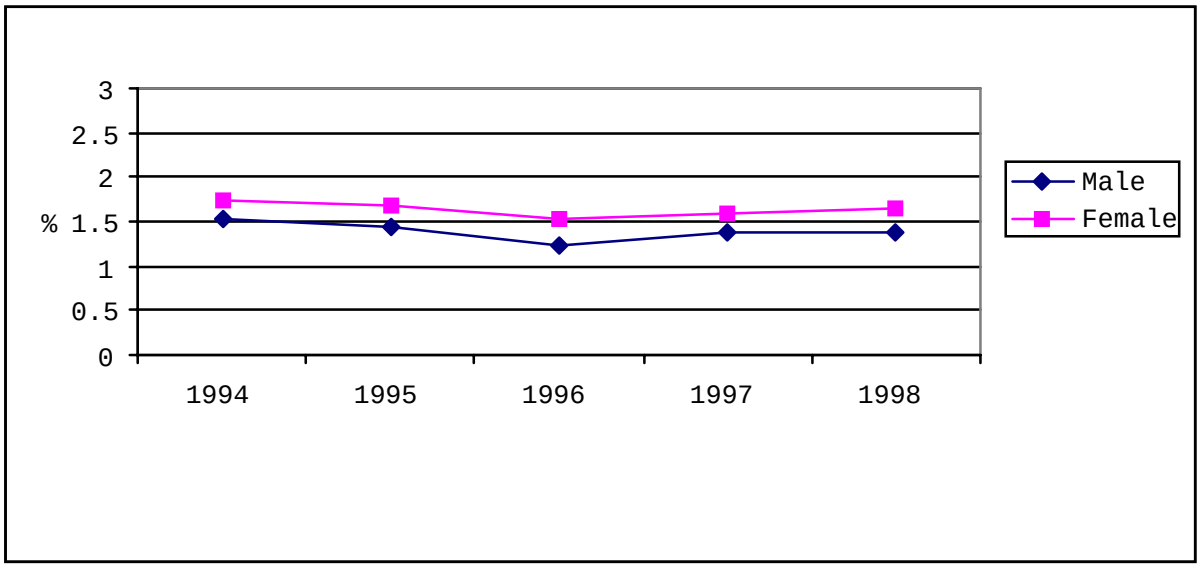
Figure 5.4 Share of higher education enrolments of rural students among school-leaver commencers completing Year 12 in the same or previous year, by gender, Australia, 1994-1998



Source: Derived from data provided by DETYA

Figure 5.4 shows that the enrolment share of female rural school leavers proceeding directly to university is measurably higher than their male counterparts and steady (around 21 per cent compared with 18 per cent). These national population statistics confirm the Lamb and McKenzie LSAY sample data on rural student destinations as discussed in section 6 of the accompanying *Data Collation and Analysis Report* (Lamb & McKenzie in press).

Figure 5.5: Share of higher education enrolments of isolated students among school-leaver commencers who completed Year 12 in same or previous year, by gender, Australia, 1994-1998



Source: Derived from data provided by DETYA

Figure 5.5, on students from isolated backgrounds, also reveals a consistent share pattern over the past five years. The proportion of school-leaver direct-destination enrolment of isolated students of both sexes is very small (around 1.5 per cent) with the female share slightly higher than the male share.

Figure 5.6: Share of enrolments in higher education of disabled students among school-leaver commencers completing Year 12 in the same or previous year, by gender, Australia, 1996-98
Source: Derived from data provided by DETYA

As we can see from Figure 5.6, disabled students of both genders proceeding directly to higher education are an even smaller percentage share than isolated students. Neither gender has a consistently greater share of enrolments. The share of enrolment for both male and female disabled students sits at just under one per cent of the overall male and female rates of enrolment. Research undertaken for this report indicates that when disabled students, of either gender, proceed to tertiary education they are more likely to enrol in vocational education and training than in higher education (Anders 1999).

Having surveyed some key data on participation in higher education, we shall now turn to assess the patterns of participation in Vocational Education and Training.

Vocational Education and Training

The Vocational Education and Training system is a vast conglomerate of public and private providers and courses across Australia. The research charts a general decline in the participation rate of the 16-to 19- years old age group in VET during the 1990-95 period, and attributes the growth in the VET sector mainly to increased participation of older age groups (Robinson & Ball 1998). Vocational education, however, has long been a sector that people have entered at different points in their lives as ambitions change, employer demands change, and new skills are needed for employment or simply desired for other reasons. As a number of commentators have indicated, vocational education has been slow to address gender issues (see Butler & Ferrier 1999). The data in this section rounds out the immediate post-school destination picture by looking more broadly, if briefly, at the gender statistics for the VET sector.

In summary, total male enrolment in VET has traditionally exceeded female enrolment and that remained the situation in 1997, the latest available figures. (In 1997, 1 688 376 Australians accessed VET). Further, among the post-compulsory and post-school age group of 15 to 19-year-olds, male participation in the VET sector is considerably heavier than female participation. Over a third of males in this age group enrol in VET in some form. This is true of only about 25 per cent of females.

Figure 5.7: Percentage female enrolments in VET, 1989-97

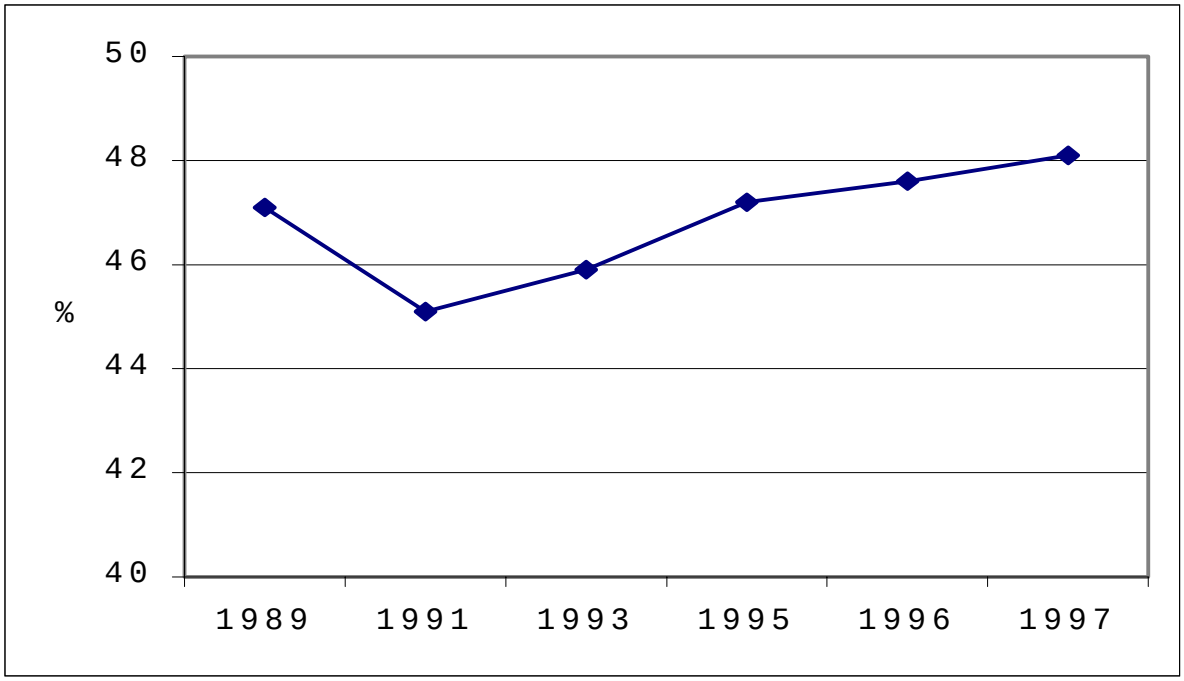


Figure 5.7 graphs the percentage of female enrolments over the same years, showing the extent to which the male enrolment total has surpassed the female enrolment total year by year. An interesting feature is the dip in female enrolments at the height of the early 1990s recession when, over the same period, there was a continuous march upward in male enrolments. This suggests that female enrolment in VET is much more sensitive to the availability of the resources for self-financing. Table 5.3 below provides a breakdown of the level of award in which males and females enrol.

Table 5.3, on Australian enrolments in each level of VET award in the years 1995 and 1997, sets out total enrolments and the enrolment share of each sex at each level of VET award. Advanced courses (diplomas/advanced diplomas and the few degrees still being completed in VET in 1995 and 1997) enrolled a slightly higher percentage of females than males in both years. Males dominated skilled vocational enrolments while there were more females in basic vocational courses. The ratio of female-to-male enrolments in ‘other courses’ changes from females being a higher proportion than males in 1995 to males being a higher proportion than females in 1997. There are more females than males in non-award courses, and males dominated both years in courses which simply gave a statement of attainment. In summary, there are slightly more females than males in advanced VET courses and many more males than females in skilled vocational courses. Males outnumber females in basic certificate courses and females outnumber males in non-award courses.

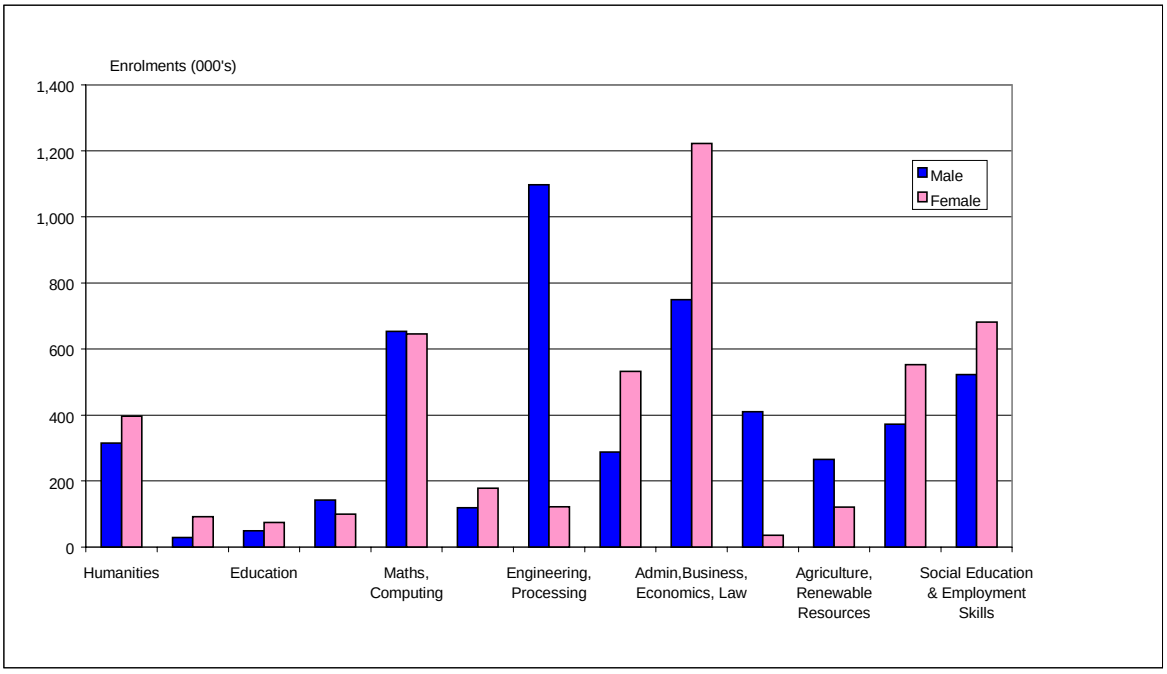
Table 5.3: VET enrolments by level of award by gender, Australia 1995 & 1997

Level of award	1995				1997			
	Females		Males		Females		Males	
	Nos	Share	Nos	Share	Nos	Share	Nos	Share
Bachelor Degree	39	86.7	6	13.3	3	-	0	-
Diploma/Advanced Diploma	100263	50.2	99436	49.8	107600	51.1	102900	48.9
Skilled vocational	95600	32.5	198246	67.5	185200	43.9	236800	56.1
Basic vocational	40040	56.2	31189	43.8	146400	52.8	130700	47.2
Other certificates	192575	51.7	179889	48.3	85000	49.6	86300	50.4
Other qualifications	63696	53.4	55690	46.6	55500	48.1	60000	52.0
Senior secondary	2812	57.7	2059	42.3	3300	60.0	2200	40.0
Non-award	156961	53.6	135706	46.4	198500	52.7	178200	47.3
Statement of Attainment	109720	44.1	139208	55.9	89700	41.5	126600	58.5

Note: 'Other certificates' denotes 'Certificates not elsewhere classified' which covers many Certificate I and II level non-trade traineeships as well as some Certificate III and IV level courses. 'Other qualifications' denotes 'Qualifications not elsewhere classified' which covers various level courses but is likely to be predominantly lower level courses provided through ACE providers
Source: NCVER, Selected VET Statistics 1997 and unpublished NCVER data for 1995

In terms of enrolment in courses and subjects, there are more males than females in courses in the discipline areas of agriculture and engineering, and more females in the discipline areas of humanities and social education. Interestingly, there are more females in the discipline group of administration, business, economics and law. These findings are confirmed by Robinson and Ball (1998) who found that 'business administration, economics [and] services, hospitality, transportation' were the most popular courses for females. The figure below illustrates these trends.

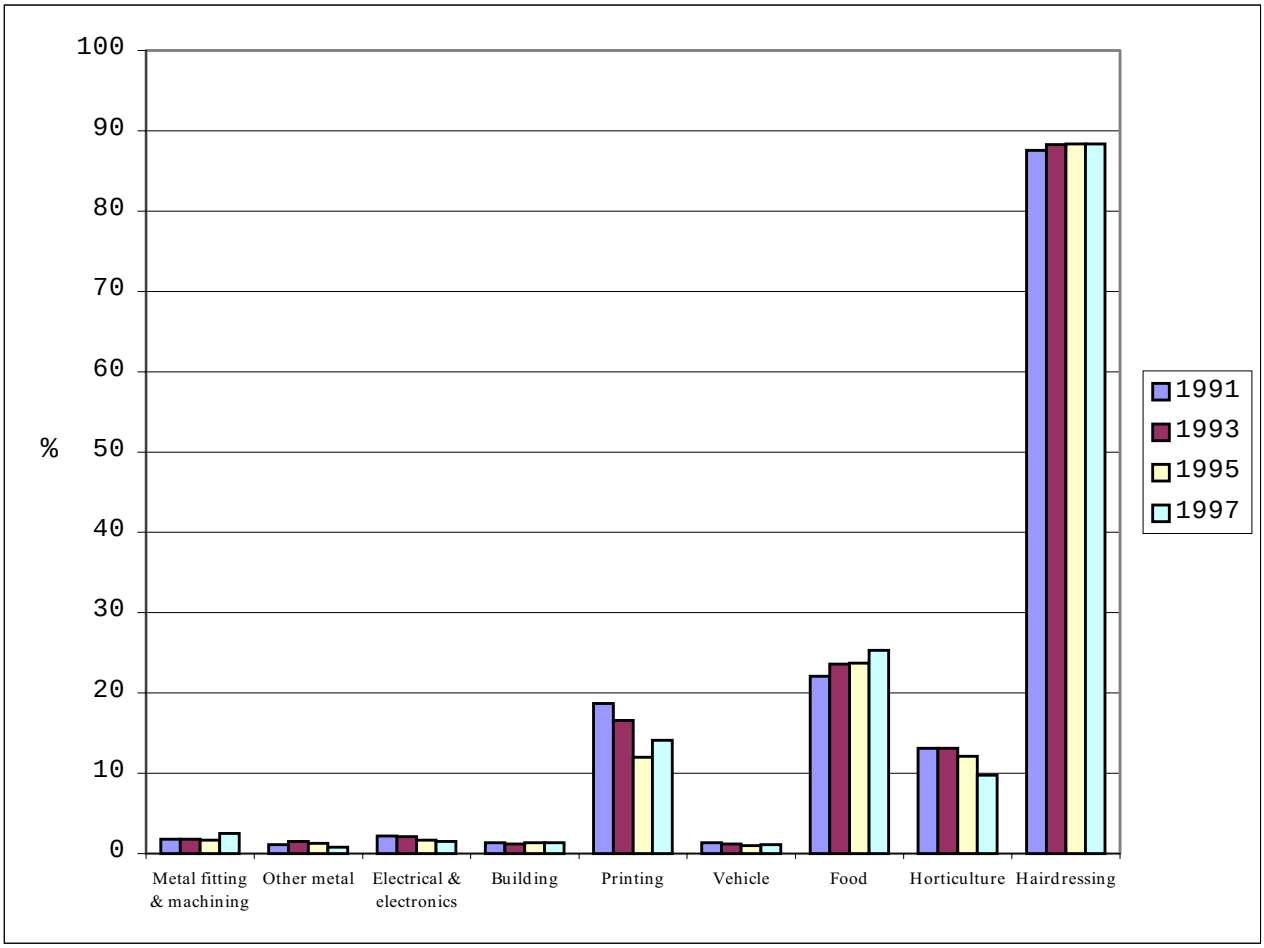
Figure 5.8: Total enrolments (000s) VET discipline groups by gender, 1996



Apprenticeships

Apprenticeships are a career path which continues to follow very traditional gender patterns. In the period 1989-97, the number of male apprentices has not been lower than 100 000, except in the sharp economic shock year of 1991; whereas the number of female apprentices has not reached 20 000 in any year.

Figure 5.9: Female share of apprenticeship commencements by occupational group, 1991-97



As we can see from the above figure, gender segmentation is an apparently intractable issue in apprenticeships. Apprenticeships, except for hairdressing, are still almost exclusively given to males. The proportion of females signing apprenticeship contracts outside hairdressing in 1997 was under seven per cent of the contracts signed. Hairdressing is heavily (85 per cent) female. The percentage of female apprentices in metal fitting and machining, in 'other metal' trades, in building and in vehicle trades remained negligible. The percentage of females in the printing trade fell from near 20 per cent to around 14 per cent between 1991 and 1997. The percentage in horticulture fell to under 10 per cent in the same period. Only in the 'food' trades has the percentage of females slowly risen, reaching 25 per cent in 1997.

Traineeships showed promise of being less gender biased, but the extent to which they offer reliable routes to full-time work is still unclear. The New Apprenticeship Scheme will need

close monitoring to evaluate how effective it is in achieving its aims, not only in regard to full-time employment, but also with respect to gender equity.

Gender and the labour force

Policy makers have tended to see the labour force as the ultimate destination for all participating in education and training at all levels. On the one hand, this is a bias in the way in which school leaver 'destination' is seen (Dwyer, Harwood & Tyler 1998). On the other, employment is both a marker of adult status and crucial in practical terms because it is life-sustaining and enabling. This section sets out what Australia's main databases can tell us about gender and the labour force.

Table 5.4 Industrial distribution of employed persons by age group and sex, August 1998 (%)

Industry	Teenagers 15-19		Young adults 20-24		Prime-age adults		Mature-age adults	
	M	F	M	F	M	F	M	F
Agriculture, forestry & fishing	5.6	1.7	4.7	2.6	5.1	3.2	12.7	10.7
Manufacturing	13.1	2.3	20.1	5.5	17.3	8.4	15.9	7.4
Construction	9.9	0.9*	11.9	1.1	11.3	2.6	10.5	2.6
Wholesale trade	5.6	2.2	7.2	4.0	7.5	4.4	7.3	4.3
Retail trade	44.2	58.4	18.8	21.7	9.8	12.5	9.3	12.9
Accommodation, cafes & restaurants	8.2	12.5	6.9	10.1	3.1	4.8	2.7	3.9
Transport & storage	1.7	0.6*	2.7	3.1	6.7	2.7	6.3	1.4
Property & business services	3.7	5.1	9.5	12.5	11.5	11.5	12.4	10.1
Finance & insurance	0.6*	0.8*	2.6	6.5	3.1	5.5	2.2	2.1
Education	1.2*	1.6	2.3	6.7	4.4	12.6	4.6	12.4
Health & community services	1.3*	4.4	2.3	12.4	4.2	18.1	4.6	22.7
Cultural & recreational services	2.6	3.0	3.5	3.9	1.9	2.4	1.3	2.8
Personal & other services	1.3*	5.2	2.7	5.7	3.9	4.4	3.7	2.9
Other	1.1*	1.3*	4.7	4.2	10.2	8.9	6.4	3.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: * Relative standard error is greater than 25 per cent
Source: Unpublished data from the ABS Labour Force Survey, August 1998; Wooden and Vanden Heuvel 1999, p. 46.

Table 5.4 sets out the distribution of male and female employees, in four age groupings, across categories of industry in which they were employed in 1998. There are clear differences in the proportions of males and females employed in most industry categories by the young adult stage. Possible exceptions are the retail trade, property and business, and cultural and recreational services.

It is important, at the beginning, to understand clearly the gendered nature of the labour force which young people are entering.

Table 5.5 Occupational distribution of employed persons by age group and sex, August 1998

Industry	Teenagers 15-19		Young adults 20-24		Prime-age adults		Mature-age adults	
	M	F	M	F	M	F	M	F
Managers & administrators	**	**	1.8	0.6*	10.6	3.9	20.3	10.8
Professionals	0.9*	1.1*	9.7	13.3	18.4	23.1	16.4	19.7
Associate professionals	3.1	1.4	8.4	8.5	12.5	9.6	12.5	9.8
Tradespersons and related workers	24.9	3.2	26.9	3.8	21.3	3.0	16.4	2.3
Advanced clerical & service workers	**	2.4	1.0	7.8	0.9	10.3	1.2	11.6
Intermediate clerical, sales & service workers	6.0	22.3	10.7	36.4	8.4	28.1	5.6	23.2
Intermediate production & transport workers	13.6	2.8	14.4	1.6	14.5	2.9	12.4	2.6
Elementary clerical, sales & service workers	21.6	57.1	11.1	21.0	4.3	10.4	4.4	10.2
Labourers & related workers	29.7	9.7	16.0	7.0	9.2	8.6	10.8	9.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: * Relative standard error is greater than 25 per cent
** Relative standard error is greater than 50 per cent
Source: Unpublished data from the ABS Labour Force Survey, August 1998
Wooden and Vanden Heuvel 1999, p. 46

Young people — teenagers and, indeed, those well into their twenties — play a very particular role within the labour market. They are its newest members and therefore highly vulnerable.

Table 5.5 is a parallel table to table 5.4, which looks by occupational group rather than by industry. Striking gender differences are immediately apparent in most of the important occupations in all age groups. Among the teenage group, intermediate clerical, sales and service work is a large occupational area for females but not for males; elementary clerical, sales and service work is a large occupational area for both genders but nearly three times as much so for females; labouring and related work is dominated by males. The large percentage (25 per cent) of male teenagers compared with female teenagers (three per cent) who are classed as tradespersons, presumably largely as apprentices, is notable. The major differences between the distribution of occupations between teenagers and older age groups are that professionals come into the labour market in their twenties (23 per cent of females and 18 per cent of males spend their prime-age years in professional occupations) and that a fifth of males ultimately end up in managerial and administrative occupations (compared with 11 per cent of females).

Table 5.6: The composition of the teenage labour market, August 1997

	Employed									Unemployed						Not in Labour Force						Total
	FT			PT Student			PT: Non-student			Student			Non-Student			Student			Non-student			
	M	F	Persons	M	F	Persons	M	F	Persons	M	F	Persons	M	F	Persons	M	F	Persons	M	F	Persons	
Number (000s)	132.6	72.3	204.9	117.3	163.0	280.3	28.7	39.5	68.2	28.5	32.5	61.0	42.3	29.4	71.6	289.6	264.0	553.4	21.6	27.7	49.3	660.5
% employment	47.6	26.3	37.0	42.1	59.3	50.7	10.3	14.4	12.3													100.0
% labour force	38.0	21.4	29.9	33.6	48.4	40.9	8.2	11.7	9.9	8.2	9.7	8.9	12.1	8.7	5.6							100.0
% population	20.1	11.5	15.9	17.8	25.9	21.8	4.3	6.3	5.3	4.3	5.2	4.7	6.4	4.4		43.8	42.0	42.9	3.3	4.4	3.8	100.0

Note: For the purposes of this table, a student is defined as a person attending school or attending a tertiary educational institution full-time
Source: ABS, The Labour Force, Australia, August 1997, ABS cat. No. 6203.0 Wooden 1998, p. 32

Table 5.6 sets out overall statistics of their labour market status in August 1997. This table shows that 47 per cent of males are in full-time employment compared with 26 per cent of females. The unemployed category is broken down into student unemployed and student employed. There is a considerably greater proportion of non-student males unemployed than non-student females. There is a slightly greater proportion of female teenage students registered as unemployed than males. More male students are not in the labour force and more female non-students are not in the labour force.

Table 5.7: Composition of teenage employees by study status and sex, August 1996 (%)

Students	**Males**	**Females**
Full-time permanent	2.4*	0.8*
Part-time permanent	6.4	5.2
Full-time casual	1.5*	0.5*
Part-time casual	89.7	93.5
	100%	100%
Non-students		
Full-time permanent	68.0	56.5
Part-time permanent	3.1	8.2
Full-time casual	15.4	7.0
Part-time casual	13.5	28.3
	100%	100%
Total		
Full-time permanent	40.2	23.9
Part-time permanent	4.5	6.4
Full-time casual	9.4	3.2
Part-time casual	45.9	66.5

Notes: This data only relates to employed persons who worked in their main job for an employer for wages or salary, or in their own business if that business was a limited liability company. Employment status is determined by the main job held.

- Relative standard error high (greater than 25 per cent) and hence estimate may be unreliable.

Source: Unpublished data from the ABS labour Force Supplementary Survey, August 1996 Wooden, 1995, p. 38

Table 5.7 continues this analysis by looking at the study status of teenage employees by gender. A greater proportion of male students who are employed are full-time, whether permanent or casual. A greater proportion of females who are employed are part-time, whether permanent or casual. This is true whether or not the teenager is a student.

Table 5.8 Casual share of employment by age and sex, August 1984 and August 1996 (%)

	1984		1996	
	M	F	M	F
Teenagers	24.4	35.9	55.3	69.7
Young adults	11.9	16.7	28.8	30.5
Prime-age adults	6.6	27.1	16.1	27.2
Mature-age adults	8.5	25.9	26.8	37.9
Total	9.1	26.1	21.2	32.0

Note: This data only relates to employed persons aged 15 and over who worked in their main job for an employer for wages or salary, or in their own business if that business was a limited liability company. Employment status is determined by the main job held.

Source: Unpublished data from the ABS Labour Force Supplementary Survey, August 1984 and August 1996 Wooden 1998, p. 37

Table 5.8 sets out the casual share of employment for 1984 and 1996. The casual share of employment has risen alarmingly for both genders in all age groups. The male casual share of employment (as a per cent of all male employment) has risen slightly in comparison with the same statistic for females. However, the casual share of female employment in 1996 still far outstripped the casual share of male employment.

Table 5.9: Average weekly total income by gender and age for those with income, 1995/96[a]

Age	15	16	17	18	19	20	21	22	23	24
Male ($)	55	81	119	175	226	293	381	407	466	481
Female ($)	65	85	108	152	205	261	328	352	404	407
Percentage difference (%)	-15	-5	10	15	30	12	16	16	15	18

Note: Figures for 15- to 19- year olds are taken from Landt et al (1998) and are in 1994 - 95 dollars
Source: Beer, 1999, p. 89
Landt et al, 1998 and ABS, 1994 - 95 and 1995 - 96 Survey of Income and Housing Costs.

Table 5.9 sets out comparatively the average weekly income of males and females over the two commonly recognised school transition age brackets, 15 to 18 and 19 to 24. Beyond the age of 16, the average income of males exceeds that of females in increasing proportions year by year. Work by Beer (1999) shows that the proportion of females in the bottom quartile of incomes by age 24 in 1996 was 63 per cent, while the proportion of females in the top quartile of incomes by this age was 33 percent.

Table 5.10: 15-19 year-old DSS recipients by gender, percentage of total, August 1996 #

	Males	Females	Persons
Total DSS recipients	64 800	65 500	130 300
Proportion of teenagers	10%	11%	10%
Breakdown of DSS recipients			
Labour market payments:	**90%**	**76%**	**83%**
Newstart Allowance	19%	16%	17%
Job Search Allowance	43%	35%	39%
Youth Training Allowance	28%	24%	26%
Sickness Allowance	1%	1%	1%
Other payments:	**10%**	**24%**	**17%**
Sole Parent Pension’	0%	16%	8%
Disability Support Pension	10%	7%	8%
Special Benefit	0%	2%	1%
Total DSS payments	**100%**	**100%**	**100%**
Independent homeless rate recipients*	**7%**	**8%**	**7%**

Population estimates and numbers of DSS recipients have been rounded to the nearest hundred. Proportions have been rounded to the nearest per cent. As DSS data are point-in-time the figures may reflect seasonal variations.
* Independent homeless rate recipients are a subset of all recipients except pensioners.
Source: McClelland, Macdonald and MacDonald 1998, p. 108

Table 5.10 looks at 15 - to 19-year - old recipients of social security benefits in 1996. The overall proportions of males and females on social security allowances is about the same (10 per cent for males and 11 per cent for females). However, 90 per cent of males receive labour market payments of some kind, while only 76 per cent of female recipients receive these. The major difference between the genders is that 16 per cent of female social security recipients are on sole

parent pensions while no males receive such pensions. The 10 percent of males who receive non-labour market payments are all on disability support. Only 7 percent of females are on such support.

Table 5.11: Main activity at age 24, Australian Youth Survey sample

	Young people with labour market disadvantage & limited education over time*			Other young people		
Main activity at age 24	**Males**	**Females**	**Persons**	**Males**	**Females**	**Persons**
Employed full-time	46.1%	15.2%	28.0%	84.4%	75.0%	79.8%
Not employed full-time & not in higher ed or apprenticeship training	53.9%	84.8%	72.0%	15.6%	25.0%	20.2%
Employed part-time	9.2%	15.2%	12.7%	8.9%	15.2%	12.0%
Unemployed	33.9%	19.6%	25.5%	5.4%	4.9%	5.2%
Not in the labour force	10.8%	50.0%	33.8%	1.3%	4.9%	3.0%

Note: * Those who, by the age of 24, had not participated in any higher education or apprenticeship training, had not obtained a TAFE qualification, and had either been unemployed or out of the labour force for more than 25 per cent of their time since leaving school
Source: McClelland and Macdonald, 1999, p. 124

Table 5.11 looks down the track about seven years beyond school and sets out the 1998 employment figures for 24 year-olds. It compares the activities of those with a labour market disadvantage over time with the activities of all other young people.

Table 5.11 is a good place to end this brief review of the labour market position of young people of both genders. It confirms solidly the pattern of relationship between gender and the labour market for young people (ages 15 to 24) which has come through across the data in this section:

- More males than females have full-time employment;
- More females are employed part-time;
- More males are unemployed; and
- More females are not in the labour force.

Among those with labour market disadvantage[16] — the young people on whom equity policy needs to focus — differences between male and female rates of employment, unemployment and not-in-the-labour-force are extreme. Forty six per-cent of males with labour market disadvantage have full-time work by age 24 compared with 15 per cent of females. Another 15 per cent of females have only part-time employment compared with nine per cent of males; 34 per cent of males are officially unemployed compared with 20 per cent of females; and half the females in this labour market disadvantage category—50 per cent—have dropped out of the labour market altogether. The label 'Not employed full-time and not in higher education or training' in this Table sums up the statistics of 24 year old disadvantaged people who were in labour market

[16] These are defined on the basis of Australian Youth Survey (AYS) analysis as: Young people of age 24 "who, since leaving school, had not participated in any higher education or apprenticeship training, had not obtained a TAFE qualification, and had been either unemployed or out of the labour force for more than 25 per cent of their time (at least 18 months). Based on the AYS sample, this group is estimated to be 8.3 per cent of the population of 24 year olds" (McClelland & Macdonald 1999, p. 123).

difficulties at the time of the survey: the still part-time employed, the unemployed, and those who have dropped out of the labour market. 85 per cent of labour-market-disadvantaged females were in difficulties while 54 per cent of labour-market-disadvantaged males were in difficulties.

The transition from school to the labour market

By far the most important statistical data on the process of transition from school to work has been undertaken by the *Longitudinal Study of Australian Youth* project and particularly by Stephen Lamb with colleagues.

The transition from Year 12 subject clusters to tertiary education and the labour market

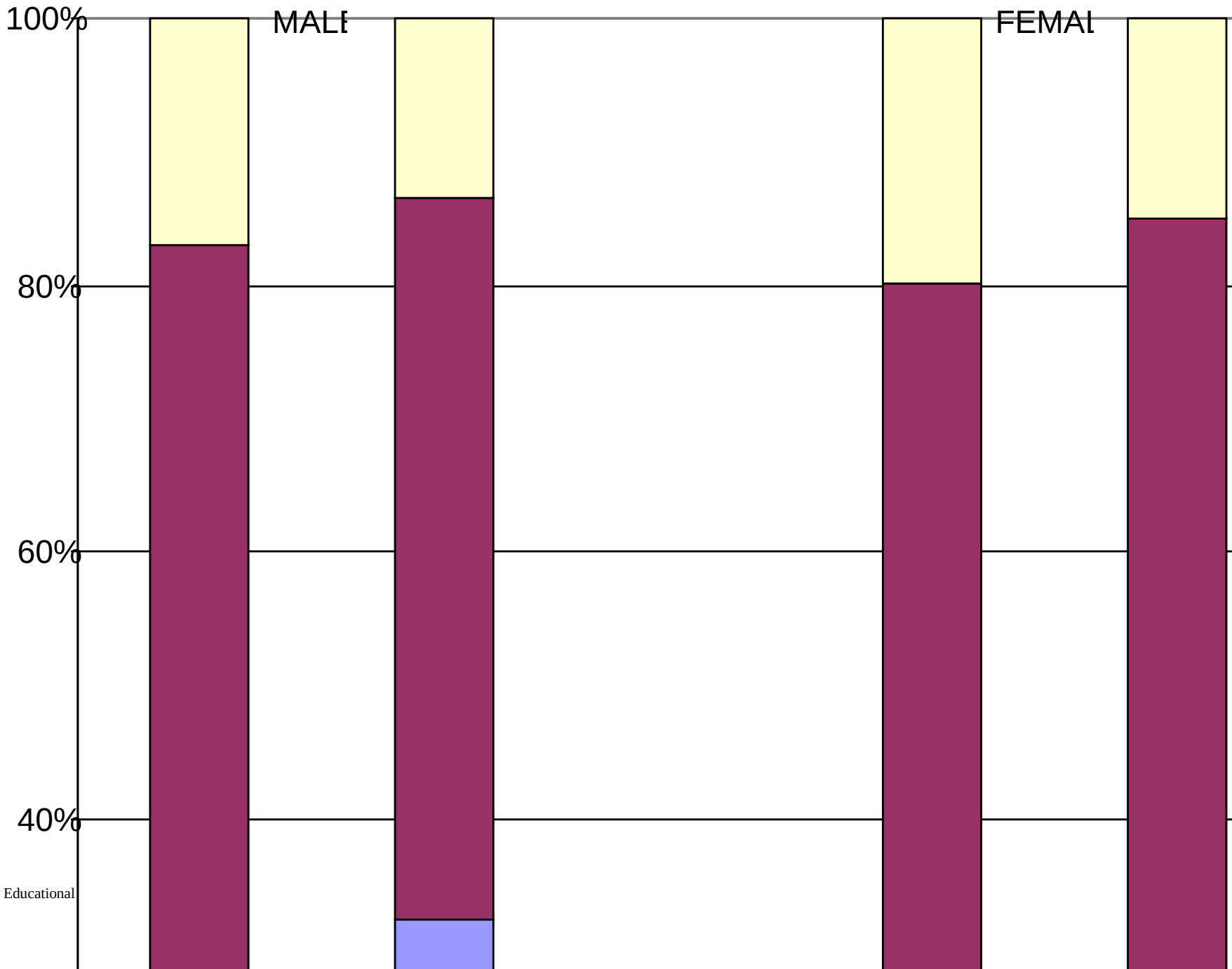
Lamb and Ball (1999) followed through on their analysis of Year 12 subject cluster choices, discussed in chapters 2 and 3, with work exploring the consequences for students in terms of post-school destinations. Where did each of the 20 subject clusters lead?

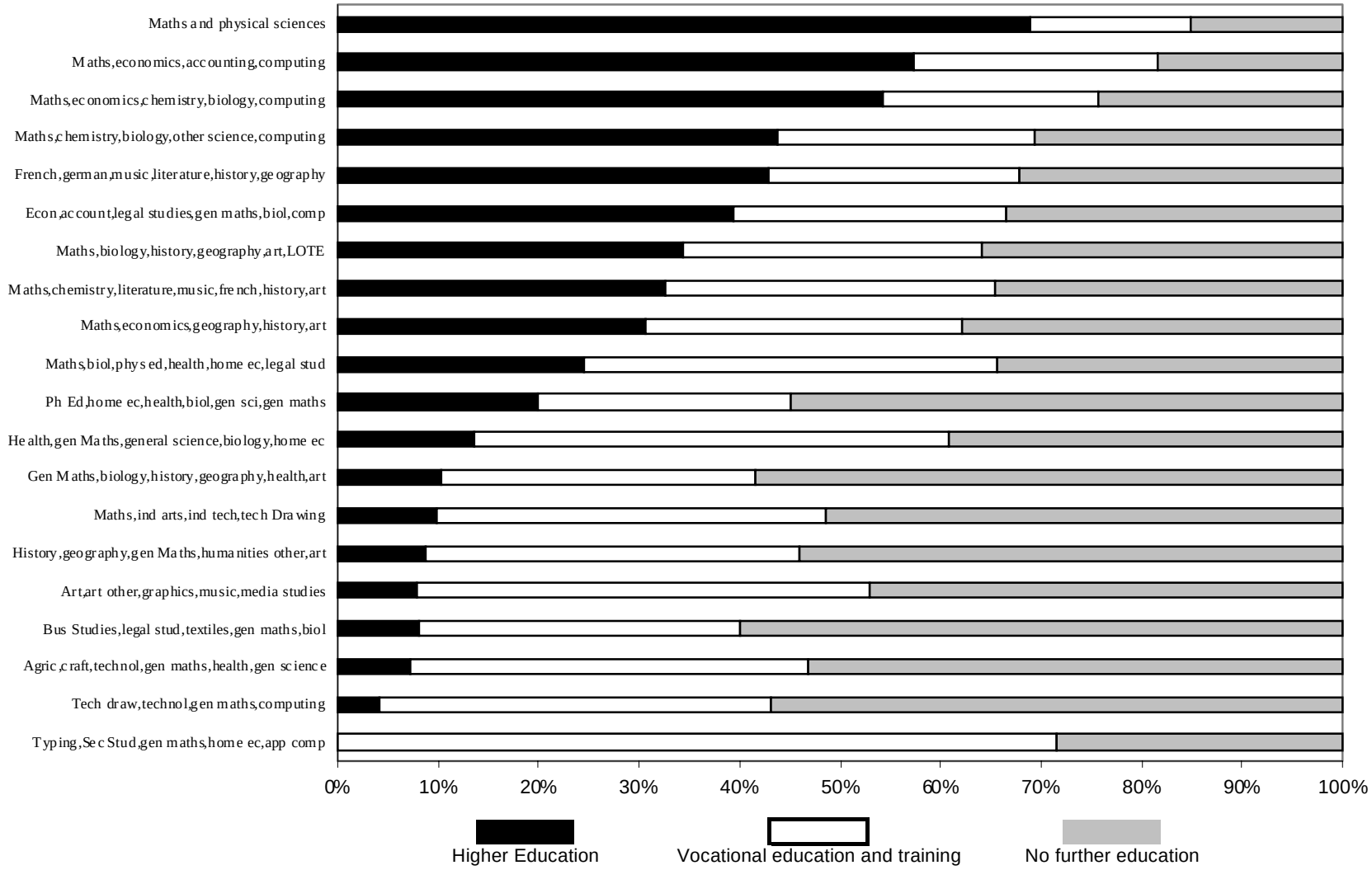
Figure 5.10 shows the immediate post-school destinations of males from each of the 20 subject clusters and Figure 5.11 shows these destinations for females.

It is immediately apparent that certain subject clusters are much less likely to link students through to further qualifications. As an important example, the subject cluster of general maths/biology/history/ geography/health/art, which is the most popular subject cluster for lowest to upper-middle SES females (and for lowest to upper middle female achievers), leads to further qualifications for fewer than 50 per cent of females. There are 11 subject clusters out of the 20 which offer a better chance of further education than this for females.

This subject combination also illustrates an important gender result - the same Year 12 subject cluster can have different consequence chances for male and female students. The general maths/biology/history/geography/health/art combination shows a lower proportion of males than females (around 40 per cent compared with 49 per cent) proceeding to further qualifications. An even more striking example of different gender consequences for the same subject cluster is the consequences of taking the agriculture subject cluster. This led to further study for nearly 50 per cent of males but only for well under 30 per cent of females.

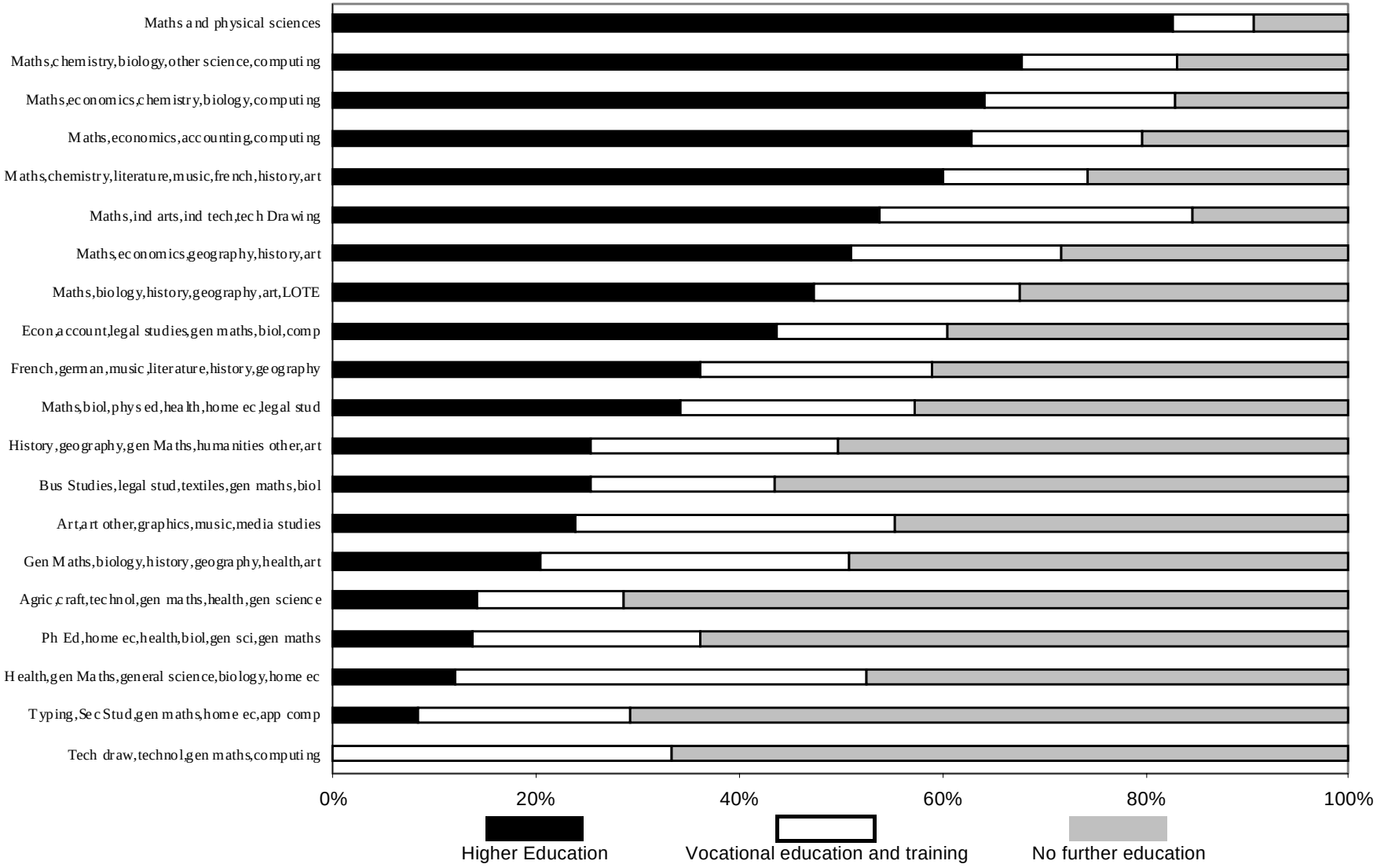
Figure 5.10: Participation in post-school education and training to age 19, by Year 12 study: males


100%
MALE
FEMALE
80%
60%
40%



Unpublished data. Produced by Stephen Lamb, ACER, from AYS data for this study. Sample is as for Lamb, S. and Ball. K. (1999) ibid

Figure 5.11: Participation in post-school education and training to age 19, by Year 12 study: females



Unpublished data. Produced by Stephen Lamb, ACER, from AYS data for this study. Sample is as for Lamb, S. and Ball. K. (1999) ibid

Another way to look at the gendering of consequences is to look at the extent to which each subject cluster led directly to university, to vocational education and training or directly to further education. The rank order of subject clusters by the criterion of the proportion of students who proceeded on to university study after taking that cluster (the criterion which has, indeed, been used) shows similarity in the top clusters and difference thereafter. The first ranked cluster for each gender was indeed the maths/physical science cluster. For males, the next ranked cluster was the male-favoured and equally knowledge-narrow cluster of maths/ economics/ accounting/ computing noted in chapter 2. For females, the second ranked cluster includes biology. For both, the top four best outcome clusters for proceeding to university study were focused on 'mathematico - logical formulaic knowledges' to use the phrase from chapter 2's discussion of these clusters, or these knowledges plus biology. Thereafter, each gender's list is differently ordered. The same kind of ordered list can be made in relation to the proportion of students of each gender from each cluster who proceeded on to Vocational Education and Training or who moved directly out of education after Year 12.

Figures 5.10 and 5.11 also indicate that a larger proportion of males from almost all Year 12 subject clusters make greater use of the vocational education and training post-school enrolment option. By contrast, a larger proportion of females from almost all Year 12 subject clusters make use of the post-school option of university enrolment. This generalisation notably includes students who took the maths and physical science subject cluster: a larger proportion of the females from that subject cluster go on to university than males. This does not mean that there are more females than males going on to university from that traditional background. Many more males than females take the maths and physical science subject cluster in the first place. What the finding probably indicates is that more females who choose to take that subject cluster in Year 12 do so deliberately in order to gain access to university while some boys are simply choosing the subject cluster out of a gendered cultural habit without any firm intention of university study.

The transition from Year 12 to the labour market

Important new work on the process of transitioning from school to the labour market has recently been completed by Lamb and McKenzie (in press)[17] using Australian Youth Survey data over a seven to eight year period in order to track what happened to young people over the first seven years post-school. The study included only those in the school leaving cohort[18] who did not complete a university degree or a TAFE course of Diploma standard. Thus this is a report largely on those who did not proceed to tertiary education but instead went into the labour market either directly or through apprenticeships. As this is a cohort who left school at the end of the 1980s, traineeships were not on offer. We include tables and figures from Lamb and McKenzie for DETYA use in this *Report* with permission.

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[17] The authors wish to thank Dr Stephen Lamb and Dr Philip McKenzie for allowing us to use their research data for this project, and for re-analysing some of their data for this *Report*. It should be noted that Lamb and McKenzie own copyright for this material, and their permission must be obtained for use of this material outside DETYA.

[18] Year 1 of the seven year study is defined as the first year after Year 12. For students who left in Year 10 (or Year 11) this is already two years (one year) down the track. Nevertheless the age cohort is kept in step and these ex-students are picked up in their age cohort in the year beyond Year 12 for the majority and included as Year 1 etc alongside their earlier school peer group.

Lamb and McKenzie divide the seven year post-school experiences for those not on tertiary graduation routes into eight overall patterns. Four of these patterns (which they name 'pathways') they see as likely to be positive experiences for a young person who lives through one of them. These are: full-time work, training/work, further study/work, and brief interruption/work. The other four patterns they regard as potentially destructive experiences. These are: extended interruption/work, mainly part-time work, mainly unemployment, and mainly not-in-labour-force.

Table 5.12: Percentage distribution of main activity across the first seven post-school years, by highest level of school attainment, 'of those who did not obtain university qualifications or TAFE diplomas'

	Highest school attainment							
Pathway	Year 9		Year 10		Year 11		Year 12	
	M	F	M	F	M	F	M	F
Full-time work	21	5	19	20	14	24	18	25
Training/work	14	0	31	4	34	4	16	4
Further study/work	0	0	2	1	4	2	17	14
Brief interruption/work	25	11	20	25	26	29	24	24
Extended interruption/work	14	16	11	13	6	16	14	15
Mainly part-time work	4	5	4	7	3	7	3	6
Mainly unemployment	21	5	12	6	12	5	7	6
Mainly not-in-labour-force	0	58	2	25	2	14	1	7
	100	100	100	100	100	100	100	100

Source: Lamb, S. and McKenzie, P. (In Press) Patterns of Success and Failure in the Transition from School to Work in Australia, , ACER, Canberra, p. 28. COPYRIGHT ACER

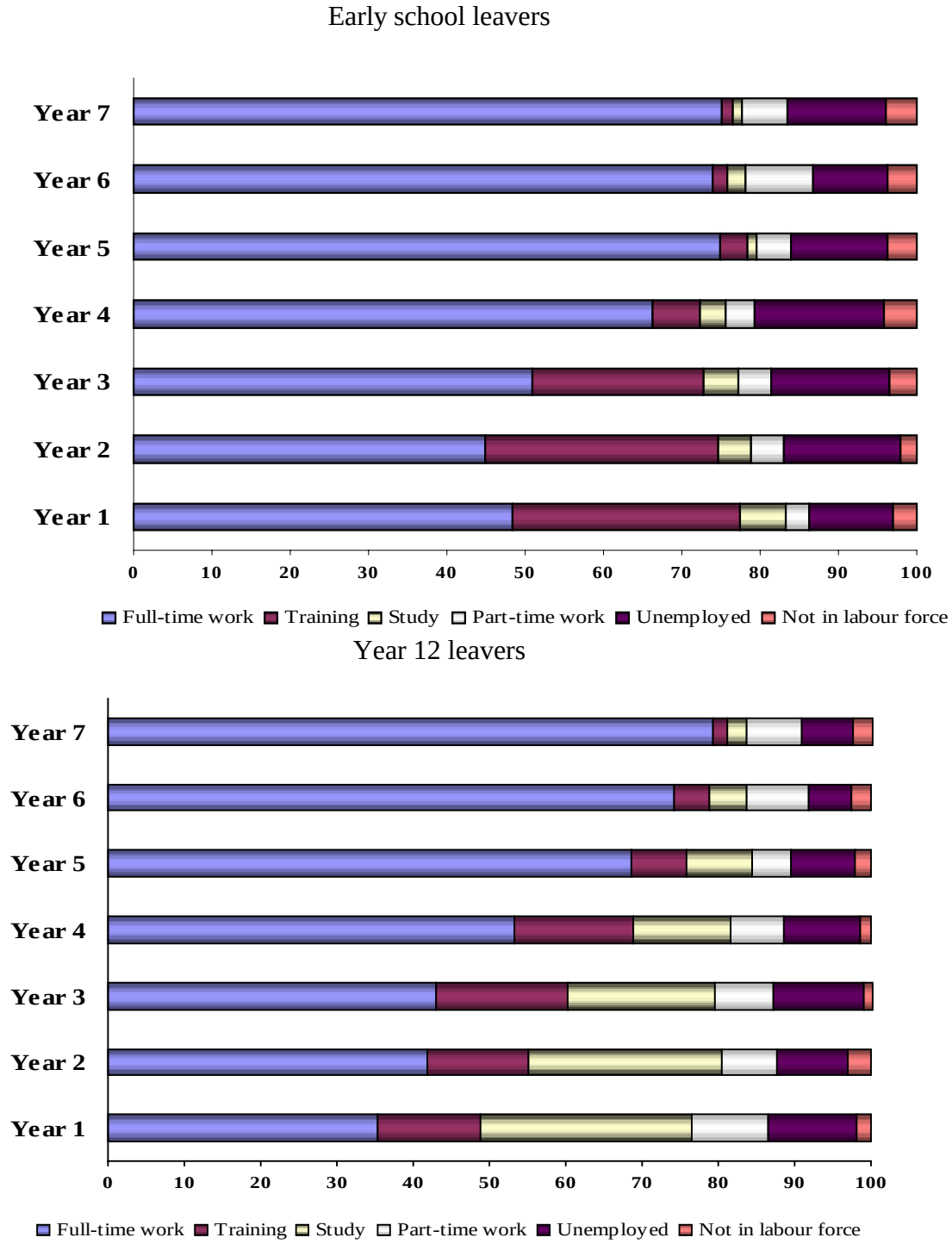
Table 5.12 takes school leavers by highest school attainment and looks by gender at the percentage of non-tertiary qualified who have experienced each of these eight pathways over the seven post-school years. There are clear patterns by attainment and by gender.

Important findings include the following. First, a larger percentage of females than males found themselves in three of the potentially destructive pathways no matter what attainment level they had reached at school. These pathways are: extended interruption/work, mainly part-time work, and mainly not-in-labour-force. Second, a larger percentage of males than females found themselves in the potentially destructive pathway of unemployment.

School completion: Is it important?

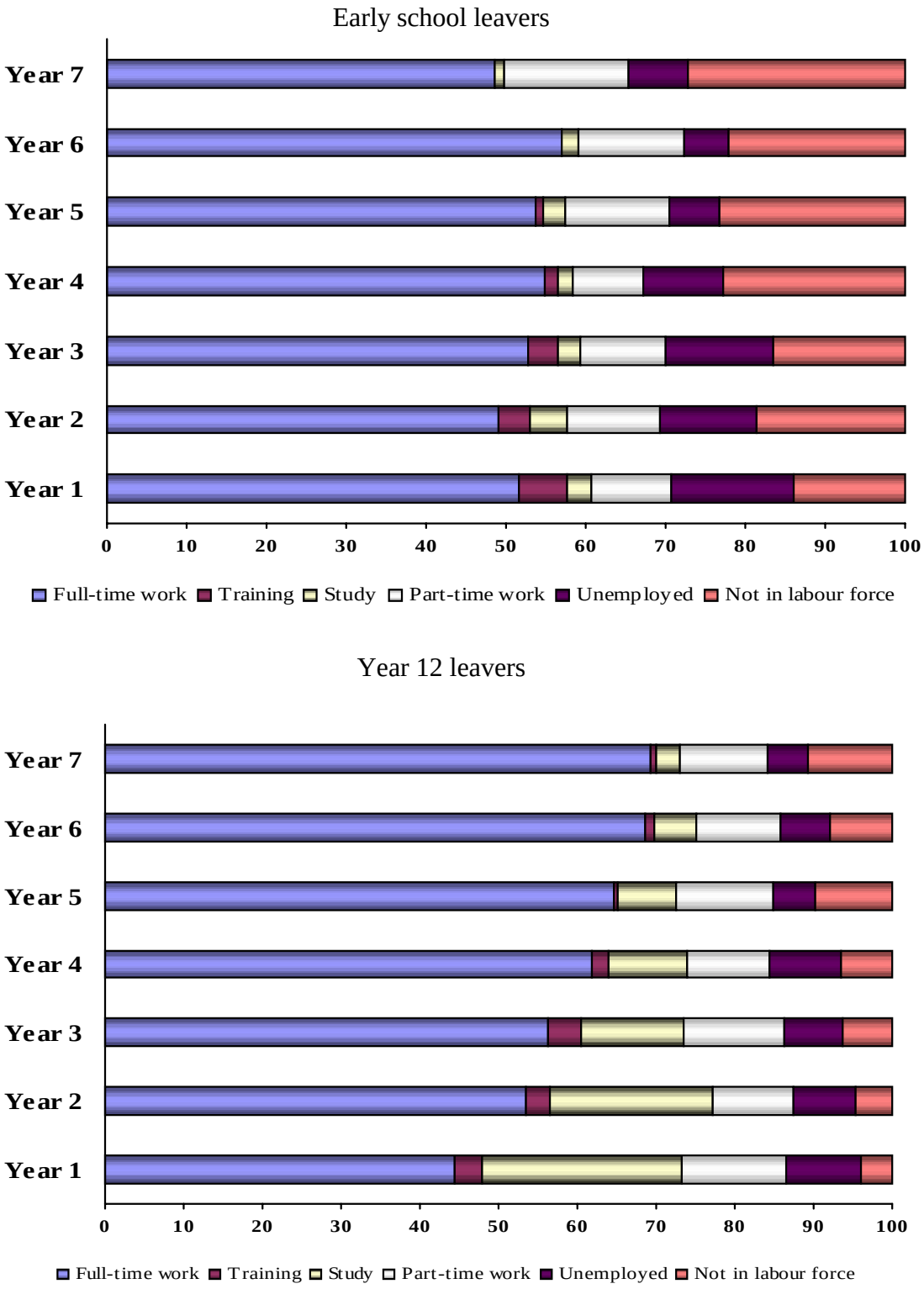
Figure 5.12 and Figure 5.13 look at early school leavers against school completers among non-tertiary achiever males and females. They map out the percentages of males and females experiencing full-time work, training, study, part-time work, unemployment or being out of the labour force in each of the seven years of the survey.

Figure 5.12: Percentage distribution of main education and employment activity for males, by school attainment and year-out-of-school



Source: Lamb and McKenzie (In Press), p. 8. COPYRIGHT ACER

Figure 5.13: Percentage distribution of main education and employment activity for females, by school attainment and year-out-of-school



Source: Lamb and McKenzie (In Press) p. 9. COPYRIGHT ACER.

The most important finding is as follows: *there appears to be much less gained by males than females in completing Year 12*. The pathways available to male early school leavers through forms of work-related apprenticeships and training mean that, by their seventh year post-school, early male leavers show a pattern of success in achieving full-time employment (around 79 per cent) which almost equals that of males who stayed to complete schooling (around 83 per cent).

The most notable difference in the seventh year post-school pattern is that about 13 per cent of early school leaver males compared with 7 per cent of Year-12 completer males were unemployed. A few more early school leavers were not in the labour force, and a few less were still undertaking study. These last mentioned factors affected just a small minority of males. The overwhelming message of the seventh – post school - year data for males is that, *while staying on extra years to complete schooling is very important in providing access to further study for those who choose to take it, it only seems to offer a four per cent greater chance of transitioning into full-time employment for males*.

For females, the situation is very different. *Only 51 per cent of female early school leavers are in full-time employment at the end of seven post-school years while 72 per cent of female school completers have attained that goal*. Although work - related apprenticeships and training are accessed slightly more by early female leavers, this is not an accessible post-school route for the vast majority in either attainment group. Further study, by contrast, provides a route forward for Year 12 female leavers which few female early school leavers can access. The result is that, *after seven years, a huge 20 per cent more female school completers than non-completers have full-time work. More female early leavers than school completers are unable to escape part-time work (16 per cent: 11per cent), a few more are unemployed, and more of them by a ratio of 5:2 (28 per cent: 11 percent) are not in the labour force at all.*

Two important points stand out:

- There was a different pattern of access directly from school to the full-time labour market for females than males, no matter whether they were school completers or not. The traditional male apprenticeship/training route is the major obvious difference in the pattern.

- Previous data has largely turned a blind eye to the percentage of females who are not in the labour force as if they somehow do not exist in the way that those in the unemployment statistics exist. These figures show that when the percentage of those not in the labour force are added to the proportion unemployed, a larger percentage of females than males were excluded from an earned income in all years in both attainment groups.

It is also worth noting that these figures suggest that employers may believe not just in a gender-segmented labour market in terms of appropriate occupations but also in gender segmentation in relation to full-time and part-time work for young people. It is females who, even with the same years of schooling, are largely left in part-time work. This is to put the matter in terms which make young people seem acted upon rather than agents. If we put it the other way round, it may be that more males resolve to seek full-time work only and will wait for it (this might explain why there are more unemployed males) while females are more likely to take part-time work if it is offered. It is also possible that decisions for this age-group regarding part-time work and being 'not-in-the-labour-force' are related to parenting and

family responsibilities. Full-time parenting is, of course, a legitimate option for girls. Nonetheless, this should not prevent girls from pursuing education and training that enables them to be economically independent and secure. Neither should it be assumed by schools or the labour market that girls will necessarily choose full-time parenting, nor should such a choice justify lesser attention to their education and training or to their equal right to full-time employment and an equal income. And, at the same time, boys should be encouraged to consider the relationship between their parenting responsibilities and their work and training directions.

Transition by socio-economic status and gender

Figure 5.14 and Figure 5.15 use the same non-tertiary achiever sample to set out pathways for males and females from low and high socio-economic backgrounds.

These figures show gender as more important than socio-economic status in ensuring a pathway to full-time employment for those who do not obtain a degree or TAFE Associate Diploma. They suggest the need for females, more than males, to have formal qualifications.

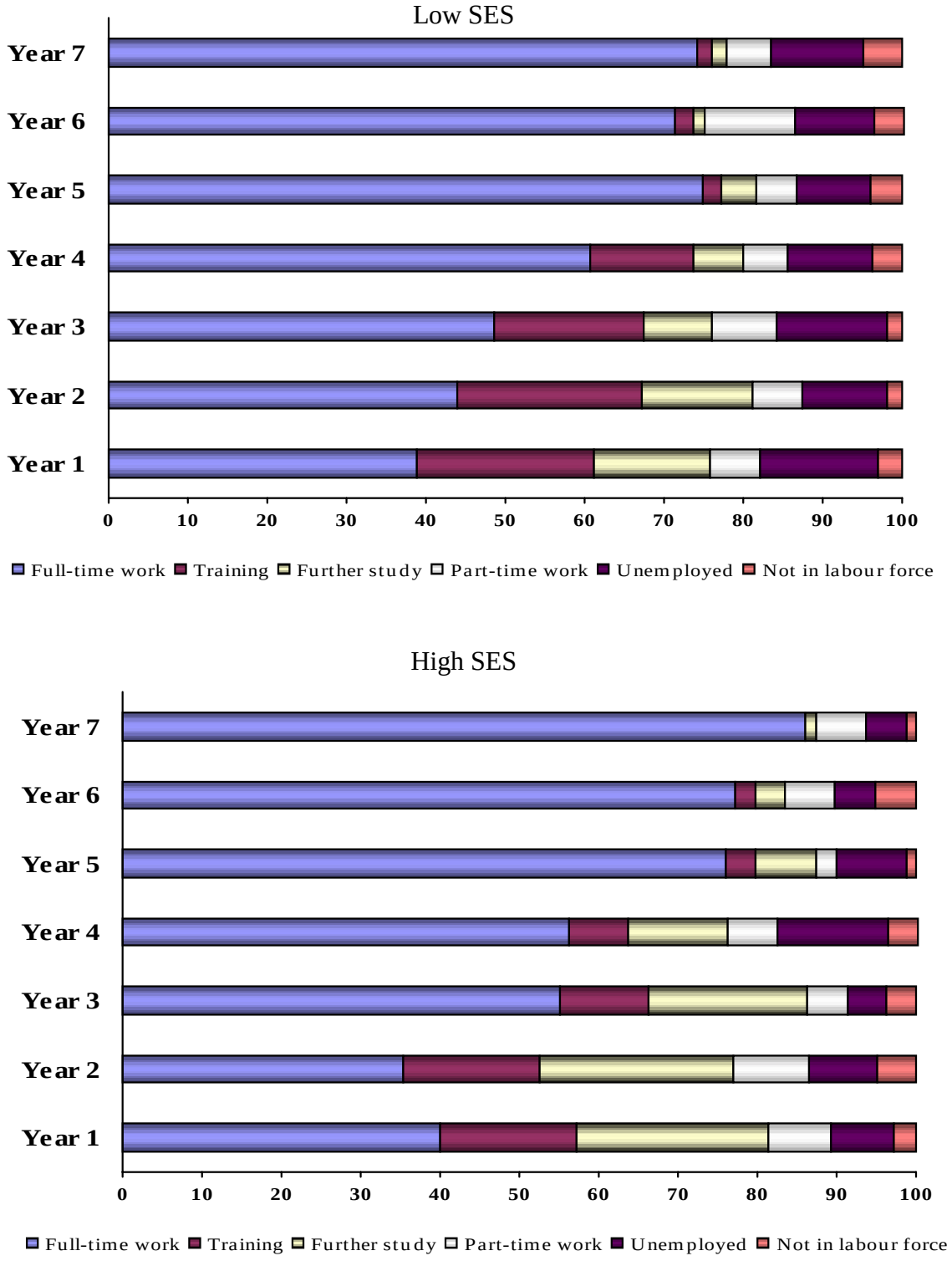
A greater percentage of low SES males in this study (around 75 per cent) than high SES females (around 65 per cent) are in full-time employment by the seventh post-school year. Other aspects of the different pattern of male and female post-school experiences also overwhelm any social class effects. These aspects include:

- the greater use of training by males,
- the higher proportion of females unable to move from part-time work to full-time work,
- the greater proportion of unemployed males and,
- conversely, the much greater proportion of females not in the labour force so that, overall, there are more females than males without access to an earned income.

Low-SES females are the least likely to reach full-time employment and the most likely not to have access to an earned income, ie unemployed or not-in-labour-force. Their difficulties are considerably worse than high-SES females who, in turn, have more difficulties than low-SES males.

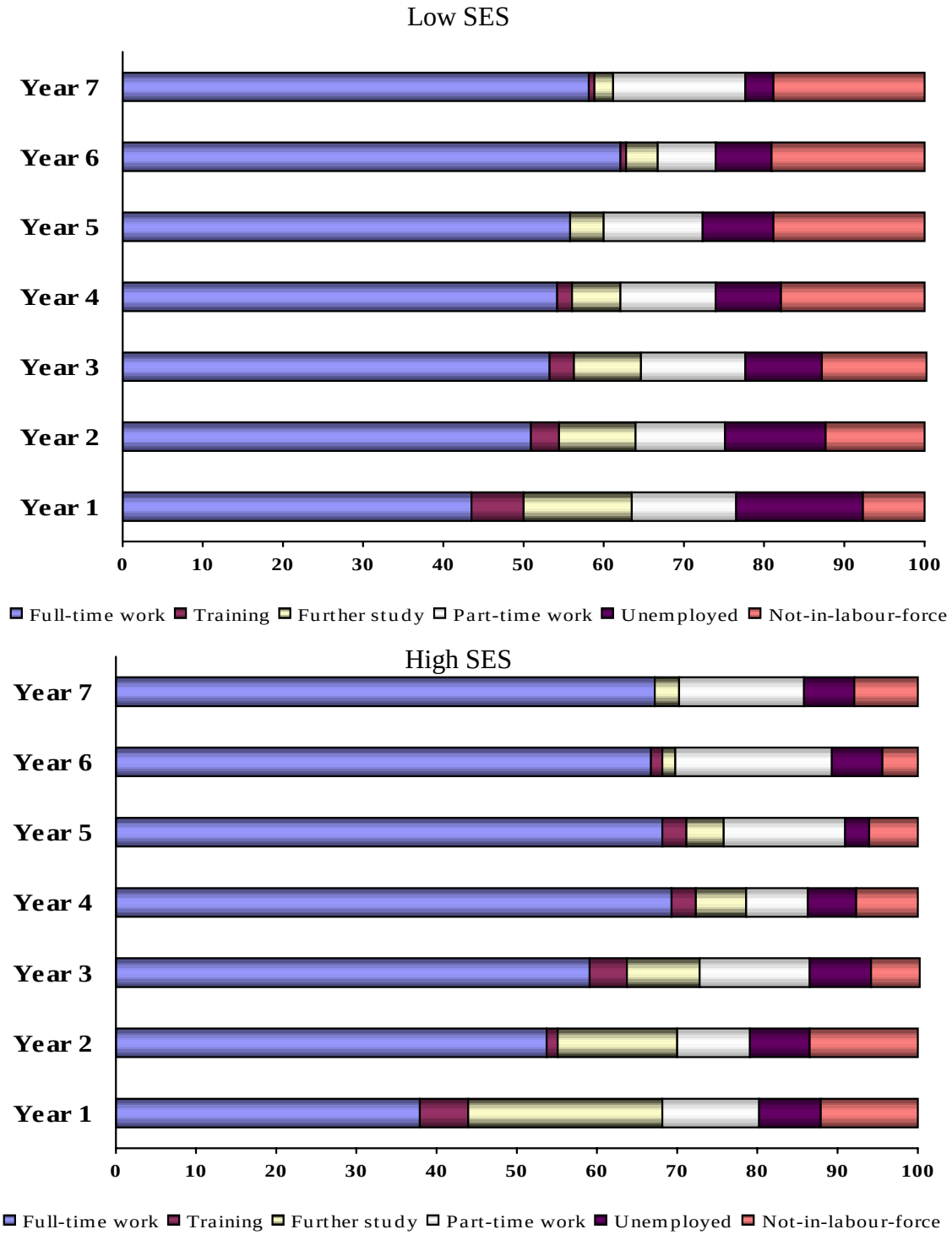
Most high-SES males do very well without further qualifications: by the seventh year around 85 per cent of them are in full-time work.

Figure 5.14: Percentage distribution of main education and employment activity of males, by socio - economic status, and year-out-of-school



Source: Lamb and McKenzie (In Press) op cit, p. 13 COPYRIGHT ACER

Figure 5.15: Percentage distribution of main education and employment activity of females, by socioeconomic status, and year-out-of-school



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Transition by location and gender

Figures on this issue are available in the Lamb and McKenzie LSAY monograph (in press) and are repeated with permission in our *Data Collation and Analysis Report* as Figures 6.7 and 6.8.

Gender shows itself to be much more of a factor than locational background in setting the pattern of post-school experiences. By the seventh year beyond school, around 79 percent of rural males (ie those who completed their schooling in rural high schools) and some 74 percent of urban males were in full-time employment. *A few more per cent of urban males were unemployed than rural males* (possibly because rural high school leavers, facing unemployment locally, come to the cities).

A lower percentage of both rural (62 percent) and urban (65 percent) females are employed full-time than males from either background. More rural females are either not in the labour force, unemployed or only part-time employed than any other category in these two graphs. Urban females follow fairly closely behind. *This locational data suggests, just as the SES data did, that the completion of Year 12 increases the chances for females of all backgrounds of moving into a path of stable full-time employment, to an extent that is not true for males.*

Conclusion

The data in this chapter shows clearly that neither the greater percentage of girls who stay at school to Year 12, nor the better performance of the average girl across a wide range of subjects is translating into better long - term outcomes for females than males in obtaining work or in being paid at higher average rates than males when they do obtain work. Indeed the reverse is clearly the case.

It also suggests that gender, not attainment, is still the most powerful predictor of long-term full-time employment, at least among school leavers who do not obtain tertiary qualifications. Lamb and McKenzie undertook a multi-variate logistic regression analysis which powerfully makes this point.

Table 5.13: Predicted probabilities of participating in a pathway expressed as percentages, by selected background characteristics

	Pathway								
Attribute	Full-time work	Training/ work	Study / work	Brief interruption / work	Extended interruption/ work	Mainly part-time work	Mainly unemployed	Mainly NILF	Total
Comparison group+	18.6	21.2	11.9	23.7	10.2	3.3	10.1	0.8	100
Female	25.6**	3.3***	9.3	26.5	14.2*	8.1***	5.8**	7.2***	100
Early school leaver	16.2	33.4**	1.8***	22.3	7.6	3.4	12.7*	2.5***	100
Live in rural area	18.5	25.6	9.0	21.2	12.2	2.4	10.1	1.1	100
High SES	19.3	15.0	25.3***	19.9	11.0	2.3	6.8	0.4	100
Upper middle SES	16.8	16.7	19.3***	21.9	16.3**	2.8	5.9	0.3**	100
Lower middle SES	25.2	19.0	13.1	26.1	9.6	2.0	4.6**	0.4**	100
Catholic school	20.9	17.3	17.9*	25.4	8.0	5.6	4.6*	0.4	100
Non-Catholic private	14.6	14.6	25.9***	22.3	10.2	3.0	8.5	1.0	100
Disability	13.2*	9.7**	9.0	21.8	14.6	7.2*	20.3*	4.2***	100
Non-English-speaking background	10.6**	19.6	13.1	27.1	11.7	2.8	14.2*	0.8	100

Notes: + The control group on which the multivariate logistic regression analysis was based includes low SES males without a reported disability from government schools in urban areas, who had completed Year 12, and who had Australian-born parents.
** p>0.10 ** p>0.05 ***p>.01*
Source: Lamb and McKenzie (In Press), p. 34, COPYRIGHT ACER

The base for the comparative analysis in table 5.13 is: low - SES, non-disabled males of Australian - born-parents who completed Year 12 in a government school in an urban area (top line of table). Standing out as the single factor which makes a student most unlike this control group is the simple fact of being female. This factor alone makes a school leaver seven per cent more likely to go directly into full-time work (25.6 per cent:18.6 per cent) but 18 percent less likely to go the stable route to full-time employment via training (3 per cent:21 per cent). Overall, then, taking these two sure-fire routes to full-time employment together, the fact of being female makes a school leaver eleven per cent less likely than a member of the control group to be on a relatively reliable full-time employment pathway from school leaving onwards (29 per cent:40 per cent).

The fact of being female alone makes it somewhat more likely that the school leaver will be on the extended interruption/work path (14 per cent:10 per cent), highly more likely that they will access only part-time work (8 per cent:3 per cent), and highly more likely that they will not have access to the labour force at all (7 per cent:1 per cent) compared with the control group. On the other hand the control group is more likely to be unemployed (10 per cent:6 per cent).

While other factors, such as being an early school leaver (but otherwise from the same background) make a significant difference to the chances of taking some of these pathways, gender makes a significant difference to the chances of taking six of them and three of these differences are significant at the .01 level. Indeed, on the basis of this table, being female affects more pathway possibilities than being disabled.

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6. EXPLAINING POST-SCHOOL DESTINATIONS

One purpose of this chapter is to explain differences in the experiences of males and females in the post- school labour market and in education and training. Another purpose is to explain the differences in their experiences of disadvantage. A third purpose is to discuss young people's post-school labour market experiences and to indicate the difficulties many are experiencing and their strategies for dealing with them.

In chapter 5 we showed that there are some gender reversals which come to light once we consider the destinations data. If we return to thinking in male/female terms, and if we look overall at patterns of participation in all of the tertiary sector and the labour market, then in terms of post-school rewards in general, females are worse off than males. This is despite the laudable improvements in their schooling performances. There are major gender differences and inequalities in industries and occupations, full- and part-time work, unemployment and out of the labour force, patterns of education and training, and their relationship to work. One question explored in this chapter is: 'why does gender become such an important variable in comparison with others, after school finishes?'

The purpose of this chapter is to identify the literature that explains the puzzle of this gender reversal, how males and females are disadvantaged because of this reversal, and how youth in general are experiencing difficulties. A range of explanations exist, depending upon which focus is used. It is useful to consider these under three headings. Some explanations focus on what students bring from school to their post-school lives – their credentials, other experiences and personal resources. Others focus on the structural and cultural character of the worlds that students enter – education and training, the labour market, work and non-work and the economy. A third focuses on the ways in which young people travel from one through the others – the routes they take and the transitions they negotiate. We will divide this chapter accordingly:

- The resources students bring forward from their schooling years.
- Post-school worlds.
- Travels from school through post-school life.

The resources students bring forward from their schooling years

There is no doubt that students' schooling outcomes and their experiences in and out of school during their schooling years have an important impact on their post-school lives. A great deal of attention has been paid to their outcomes from schooling – to their educational achievements, the credentials they accrue and the opportunities these make available to them in the form of paid work, study or training. We will consider these before we look at the less examined question of their experiences in and out of school and at the manner in which these translate.

As indicated in chapter 4, schools are sites of considerable influence in the post-school destinations of males and females. The most influential explanation for the location of males and females in the labour market and for their post-school education and training directions is offered in various papers and reports by Richard Teese, Stephen Lamb (separately and together) and their colleagues (Lamb 1996, Lamb 1997, Lamb 1998, Lamb & Ball 1999, Lamb & McKenzie 1999, Lamb, Polesel, Teese, with Davies & Charlton 1995, Teese, Merryn, Charlton & Polesel 1995). They observe that different school subjects and clusters of

subjects have differential vocational linkages and these are strongly linked to both class and gender. They note that boys appear to take three curriculum pathways to their post-school lives – technical, professional and the combination of economics, accountancy, and computing. Each has a direct linkage to paid work. Girls tend not to have such distinct patterns, although their subject choices are still coded by SES. With regard to girls in general, Teese *et al* (1995) argue that despite their improved and superior performance and participation 'the advantages which girls appear to enjoy [because of this] are often illusory' (p. xiii). Girls remain over-represented in subjects with poor vocational linkages.

The general argument is that such 'choices' are the 'critical filter' to post-school opportunities. At a superficial level, this may seem to imply that if only girls made choices more in the manner of boys then the issue would go away. However, this is not what Teese *et al* conclude. They argue that the school curriculum is valued and stratified by gender, and that girls and boys engage with it and are 'rewarded' by it in highly gendered ways. This argument is in keeping with those noted in chapter 4.

In chapter 4, the argument was also noted that there are gender differences in perceptions of the relevance and purposes of schooling, although such arguments are limited with regard to girls because they imply that girls do not connect their schooling to their future paid work. However, the evidence seems to suggest that girls' extended time at school is very much connected to their post-school opportunities. They attend to personal and social relevance *and* to utility. Those girls who complete Year 12 are much better off than those who do not. Completion of Year 12 has considerably greater effect on the earnings (at age 24) of young women than young men. Ainley and McKenzie speculate that 'It may well be that completing Year 12 opens up a proportionately wider range of job possibilities for young women than for young men, since most of the job market is open to men in any case' (Ainley & McKenzie 1999, p. 113). This certainly helps to explain the anecdotal evidence that many girls are more keen to stay at school than many boys.

Indeed, the meanings and significance of participation in post-secondary education are rather paradoxical for both boys and girls. On the one hand it would seem that the school/work nexus has to some extent been broken for certain males, who, despite their generally lesser achievement, are better able to access training and jobs. On the other, it seems the nexus has remained tight; as long as boys access the right subject combinations they can readily connect their schooling to vocational opportunities — even if they do not perform very well.

Girls' schooling, however, does not pay off for them as well as it might, but they are dependent on it. This is indeed a paradoxical set of circumstances. Add to this the suggestion that girls' travels through school 'prepare them better for life' than do those of boys. As indicated earlier, girls' final years of schooling do appear to develop their social and cultural capital as well as their human capital. Boys' engagements with schooling are much narrower and appear to minimise personal and social relevance.

The key issues here are associated with two levels of practice – a surface and a more subtle level. At the surface level, we are apparently dealing with issues of choice, attitudes and values. At a deeper level, there appear to be gender codes associated with the curriculum, work, and lifestyle which guide these choices, attitudes and values. Individual 'choices' are somewhat standardised by gender. In certain ways, both girls' and boys' choices are sensible and rational in the light of both their values and labour market chances. But there are several problems here. One problem is that girls have to perform better in school and stay at school

longer than boys in order to access a reasonable place - not even an equal place - in the world of paid work. Another problem is that, in general, while girls accrue social and cultural capital through their post-compulsory schooling, boys may not. Indeed, as the studies of the social outcomes of schooling show (noted in chapter 4), boys' concern with community well-being declines the longer they stay at school. This may lead to a gender imbalance in the social and cultural fabric. It may mean that some young males miss out on full development of skills which enable them to participate equally with females in managing their responsibilities as members of a democratic community. In an era of increasing social and cultural polarisation and violence, it is important that all young people have these skills and this therefore requires educational intervention. Given that schools prepare citizens as well as workers, they have a responsibility to educate young people about ways of living socially and ethically responsible lives during and after school.

Such educational intervention requires pedagogical innovation with regard to the education of boys in particular. This is the case as boys' utilitarian choices do tend to 'pay off'. Further, given the lower status ascribed to school knowledge associated with the humanities, the social sciences and the arts, encouraging boys to voluntarily widen their choices to include them is likely to be a challenge. But it is not simply a matter of changing boys' or indeed girls' choices. A major research question here is 'how can the identification of certain types of knowledge with specific genders be challenged to the advantage of both genders?' Another major research question is 'why are the subjects girls choose at schools and universities so poorly linked to vocational training and work?'

Understanding the connections between gender identity, school knowledge and work is now recognised by some as an important component of career and vocational education (Dwyer, Harwood & Tyler 1998, Lamb & Ball 1999)**.** However, the tendency in the literature is to draw a causal relationship between the gender segmentation of the curriculum and the gender segmentation of the world of work. That logic has its limits, however, when one considers the relative differences in where males and females are located in the world of work.

In addition to gender, the destinations of young people are strongly influenced by other cultural and socio-economic factors. After examining the influence of socio-economic status, type of school and rural/urban differences on subject choice, Lamb and Ball have concluded that children from different backgrounds achieve different outcomes from school *because they do not, in fact, receive the same schooling* (Lamb & Ball 1999). In general, they receive a form of schooling that steers them towards the backgrounds they come from – be they socio-economically advantaged or disadvantaged. Again, while the paths they take may be construed as a matter of choice, the systematic dimensions of the outcome point to the strong probability that other factors are at work. These include the disadvantages associated with 'background'. Clearly, girls and boys from low - SES backgrounds and some rural and remote groups live their lives in circumstances of great difficulty, which impacts on their schooling and their post-school lives.

In this respect, it is important to assess the role that VET in schools is currently playing. Historically, vocational education in schools has been associated with working class boys. This connection remains with regard to boys, but has also extended to low - SES girls. Those from unskilled and skilled family backgrounds are more likely to take VET in schools than those from professional/managerial or clerical backgrounds. Historically, the schools with the biggest programs have been in low - SES locations. This remains the case (Misko 1999). Further, VET programs tend to operate in government rather than private schools (14.5 per

cent) and in Catholic (10 per cent) rather than non-Catholic (4.5 per cent). VET in schools is also segmented by gender and there is a slightly lower representation in vocational courses of girls in comparison with boys (Misko 1999). As indicated in the previous chapter, the outcomes of VET in schools remain gendered with regard to apprenticeships, traineeships, and further education and training. Predictably, this leads to stark gender differences in the world of work within the same SES group. However, as Misko (1999) observes, while the post-school education and training pathways that VET students take are known, it is not known whether VET in schools actually enhances their employment as opposed to their further training prospects.

VET in schools has been promoted as a means of ensuring that 'students at risk' receive the sorts of education that will connect them to improved post-school opportunities in either work or education and training. However, the work of Angwin *et al* (1998) raises questions about the extent to which VET in schools is serving the needs of students most at risk of not completing school. They imply that for the most disadvantaged students, VET is too demanding and comes too late. They observe that the problems such students have with school arise much earlier and require earlier attention. Indeed, VET may not retain at school those students who are most at risk, and their early departure from school may further disadvantage them. As Angwin *et al* note, poor literacy and numeracy are an issue here, but that cannot stand alone as an explanation for early school leaving or for school failure as Dwyer *et al.* (1998(a), 1998(b)) make clear. Neither can improvements in numeracy and literacy stand alone as a solution to the problem of some students leaving school early without work to go to. What must be understood is their relationship to poor performance more broadly, to negative school experiences and to poverty. Indeed, it is the intersection of these factors which needs to be better understood. A vicious circle is in operation in this instance, but how it works is not at all clear and requires longitudinal qualitative research to tease out its intricacies. There is a need for much better information about the impact of poor literacy and numeracy at different stages of schooling for different groups of students in poverty. Meanwhile, there is research evidence to show that the learning environments which are typical of conventional secondary schools often compound rather than address the problems of disaffected school students or those seeking to return to school. It is not just a matter of improving students' literacy. It is also a matter of encouraging more schools to adopt the sorts of learning programs and environments that have been shown to be compatible with their success (Ward *et al* 1998, Brooks *et al* & King 1999).

Students take other experiential and personal resources forward from their schooling years to their post-school years. Key Competencies and an 'enterprising sensibility' have both been promoted by policy and taken up by systems and school, as in the Adelaide Declaration (MCEETYA 1999). The extent to which these make a difference is not clear, as the research has not been done. Other concepts that have emerged recently include 'resilience' (Johnson & Howard 1998), and 'social capital' (Martinez 1999). The resilient student is demonstrably able to remain motivated, despite constant setbacks, and to positively negotiate and surmount difficult circumstances. Those individuals and families with social capital are understood to possess and sustain the contacts, relationships and networks that informally connect them to work opportunities. James (1999) observes that, with jobs so scarce and potential applicants so plentiful, employers may find it more convenient and less time consuming to secure staff through personal recommendation. Such notions have curriculum implications that should be explored further as should the changing patterns over time of employer recruitment.

A third factor involves part-time work while at school. Robinson (1999) shows that part-time work assists students to find work after school. In comparison with students who had not had a part-time job while at school, she shows they were less likely to be unemployed at age 19, experienced shorter periods of unemployment and some had slightly higher income. She suggests that this can be explained by their enhanced job-related knowledge and skills, the possible perception by employers that they have valued work habits and attitudes and, in particular, motivation (Robinson 1999, p. 34). However, as Misko (1999, p. vii) shows, drawing from the ABS:

> Students have a larger share of part-time and casual work than workers who are not in education. This is especially so for non-student workers who are in the 15-19 year age group. In addition, part-time work is very common among Years 11 and 12 students with a third of Year 12 students working part-time. ABS figures show these are more likely to be girls from high-income families who are doing well at school. Workers who are not students have a lower share of the casual and part-time work available with females in the 15-19 year group being more disadvantaged.

Here we see a very stark example of the ways in which extra advantage accrues to the advantaged and how the disadvantaged are further disadvantaged – and we can also see their inter-relationship.

Post-school worlds

In contemporary policy, students are informed of their post-school possibilities, opportunities and risks through the language of ‘pathways’. The proposed pathways are multiple, variously providing them with a route to follow from the compulsory to the post-compulsory years, to university, to VET, to apprenticeships and traineeships, and to employment. The high-risk ‘pathways’ to unemployment or to being out of the labour force altogether are not conventionally part of the pathways discourse. However, given that students do take, or find themselves on, these routes out of school, they too must be factored into discussion.

There is an equity literature around each of these pathways, but the literature on some ‘pathways’ is more fully developed than that on others. For instance, only recently has the topic of equity and apprenticeships been adequately addressed (ANTA 1998b). Often, overall, there is a tendency to collate the figures about which students are doing what, rather than to try and explain such figures. So for example, the literature tells us such things as the ‘social background’ and types of school attended of the students on particular pathways. It also often breaks down the courses taken by gender and other ‘background factors’. When the literature moves to try to explain such differences, it sometimes focuses on what happens at school as an explanation for what happens after school. However, the post-school world is not an innocent variable when it comes to post-school disadvantages.

Neither school choices/performances nor young people’s particular post-school modes of navigation ‘cause’ certain students’ occupational disadvantage, although they may have the effect of disadvantaging them. It is important to understand how post-school worlds contribute to gender and other disadvantages. This is consequential in policy terms for the particular worlds under scrutiny, but it is also a key part of equity strategies and programs in schools. Such programs seek to prepare students for their post-school lives, not just in terms of credentials and competencies, but also in terms of their knowledge about the worlds they

are to enter and the skills that will enable them to best navigate such worlds. They seek to produce informed young people with a sense of agency. While it is not possible here to fully document the ways in which such worlds may disadvantage certain groups of people, by way of example, certain features will be singled out for discussion. These are as follows:

- • Gender and the current world of work.
- • Youth labour markets.
- • Institutional environments in VET.

Comments on young people's early experiences of universities are not included here, but can be found in McInnis and James with McNought (1995).

Gender and the current world of work

How is the gender puzzle in the post-school worlds of work and training to be explained? Why is it that the location of males and females in the paid world of work is characterised by difference to the extent that boys who are less well educated than girls are able to access opportunities for work which are not so easily available for girls. And what is the difference between those males who successfully bridge the barrier from early school leaving to work and those who become chronically unemployed?

There are both structural and cultural explanations of the different experiences of males and females in the labour market. One might expect a more obvious link between retention and performance at school and relative positions of groups within the labour market. This link is not obvious particularly with regard to young females. Some explanations are outlined in detail in Kenway and Willis (1995) who identify this mismatch between women's credentials and their experiences of the labour market. Structural explanations focus on the relationship between paid work and family work, pointing to the constraints that the latter place on the former. They also point to the manner in which family work impacts on employers' perceptions of women as workers, and indeed women's perceptions of themselves as workers. The more cultural explanations explore other connections between gender identity and work, suggesting that males and females often gain their sense of themselves as feminine or masculine according to the work that they do. They also observe that versions of femininity and masculinity are integral to certain types of work – that many jobs are literally gendered. Equally, many workplaces are coded by traditional gender conventions. Such workplaces tend to attract those who readily fit into such gender codes and tend not to welcome those who do not.

But the world of work is not static and, at the moment, it is in considerable flux. This has major implications for those young males and females who are just joining the workforce. Changing gender identities and relations, changing labour processes and labour markets and changing family forms are amongst the inter-related features of current times. In Australia, as in other advanced Western economies, a characteristic of globalising labour processes and labour markets is what Bakker (1996, p. 7) calls the 'gender paradox of restructuring', involving the 'contradictory effects of the dual process of gender erosion and intensification'.

Gender differences and inequalities in core labour markets are intensifying as core, traditionally male labour markets are shrinking. Workload is intensifying as institutions downsize and the workers who remain have their workload dramatically increased. This makes it more difficult for those who care for households and children either to participate

fully or to ascend the career structures. Here we see the intensification of gender, and indeed, SES divergence.

In contrast, certain peripheral, traditionally female, labour markets are expanding, Here we see the gendered convergence of labour market experiences. More workers, both male and female, are in poorly paid, part-time, non-unionised casual work. Beck (1992, p. 143) calls this the 'generalisation of employment insecurity'. This expanding periphery has seen the generalisation of employment insecurity from women to some men, and from the working class to some of the middle class.

These, and other changes in labour markets and work-places, have been accompanied by the collapsing distinction between breadwinners and home-workers as more women take up paid work and as many adult household members face intermittent patterns of employment and unemployment. In turn, this has implications for the traditional gender patterns of households. Here we see another emerging pattern of gender erosion even though women continue to carry the major load of household and emotional labour**,** particularly in single parent households. This load is increasing as welfare support recedes.

These processes of gender erosion and intensification have important implications for the masculine and feminine identities of young people/workers today. Masculinity has historically been intimately connected with employment and with certain power positions within households. The changes noted put certain masculinities at risk. For those males whose manual labour is an important source of their masculinity, these shifts have the potential to cut deeply into the foundations of their identity.

Mac an Ghaill's (1996) research from the UK shows how certain traditional conceptions of working-class masculinity are vulnerable and how others are emerging. It also sheds some light on the implications of this for vocational education. Blurring the distinction between vocational and general education is implicit in programs for vocational policies. New hierarchies between high- and low-status vocational fields are developing in the UK and leading to the re-stratification of working-class male students. The emerging high-status technological and commercial subject areas such as business studies, technology and computer studies are providing some of these boys with what Mac an Ghaill calls an 'ascending and modernising version of working class masculinity', with associated values of 'rationality instrumentalism, forward planning and careerism'. Other working-class boys, he argues, are maintaining a descending traditional mode of masculinity based on low-level, practically-based subject areas that reflect the tough masculinity of the disappearing shop floor. The boys who subscribe to this mode of masculinity can be seen to be particularly 'at risk'. Given that it is no longer feasible for boys to hang on to traditional notions of wage and domestic labour that involve male breadwinners and female home-workers, what new models of masculinity are available and how might schools help those boys who are most at risk in this regard?

Uneven economic growth and decline have meant that greater attention is now being paid to the geography of gender: that is, the relationship between gender and locality. For example, the decline of heavy work in factories and mines has been of significance for certain single industry localities. Such localities are being emptied of the major sources of employment associated with working-class males. Also, due to the withdrawal of certain public services and service industries such as banks, some rural localities are losing the sources of employment that often kept young women in the country (Jones 1999). Indeed, the lack of

educational and work opportunities within rural areas is considered a serious structural issue impacting on rural youth's health and well-being. The need to leave home to gain post-compulsory credentials means that rural youth are less able to mix part-time work and study than young people in cities (Looker & Dwyer 1998). Equally, locality has thus become a particularly important factor in youth employment and unemployment. Given the importance of locality, more research is needed on the impact of different localities' economic base on males' and females' perceptions of their future, and the implications of this for their learning.

Youth labour markets

The collapse of the traditional youth labour market has been extensively documented in numerous government reports, hence we will only touch on it briefly here. The changing nature of work for young people generally means that many will face a difficult future in the world of work. There has been a major drop in demand for full-time teenage employees (Lewis & Koshy 1998, Lewis & McLean 1999). The youth labour market in Australia is characterised by low participation rates and a predominance of part-time employment, as well as high unemployment and under-employment. It is more and more the case that young people's experiences of work are in part-time and marginal labour markets and that this trend is increasing (Ainley, Malley & Lamb 1997, Dusseldorp 1999, Lewis & McLean 1999).

Further, as Wyn and White (1997) observe, young workers are scattered over five different economic realms. These are:

- the formal waged, regulated, taxed and officially recorded economic realm;
- the informal waged, unregulated, untaxed and unrecorded;
- the informal unwaged domestic and 'barter' economy;
- the social wage and welfare economic realm; and
- the criminal economic realm.

These different realms extend different types and degrees of opportunity, and leave young people open to different forms of exploitation or to different levels of protection.

Having a career is no longer the norm for many young people. Their experiences of work are fragmented and dispersed across various combinations of part- and full-time work, casual work, voluntary work, looking for work and working at multiple jobs for multiple employers and education and training. This may also be interspersed with periods of unemployment and being out of the labour market. Interestingly, as table 5.7 shows, the majority of casual part-time workers are students. Young peoples' work may be across any of the economic realms listed above. As shown in chapter 5, such fragmented work certainly does not bring them a solid or secure income or the benefits of sick leave and other entitlements. Further, it is not usually attached to training, a credential or indeed to any sense of incremental progress. Life-long or on going learning is clearly occurring here although not necessarily of the sort that is credentialed.

It is worth considering the implications of an oversupply of workers for the quality and equity of the work experiences made available to young people. Jones (1999) documents the ways in which young workers can be exploited in this environment. She indicates that job scarcity often prompts young people to stay in unsatisfactory work situations and to put up with poor treatment and minimal wages, below the established adult levels. It is the role of government to protect young workers and to pursue ways in which employers can be encouraged to take

responsibility for not exploiting them and, indeed, for considering ways of ensuring that even casual work is understood as part of a young person's training for the world of work.

Integrally connected to this has been the significant rise in overall education participation rates in Australia in recent years, which is directly linked to the low demand for full-time teenage employees. Overall, it is now well understood that the youth labour market and post-school education and training are closely interconnected (Lewis & Koshy 1998). As job opportunities lessen, more people undertake education and training. As a result, despite teenage unemployment in Australia being twice that of the general population, only a small proportion of the teenage population in Australia is not in some form of employment or education. This group of young people who are outside both employment and education and training is of considerable concern. In addition though, as studies by Payne and Cheng (1996) suggest, VET expansion intersects with a possible reduction of work-based training and other employment options. Comparisons with the UK show that as employment options decrease, options in VET increase. This is a complex pattern and important questions thus arise about the relationship between post-school education and training and real work opportunities. Or to put it another way, if the jobs are not there, for what are young people training? And, if fragmented working lives are the norm, as we will shortly show, what does this mean for education and training? Research is needed into the real worth of casual work for building life chances and opening up life choices. For instance, such research should explore how part-time and casual work might become more centrally part of a credentials portfolio within the AQF.

Institutional arrangements and environments in VET

VET involves a complex set of institutional arrangements and environments that have been characterised by constant change. These will not be explained here, except to say that as VET and the world of work change, new equity issues are layered over old. Over recent times a number of documents have emerged from ANTA (ANTA 1996, 1997, 1998a, 1998b) which describe previous approaches to equity, recognise the groups that are disadvantaged by the structures and operations of VET as well as by other factors, and identify strategies of redress which attend to such modalities of disadvantage. It is apt that we draw out some of the conclusions of such documents.

On the basis of access and participation data, VET has identified six 'client groups' or 'equity stake-holders' that are the focus for its most recent equity strategy *Achieving Equitable Outcomes* (ANTA 1998a). These are women, Aboriginal and Torres Straight Islander peoples, people with a disability, people from non-English speaking backgrounds, people without adequate literacy and numeracy skills, and people from rural and isolated areas (Butler & Ferrier 1999). This Report, amongst others, identifies critical issues relevant to each group and, in so doing, also points to those issues they have in common (ANTA 1996, 1997, 1998a).

Many young people experience structural inequities that, in some cases, arise from a lack of adequate infrastructure either in the institution or the public sector: eg the provision of adequate childcare, physical access for people with disabilities and adequate public transport for those who live in rural and remote locations. There is also the inability to obtain support, such as financial resources to meet training related costs particularly in user-pays environments, lack of appropriate equipment and alternative modes of delivery, insufficient and/or difficult to access information, poor communication within the VET sector and between VET and other agencies, and lack of moral and other support in the first weeks of a

program. Other structural inequities arise as a result of inflexible modes of delivery with regard to place, time and form. The students' needs and interests and sense of what is relevant for them may be subsumed by those of the institution.

Yet other structural inequities include those which arise from discriminatory attitudes, hostile environments and culturally inappropriate courses. In general, these may involve low expectations and stereotypes about which work is suitable for which people resulting in, for example, biased course guidance and the inequitable distribution of training opportunities by employers. For instance, there may be bias in competency standards, curriculum, teaching and course requirements. For women, this may involve a refusal to recognise prior learning because of a gender bias in notions of skill and merit. With regard to people from diverse backgrounds and Aboriginal and Torres Strait Islander people, programs may fail to connect with their cultures and identities. If there are no opportunities for employment after the VET program ends, as is the case particularly in certain rural and remote locations, then an edge of cynicism and despair may be the result.

Students who have low level or institutionally incompatible language, or low literacy and numeracy skills are additionally disadvantaged. This is a matter of concern for Aboriginal and Torres Strait Islander peoples, certain migrants and men with low post-school qualifications. Additional disadvantages also include poor or incompatible basic work and life skills. These are most problematic for people with a disability, Aboriginal and Torres Strait Islander peoples, mature women entering the labour market for the first time and people returning to work following institutionalisation. Clearly, such people are disadvantaged if bridging programs are not made available to them.

From the point of view of this particular study such information is both helpful and limited for it does not provide us with any information about the particular experiences of young people from such 'equity stake-holders' groups. Given that youth are one group which is structurally disadvantaged in the labour market such information is necessary. Research is needed on young people from these equity groups' experiences of VET, especially their early experiences.

Travels from school to post-school life

The work of a number of scholars suggests that the 'transitions' from school to work and from childhood to adulthood have been destabilised. The institutions of work, family, education, and households that, in the traditional sense, defined growing up, are losing their hold on the collective consciousness. Mac an Ghaill (1996) argues that young people in the 1990s find themselves in a 'new social condition of suspended animation between school and work. Many of the old transitions into work, into cultures and organisations of work, into being consumers, into independent accommodation – have been frozen or broken…' (Mac an Ghaill 1996, p.390). Similarly, Freeland (1996) raises issues of identity and implies that without adequate work and income, young people cannot in effect grow up and become adults. These and other comments point to the limitations of thinking about transitions only in terms of school to work. The debate about youth and adulthood remains intense as it engages issues about what it means to be an adult in contemporary times. For instance, do 'youth' cease to be adults if they become unemployed , sick, homeless? Are those on a higher income more adult than those on the breadline?

The concepts most associated with the move from school to post-school at the moment are 'transitions' and 'pathways' (Donaldson, Hiebert, Pyryt & Arthur 1998). However, recent research has pointed to the inadequacies of such concepts in the light of the various 'multi-dimensional lives' of different young people in the contexts of changed youth labour markets. Such concepts are seen to be too linear to be able to sufficiently describe the non-linear and complicated mix of study, work and relationships which characterises young people's actual lives after school (Dwyer & Wyn 1998).

Dwyer, Harwood and Tyler (1998) offer different 'typologies of transition' – they call them 'traditional "normal" biographies' and 'choice biographies'. These both point to the various ways in which young people negotiate and navigate (Furlong & Cartmel 1997) their biographies in current times of economic uncertainty. Those who fit into the former follow a somewhat 'predictable linear track' towards a vocation or an occupation. Current approaches to career and vocational education tend to match the lives of such young people. In contrast, those who develop a 'choice biography' tend to take 'contingent, variable journeys' for which current VET and career education approaches are ill-suited.

The 'choice biography' group include people who mainly consider context (eg location, life style, issues based or industry - based work) rather than occupation or education when deciding on their life patterns. It also includes those whose lives are characterised by 'altered patterns' which involve a 'sequence of choices and change of directions', and possibly 'trial and error' (Dwyer *et al* 1998, p. 53). A third group have 'mixed patterns', and tend to balance work and study with other life considerations which allow them variety and choice. The implication of this research is that those who adopt a choice biography are becoming more typical — they are less governed by convention and more by their individual preferences, assessments and possibilities. However, these studies note that 'background' has an impact on preferences, assessments and possibilities. They point to the enduring and constraining impact of gender, SES and locality on education and training choices, noting particularly the impact of gender on educational and career choices. Together with that of Batten and Russell (1995) and Dusseldorp (1998), this research indicates that some young people have considerably less choice and face many more risks than others.

Both Freeland (1996) and Sweet (1997) outline statistically the uncertainties, vulnerabilities and risks that such young people are exposed to in their various 'pathways' to the workplace. Sweet points to the different ways in which young people are marginalised or excluded from the mainstream of employment, education and training. *Unemployment,* that is wanting a job and not being able to find one, is the most common way. Young people are also marginalised through solely relying on *casual part-time work.* They normally rely on jobs that provide only a few hours of poorly paid part-time work each week. The numbers in this category 'trebled from around five per cent to over fifteen per cent of all those young people who are not full-time students in the last five years' (Sweet 1997, p. 6). (But as the tables in chapter 5 show, the rise of casual work affects non-teenagers as well.) Further, Sweet indicates that one in five has completely dropped out of both the labour market and education. They are not working, not looking for work and not studying. Some can be traced through social security but others are simply *'lost'*. It is suggested that this is partly a result of the increasing retention rates in schools, resulting in a labour market that relies more heavily on credentials. Accordingly, lower academic achievers and other disadvantaged groups are likely to have particular difficulty in competing for work (Sweet 1997, p. 7). The fact that school and higher education students also now compete for the service jobs once the province of early school leavers adds to the difficulty. Further, Sweet implies that through unemployment of various sorts, young

people risk becoming economically dependent, living in poverty and succumbing to a host of associated health and well-being problems. This is then likely to have a negative impact on their opportunities to train and work . Such young people thus become vulnerable to long-term exclusion at a relatively early stage of their lives.

Family and parenting responsibilities continue to be key variables in girls' and women's engagements with paid work (Milne-Home, Power & Dennis 1996, Power, Whitty, Edwards & Wigfall 1998). Indeed, studies of girls' transitions from school to post-school life show that they are often factored into the process of transition in ways which may constitute, in one sense, a parallel pathway. Probert and McDonald's study of young women's attitudes to motherhood is situated in the context of their experience of school-to-work transition and post-school education and training (Probert & McDonald 1999). Prompted by Australia's high rates of young motherhood and the established evidence that 'lower educational achievement is the key risk factor associated with adolescent maternity', the study describes a polarisation of work and parenting experiences along class and educational attainment lines. This results in an increase in deferred motherhood amongst highly educated young women in professional occupations, and longer-term economic and educational disadvantage amongst younger mothers. This is yet another factor compounding the disadvantage of low-SES girls, and leads back to the question of 'which boys and which girls?'. For example, Looker and Dwyer (1998) observe that gender differences are a factor that differentiate the experience of rural youth, with young people (particularly women) negotiating family responsibilities often at an earlier age than their urban counterparts. Overall, Kenway and Willis (1995) argue:

> The proportion of sole parent families not in paid employment is substantially higher than the proportion of two-parent families in which neither parent is in employment. This has been caused by unemployment generally but a considerable contributor is also the labour force disadvantage of sole parents who have to combine work with rearing children and other household responsibilities alone. Thus women who parent alone with young children are likely to be unemployed or jobless. Indeed, the labour force participation rate for sole mothers is 47 per cent compared with 60 per cent of married women. Notwithstanding some efforts in the past decade to improve the position of sole parent families, such families (which are predominantly female headed) have the highest incidence of poverty in Australia (McClelland 1994). In 1990, when the mean annual income for men was $26 000, the mean annual income for 'lone mothers' was $14 000.

Indeed, being out of work and out of the labor market is characteristic of this group of young women. More research about the motivations, experiences and 'choices' of those who are not in the labour force is needed.

Given this, the notions of 'traditional biography' and 'choice biography' must be complemented by that of 'risk biography', and the implications of these for new approaches to vocational and career education must also be considered. The meanings of these different risk biographies for males and females, and for gender relationships among unemployed, under-employed and 'lost' young people needs research. A subsequent question then is 'How might vocational and career education help girls and boys to maximise their choices and minimise their risks in situations of dependency and poverty? This raises the issue not just of what qualifications are needed to successfully move from school to post-school work but

what knowledge, experiences, skills and other attributes are needed in current youth labour markets – especially for those from a background characterised by poverty. Are resilience and social capital the answer? Such new approaches would need to keep in mind that, in the current context, 'individuals are forced to assume greater responsibility for their experiences in the labour market and to constantly assess the implications of their actions and experiences' (Furlong & Cartmel 1997).

There is some debate in the literature about the implications of the barren youth labour market for young people's attachment to work as a life-style and identity issue. Some make the case that they now look for other sources of identity, while yet others observe that they still see paid work as an important part of a meaningful, independent adult life. Whatever the case, generational differences with regard to attitudes to work and life style do appear to be emerging. These raise the question of how adequately older generation adults in positions of influence over young people can identify with the issues young people are grappling with and formulate adequate responses.

There are some suggestions in the literature that young people themselves are developing their own approaches based on the recognition that without actual experience it is very difficult to even get a 'foot in the door'. Some work for no pay (Jones 1999). This approach has its dangers – particularly when it involves no pay and/or no credentialing processes. This raises questions about employers' responsibilities with regard to a range of issues that include the provision of structured workplace learning and credentialing for casual workers.

In this chapter we have examined the literature on the post-school destinations and experiences of young males and females which explores and explains issues of difference and disadvantage. We identified explanations that focus on what students bring from school to their post-school lives –their credentials, other experiences and personal resources, and those that focus on the structural and cultural character of the worlds that they enter – education and training, the labour market, work and non-work and the economy. Here we focused on discussions of gender and the current world of work, youth labour markets and institutional environments in VET. We then considered the ways that young people travel from one through the others – the routes they take and the transitions they negotiate.

Top

CONCLUDING SUMMARY

This *Report* is the culmination of research commissioned by DETYA to investigate factors influencing the educational performance of males and females at school and their initial destinations after leaving school. The specific requirements of the research tender are identified in the introduction to the *Report.* The preceding chapters address findings and analyses according to school and post-school outcomes, and each chapter provides conclusions to their particular discussions. An overall account of the *Report's* major findings and arguments can be found in the Executive Summary.

In brief, the overall purposes of the *Report* have been:

- to collate and interpret the current statistical data on the educational participation and performance of males and females and on their post-school destinations, and to assess the relationship between school and post-school outcomes;
- to review the current research literature relevant to understanding gender equity in education and gender and educational performance, and to analyse the available statistical data in relation to this research literature; and
- to address the impact of gender on performance relative to other socio-demographic variables.

In addition, the *Report* raised some questions about the manner in which discussions around gender equity are currently framed and suggested some alternative approaches to consider when devising policies and strategies in relation to gender equity and males' and females' educational performance. Throughout, the key question, 'which boys, which girls?' has functioned as a shorthand to express the approach to gender equity proposed in the *Report*.

This approach attempts to move the debate about gender equity beyond a simplistic discourse of winners versus losers, where the performance of all girls and all boys is contrasted, and only one or the other group can be found as a whole to be disadvantaged. This *Repor*t has clearly demonstrated that the situation is more complicated than such a superficial contrast admits.

Once the impact of a range of socio-demographic variables is considered, a more differentiated picture emerges. This picture demands that questions be addressed about which groups of boys and girls are most disadvantaged, how and what forms this disadvantage may take, and why this disadvantage occurs.

Addressing differences within (not only between) the two genders allows those girls and boys who are most disadvantaged to be identified and for programs and policies to be appropriately targeted to areas where they are most needed.

From investigating the range of questions and answers about 'which boys, which girls', the *Report* has outlined an approach to gender equity that encompasses strategies able to address issues of 'recognition' and of 'redistribution'. It has argued that educational and gender disadvantage can arise from an unequal distribution of resources, capabilities, respect and recognition, both within and beyond schools. These are matters that can, and should, be a major focus for gender equity programs.

Overall the *Report,* holds educational performance to be a significant issue not only in terms of absolute or comparative results in end-of-year achievement. Rather, educational performance is an important issue because it is strongly linked to processes of social cohesion and exclusion and to questions about how it can be ensured that all young people have equitable access to an education that enhances their capabilities and opportunities both at school and beyond.

Appendix I: List of the Research team, consultants and participants at workshops

Project Research Team

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Deakin University, VIC

Dr Julie Mcleod
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Deakin University, VIC

Dr Helen Forgasz
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Ms Rachel Boston
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Ms Angie Bloomer
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Reader in Education
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University of Melbourne

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Graduate School of Education
La Trobe University

Dr Stephen Lamb
Australian Council for Educational Research, VIC

Dr Wayne Martino
Institute of Education
Murdoch University, WA

Dr Georgina Tsolidis
Senior Lecturer
Faculty of Education
Monash University, VIC

Associate Professor Pat Thomson
Underdale School of Education,
University of South Australia, SA

Associate Professor Lindsay Fitzclarence
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Associate Professor Jill Blackmore
Faculty of Education
Deakin University, VIC

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Dr Lyn Harrison
Faculty of Education
Deakin University, VIC

Dr Andrea Allard
Faculty of Education
University of Melbourne, VIC

DETYA Project Advisory Committee

Ms Mylinh Hardham
Dr Evan Arthur
Ms Michelle Kallmier
Ms Eileen Newmarch
Ms Anne Baly
Ms Elizabeth Dangerfield
Dr Jan Baker
Mr David Goodbody

Invited Participants at workshops (including field of expertise)
Interpretative Workshop, Canberra, September 1999

Dr Wendy Brady
Director, Aboriginal Research and Resource Centre,
Faculty of Arts and Social Sciences, UNSW,
aboriginality, general including gender and education

Ms Joan Brown
Equity Centre, NSW
socio-economics &schooling and school systems

Ms Elaine Butler
University of South Australia, SA
VET, work & gender

Ms Helen Kerr-Roubicek
NSW Department of Education
gender reform

Ms Justine Knight
University of South Australia
curriculum reform

Associate Professor Bill Cope
RMIT, VIC
ethnicity, VET

Professor Bronwyn Davies
James Cook University, QLD
gender & primary schools, primary school sector

Dr Paul Brock
NSW Department of Education
curriculum reform

Associate Professor Gary Dowsett
Latrobe University
men's health

Mr Jeremy Ludowyke
Princes Hill Secondary College
gender reform policy

Professor Eleanor Ramsay
University of South Australia
gender curriculum

Dr Peter Dwyer
Youth Research Centre, The University of Melbourne, VIC
youth, rurality & transitions

Dr Victoria Foster
University of Wollongong, NSW
gender & schooling, schooling secondary

Professor Michael Garbutcheon-Singh
RMIT, VIC
ethnicity & schools, school sector
Associate Professor Rob Gilbert
James Cook University, QLD
masculinity & schooling/literacy , school sector

Dr Miriam Henry
QUT, QLD
training & gender, VET

Associate Professor Gael Hildebrand
The University of Melbourne, VIC
gender science curriculum & assessment, schools secondary

Dr Stephen Lamb
Australian Council for Educational Research, VIC
youth &transitions, youth

Dr Phil Lewis
Centre for Labour Market Research, Murdoch University, WA
youth labour market, labour markets

Associate Professor Bob Lingard
University of Queensland, QLD
gender reform policy, school sector

Ms Lyn Martinez
Queensland Education System, QLD
gender & schooling, schools systems

Associate Professor Glenda MacNaughton
University of Melbourne, VIC
gender & early childhood, early childhood

Dr Martin Nakata
University of South Australia, SA
aboriginal & islander studies, youth

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DETYA representatives:

Mr Robert Horne
Ms Eileen Newmarch
Ms Anne Baly
Mr David Goodbody
Ms Elizabeth Dangerfield

Dr Jan Baker
Ms Michelle Kallmier
Mr Joe Gyngell
Ms Yew May Martin
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Workshop for Discussion Paper, Adelaide, August 1999: External Consultants

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Tony Mercurio
Senior Secondary Assessment
Board of South Australia

Wendy Engliss
Superintendent
DETE
Adelaide, SA

Appendix II: DataBase searches

The following bibliographic databases were searched:

ERIC: Education Resource Information Centre;
AEI: The Australian Education Index;
APAIS: The Australian Public Affairs Information Service;
Current Contents (Ovid);
Expanded Academic ASAP;
AUSTROM: Australian Family and Society Abstracts;
PsycLIT (Silverplatter): re. Psychology and Education; and,
Sociological Abstracts.

The following sets of Australian school statistics were consulted:
ABS, Schools Australia (various). Catalogue 4221.0
Board of Studies NSW, 1999. (1998 Higher School Certificate Examination Statistics)
Board of Studies Victoria. VCE results 1996, 1997, 1998
Board of Studies Victoria. VCE results 1998 (CD-ROM)
Board of Studies Victoria. VCE results 1998 (CD-ROM)
Commonwealth Schools Commission, 1984. (Girls and tomorrow: The challenge for schools)
Commonwealth Schools Commission, 1985 (Quality & Equality)
Curriculum Council, WA, 1998
Curriculum Council. (1998). Secondary education statistics (Year 11 and 12) 1997.Osborne Park, WA
DEET, 1991. (Retention & Participation in Australian Schools, 1967-1990)
Ministry of Education and Youth Affairs (1988). (National database on the education of girls in Australian Schools)
National Report on Schooling in Australia, 1996
National Report on Schooling in Australia, 1997
National Report on Schooling in Australia, 1998
NCVER, 1997 [Australian VET statistics]
Schools Commission, 1975 (Girls, School & Society)
Schools Commission, 1987. (In the national interest)
Internet searches
The following web sites have been searched for relevant materials, and often the institution has been contacted to retrieve materials.
Australian Sites
National Centre for Vocational Education Research
http://www.ncver.edu.au/

Australian Council for Education Research (ACER)
http://www.acer.edu.au

Centre for the Economics of Education and Training (CEET)
http://edx1.educ.monash.edu.au/centres/CEET/

Centre for Labour Market Research (CLMR)
http://www.cbs.curtin.edu.au/clmr/

Australian National Training Authority (ANTA)
http;//www.anta.gov.au/

Australian Vocational Education and Training Research Association (AVETRA)
http://www.avetra.org.au

Department of Vocational Education and Training, University of Melbourne
http://www.edfac.unimelb.edu.au/DVET/index.htm

Department of Education, Training and Youth Affairs (DETYA)
http://www.detya.gov.au/

Dusseldorp Skills Forum
http://www.dsf.org.au/

National Board of Employment, Education and Training
http://www.deetya.gov.au/nbeet/nbeet.htm

Australian Clearinghouse for Youth Studies (ACYS)
http://www.acys.utas.edu.au/ncys

Youth Research Centre, University of Melbourne
http://yarn.edfac.unimelb.edu.au/yarn/yrc-home.html

AVETRA (Australian VET Researchers Association)
http://www.avetra.org.au

Australian Bureau of Statistics
http://www.abs.gov.au

Curriculum Coporation
http://www.curriculum.edu.au/

Education Network Australia
http://www.edna.edu.au/EdNA/

University of Sydney Education Links Page
http://www.library.usyd.edu.au/Guides/Education/tools.html#xref08

Vicnet Education Page
http://www.vicnet.net.au/vicnet/school.html

State Government Department Sites
NEW SOUTH WALES
NSW Department of Education and Training (Schools)
http://www.dse.nsw.edu.au/index.html

NSW Department of Education and Training (Training)
http://www.dtec.nsw.gov.au/

NSW TAFE
http://www.tafensw.edu.au

NORTHERN TERRITORY
Northern Territory Department of Education
http://www.nt.gov.au/nted/

QUEENSLAND
Queensland Department of Education
http://www.qed.qld.gov.au/

Queensland Vocational Education and Training
http://www.detir.qld.gov.au/vetinfo/home.html

SOUTH AUSTRALIA
South Australian Department for Education and Children's Services
http://www.nexus.edu.au/

South Australian Department for Education, Training and Employment
http://www.tafe.sa.edu.au/

TASMANIA
Tasmanian Department of Education
http:// www.tased.edu.au/

Office for Vocational Education and Training
http://www.dvet.tas.gov.au/

VICTORIA
Education Victoria
http://www.eduvic.vic.gov.au/

Visnet (Vocational Education and Training in Schools, Victoria)
http://www.visnet.vic.edu.au/

OTFE: Office of Training and Further Education
http://www.otfe.vic.gov.au/

SofWeb: Directorate of School Education
http://www.sofweb.vic.edu.au/

WESTERN AUSTRALIA
Education Department of Western Australia
http://www.eddept.wa.edu.au/
International Sites
Scottish Qualifications Authority (SQA)
http://www.sqa.org.uk/

Department for Education and Employment (Dfee) (UK)
http://www.open.gov.uk/dfee/dfeehome.htm

Advisory Centre for Education (UK)
http://www.ace-ed.org.uk/

OFSTED: Office for Standards in Education (UK)
http://www.ofsted.gov.uk/ofsted.htm

New Zealand Qualifications Authority
http://www.nzqa.govt.nz/

New Zealand Ministry of Education
http://www.minedu.govt.nz/

Education Review Office (NZ)
http://www.ero.govt.nz/

US Department of Education
http://www.ed.gov/

Equity Assistance Centres (USA)
http://www.ed.gov/EdRes/EdFed/equity.html

Centre for Research on Education, Diversity and Excellence (CREDE) (USA)
http://www.crede.ucsc.edu/HomePage/home.html

National Institute on the Education of At Risk Students (USA)
http://www.ed.gov/offices/OERI/At-Risk/

National Centre for Research in Vocational Education (NCRVE) (USA)
http://vocserve.berkeley.edu/

Organisation for Cooperation and Economic Development
http://www.oecd.org/

Specialist Libraries
In addition to using the combined libraries of Australian Universities and the resources of Deakin University, the research team made use of:

The Cunningham Library at the Australian Centre for Educational Research (ACER), Camberwell, Melbourne;

NCVER Clearinghouse on Vocational Education and Training, Adelaide;

DEETYA Library, Canberra; and,

Australian Institute of Family Studies, Melbourne.

Appendix III :List of Acronyms

ABS	Australian Bureau of Statistics
ACER	Australian Council for Education Research
AGPS	Australian Government Publishing Service
ANTA	Australian National Training Authority
AQF	Australian Qualification Framework
ATSI	Aboriginal and Torres Strait Islander
CATS	Common Assessment Tasks
CLMR	Centre for Labour Market Research
DEET	Department of Employment, Education and Training
DEETYA	Department of Employment, Education, Training and Youth Affairs (pre-1999)
DETYA	Department of Education, Training and Youth Affairs
DFEE	Department for Education and Employment (UK)
DSE	Department of School Education (NSW)
ESL	English as a Second Language
GSCE	General Secondary Certificate of Education (UK)
HECS	Higher Education Contribution Scheme
LOTE	Language Other than English
LSAY	Longitudinal Surveys of Australian Youth
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
NCVER	National Centre for Vocational Education Research
NCYS	National Clearinghouse for Youth Studies
NESB	Non-English Speaking Background
NSELS	National Schools English Literacy Survey
SES	Socio-Economic Status
TAFE	Technical and Further Education
VCE	Victorian Certificate of Education
VET	Vocational Education and Training
VOCED	Vocational Education Database
YCS	Youth Cohort Study

BIBLIOGRAPHY

Alloway, N. *Foundation Stones: The Construction of Gender in Early Childhood*. Carlton, Melbourne: Curriculum Corporation, 1995.

Alloway, Nola, and Pam Gilbert. "Boys and Literacy: lessons from Australia." *Gender and Education* 9, no. 1 (1997): 49-58.

Arnot, Madelaine, M David, and G Weiner. *Closing the Gender Gap: Post War Education and Social change*. Oxford: Polity Press, 1999.

Arnot, Madeleine, John Gray, Mary James, Jean Ruddock, with, and Gerard Duveen. *Recent Research on Gender and Educational Performance*. London: The Stationery Office: Office for Standards in Education, 1998, ISBN 0 11 350102 1.

Artz, Sibylle. *Sex, Power and the Violent School Girl*: Teachers College Press, Columbia University, NY and London, 1998.

Biddulph, S. *Raising Boys*. Lane Cove: Finch Publishing, 1997.

Biddulph, Steve. "Making School Good for Boys." In *Manhood: An action plan for changing men's lives*. Sydney: Finch Publishing, 1994.

Browne, R, and R Fletcher, eds. *Boys in Schools: Addressing the real issues - Behaviour, Values and Relationships*. Sydney: Finch Publishing, 1995.

Browne, R, and R Fletcher, eds. *Boys in Schools: Addressing the real issues - Behaviour, Values and Relationships*. Sydney: Finch Publishing, 1995.

Butorac, Anne, and Kath Lymon. *Schools Work Towards Gender Equity: Executive Summary*. : Department of Employment, Education & Youth Affairs (DEETYA), Education Department of WA & WA Centre for Research for Women, 1998. htpp://www.deetya.gov.au/divisions/schools/publicat.htm.

Carrington, K. (1991) 'Policing Families and Controlling the Young' in R. White and B. Wilson eds, *For Your Own Good: young People and State Intervention in Australia*, Latrobe University Press, Bundoora, pp. 108-117.

Collins, Cherry (1992) 'Upper Secondary Education in Australia: Differing responses to common challenge', *Journal of Curriculum Studies*, 24(3), pp247-260.

Commonwealth, Schools, and Commission. *The National Policy for the Education of Girls in Australian Schools*. Canberra, ACT: Commonwealth Schools Commission, 1987.

Connell, R. W. "Teaching the boys: new research on masculinity, and gender strategies for schools." *Teachers College Record* 98, no. 2 (1997): 206-235.

Croce, C. (1999) Towards a National Rural Youth Policy, *Rural Society*, http://www.csu.edu.au/research/crsr/ruralsoc/v4m1p

Cuttance, Peter. "Educational outcomes for girls: a review of NSW government secondary schools." *Unicorn: Journal of the Australian College of Education* vol.24, no. no.4 (1995): pp. 27-38.

Davies, B. “Critical Literacy in Practice: language lessons for and about boys.” *Interpretations* 30, no. 2 (1997): 36-57.

Davies, B. “Education for sexism: a theoretical analysis of the sex/gender bias in education.” *Educational Philosophy and Theory* 21, no. 1 (1989): 1-19.

Davies, B. “The discursive production of the male/female dualism in school settings.” *Oxford Review of Education (UK)* 15, no. 3 (1989): 229-241.

Davies, B. *Frogs and Snails and Feminist Tails: Preschool Children and Gender*. Sydney: Allen & Unwin, 1989.

Eckersley, R, ed. *Measuring Progress: Is Life Getting Better?* Collingwood, Victoria: CSIRO Publishing, 1998.

Eckersley, R. (1988) *Casualties of Change: The Predicament of Youth in Australia,* Australia’s Commission for the Future, Carlton South.

Eckersley, R. (1992) *Youth and the Challenge to Change,* Australia’s Commission for the Future, Carlton South.

Education Review Office, NZ. *The Achievement of Boys*. Auckland: Education Review Office, New Zealand, 1999.

Education, National Conference on Boys'. “Improving Outcomes in Boys' Education: Where to Now? The 1998 National Conference.” A paper delivered at the Key Strategies for Creating a Better Schooling Process to Improve Boys' Educational Outcomes - The Road So Far and the One Still to be Travelled, The Swiss Grand Hotel, Sydney, 1998.

Elwood, Jannette. “What the statistics show and what they hide.” A paper delivered at the Targeting Underachievement: Boys or Girls, Institute of Education, University of London, 1996 1995.

Epstein, Debbie, Jannette Elwood, Valerie Hey, and Janet Maw, eds. *Failing Boys? Issues in gender and achievement*. Buckingham, Philadelphia: Open Unviersity Press, 1998.

Fitzclarence, L., Green, B. and Bigum, C. (1995) Stories In and Out of Class: Knowledge, Identity and Schooling’, in R. Smith and P. Wexler, *After Post-Modernism*, The Falmer Press, London, pp. 131-155.

Fletcher, Richard. *Improving Boys' Education: a manual for schools*. : Family Action Centre, University of Newcastle, 1997. Research report.

Foster, Victoria. “Gender, Schooling Achievement and Post-School Pathways: Beyond Statistics and Populist Discourse.” In *Teaching in Context*, ed. S. Dinham and C. Scott. Melbourne: Australian Council for Educational Research (in press), 1999.

Foster, Victoria. “What about the boys!: presumptive equality as the basis of policy in the education of girls and boys.” In *Social policy and the challenges of social change: proceedings of the National Social Policy Conference, Sydney, 5-7 July 1995. Volume 1*, ed. Peter Saunders and Sheila Shaver, 81-97. Sydney: University of New South Wales. Social Policy Research Centre (SPRC) (SPRC reports and proceedings n.122) Oct, 1995.

Fraser, B. (1999) *Becoming masculine in a Rural Context: Masculinity, Power and Adolescent Relations in a Small Rural Secondary School*, unpublished Masters paper, Deakin University.

Furlong, A. and Cartmel, F. (1997) *Young people and Social Change: Individualisation and Risk in Late Modernity*, Open University Press, Buckingham.

Gallagher, A. M. *Educational Achievement and Gender: A Review of Research Evidence on the Apparant Underachievement of Boys*. Belfast: Queens University, School of Education, 1997.

Gardiner, Greg. "Aboriginal boys' business: a study of indigenous youth in Victoria in relation to educational participation and contact with the juvenile justice system." *Journal of Intercultural Studies (Carlton, Vic)* 18, no. 1 (1997): 49-61.

Gardner, Howard. *Multiple Intelligences: The Theory in Practice*. New York: Basic Books, 1993.

Gewirtz, Sharon, and Stephen Ball. "Girls in the Education Market: Choice, Competition and Complexity." *Gender and Education* 9, no. 2 (1997): 207-222.

Gilbert, P. "Gender and schooling in New Times: the challenge of boys and literacy : The 1997 Radford Lecture." *Australian Educational Researcher* 25, no. 1 (1997): 15-36.

Gilbert, Pam. *Talking about Gender: Terminology Used in the Education of Girls Policy Area and Implications for Policy Priorities and Programs*. Canberra: Women's Employment, Education and Training Advisory Group, Department of Employment, Education and Training, 1996.

Gilbert, Rob, and Pam Gilbert. *Masculinity Goes to School* Studies in Education, ed. Fazal Rizvi and Bob Lingard. Sydney: Allen & Unwin, 1998.

Gillborn, David, and Caroline Gipps. *Recent Research on the Achievements of Ethnic Minority Pupils*. London: Office for Standards in Education (OFSTED), Institute of Education, University of London, 1996.

Gipps, Caroline. "What do we mean by equity?" A paper delivered at the Targeting Underachievement: Boys or Girls, Institute of Education, University of London, 1995.

Hastings, E. (1995) Assumption, Expectation and Discrimination: Gender Issues for Girls with Disabilities, *Dulwich Centre Newsletter*, nos. 2 and 3, pp. 130-137.

Hayes, D. "The Displacement of Girls as the 'Educationally Disadvantaged' Subject: A Genealogical Tale." *Change: Transformations in Education* 1, no. 2 (1998): 7-15.

Henry, M., and S. Taylor. *Conceptualisation, funding and monitoring of programs relating to educational equity and disadvantage in Australian schooling (unpublished report)*. Brisbane: Queensland University of Technology, 1999.

Herbert, Jeannie-Nungarrayi. "Gender issues for Aboriginal and Torres Strait Islander girls: exploring issues for Aboriginal and Torres Strait Island boys." *Aboriginal Child at School* 23, no. 2 (1995): 9-16.

Hickey, C., L. Fitzclarence, and R. Matthews, eds. *Where the boys are: masculinity, sport and education*. Geelong Vic: Deakin Centre for Education and Change (DCEC), 1998.

Hildebrand, G. M. "Redefining achievement." In *Equity in the classroom: towards effective pedagogy for girls and boys*, ed. P F Murphy and C V Gipps, 149-172. London: Falmer Press, 1996.

Hill, Peter, and Jean Russell. "Systemic, whole-school reform of the middle years of schooling." A paper delivered at the National Middle Years of Schooling Conference, Melbourne, 1999.

Inquiry into Boy's Education 1994. Sydney: A report to the Minister for Education Training, and Youth Affairs by the NSW government Advisory Committee on Education, Training and Tourism., 1994.

James, R., Wyn, J., Baldwin, G., Hepworth, G., McInnis, C. and Stephanou, A. (1999) *Rural and Isolated School Students and their Higher Education Choices*, Commissioned Report No. 61, National Board of Employment, Education and Training, Higher Educational Council, Canberra.

Jones, G. W. (1999) *Babes in the Bush: Youth, Gender and Identity Among Young Rural Women*, unpublished thesis for PhD, Youth Research Centre, The University of Melbourne, Victoria.

Kamler, Barbara, Rod Maclean, Jo-Anne Reid, and Alyson Simpson. *Shaping Up Nicely: The formation of schoolgirls and schoolboys in the first month of school*. Canberra: Gender Equity and Curriculum Reform Project, Department of Employment, Education and Training, 1994.

Kelly, Ross and Philip E T Lewis (1999) *The Impact of Inter-generational Effects and Geography on Youth Employment Outcomes: A Study of the Perth Metropolitan Region,* CLMR Discussion Paper 99/5, Centre for Labour Market Research, Murdoch University: Murdoch WA.

Kemal, Sezgin, Diana Leonard, Maggie Pringle, and Shahwar (eds) Sadeque. "Targeting Underachievement: Boys or Girls?" A paper delivered at the Targeting Underachievement: Boys or Girls?, Institute of Education, University of London., 1996 1995.

Kenway, J. "Taking stock of gender reform policies for Australian schools: past, present and future." *British Educational Research Journal* 23, no. 3 (1997): 329-344.

Kenway, J., Watkins. P. and Tregenza, K. "Australian boys at risk? The new vocational agendas in schooling." In *Gender Issues in International Education: Beyond Policy and Practice*, ed. S & Wilson Erskine, M., 43, 182. New York: Falmer Press, 1999.

Kenway, Jane, ed. *Will boys be boys? Boys' education in the context of gender reform*: Australian Curriculum Studies Association, 1997.

Kenway, Jane, Peter Watkins, and Karen Tregenza. "New vocational agendas in schooling: boys at risk?" In *Will Boys Be Boys? Boys' education in the context of gender reform.*, ed. Jane Kenway, 27-31. Deakin West: Australian Curriculum Studies Association, 1997.

Kenway, Jane, Sue Willis, Jill Blackmore, and Leonie Rennie. "Are boys victims of feminism in schools? Some answers from Australia." *International Journal of Inclusive Education* 1, no. 1 (1997): 19-35.

Kenway, Jane., Sue Willis, Jill. with Blackmore, and Leonie. Rennie. *Answering Back: Girls, Boys and Feminism in Schools*. 1st ed. Studies in Education, ed. F. Rizvi & B. Lingard. St. Leonards (NSW): Allen & Unwin, 1997.

Lamb, S. "Completing school in Australia: Trends in the 1990s." *Australian Journal of Education* 42, no. 1 (1998): 5-31.

Lamb, Stephen, and Katrina Ball. *Curriculum and Careers: the education and labour market consequences of Year 12 subject choice*.: LSAY Research Report 12, Australian Council for Educational Research, 1999.

Lamb, Stephen. *School Achievement and Initial Education and Labour Market Outcomes*. : Australain Council for Educational Research, 1997. Research report, 4.

Leckie, B. A. (1999) Girls' perceptions of two subtypes of aggression: Are there differences and does sociometric status play a mediating role? Paper presented at the Society for Research in Child Development Biennial Meeting Albuquerque April 15th-18th 1999.

Leonard, Diana. “The debate around coeducation.” A paper delivered at the Targeting Underachievement: Boys or Girls, Institute of Education, University of London, 1996 1995.

Lingard, B. “Contextualising and Utilising the 'What about the Boys?' Backlash for Gender Equity Goals.” *Change: Transformations in Education* 1, no. 2 (1998): 17-30.

Lingard, Bob, and Peter Douglas. *Men Engaging Feminisms: Pro-feminism, Backlashes and Schooling* feminist educational thinking, ed. K Weiler, G Weiner, and L Yates: Open University Press, Buckingham, Philadelphia, 1999.

Ludowyke, Jeremy, and John Scanlon. *Improving the School Performance of Boys*. : Victorian Association of State Secondary Principals, 1997.

Mac an Ghaill, Mairtin. ““What about the boys?” Schooling class and crisis masculinity.” *Sociological Review* 44, no. 3 (1996): 381 - 397.

MacKinnon, Alison, Inga Elgqvist-Saltzman, and Alison Prentice, eds. *Education into the 21st Century: Dangerous Terrain for Women?* London,: Falmer Press, 1998.

Mahony, Pat. “Changing Schools: Some International Feminist Perspectives on Teaching Girls and Boys.” *Women's Studies International Forum: Special Issue* 19, no. 4 (1996).

Martino, W. “'Cool Boys', 'Party Animals', 'Squids' and 'Poofters': interrogating the dynamics and politics of adolescent masculinities in school.” *British Journal of the Sociology of Education* 20, no. 2 (1999).

Martino, W. “Masculinity and learning: esploring boys' underachievement and underrepresentation in subject English.” *Interpretations* 27, no. 2 (1994).

Martino, W. *First Australians, New Australians: From the Margins: exploring gender, Aboriginality and ethnicity*. Fremantle: Fremantle Arts Press, 1997.

Martino, Wayne. ““ A Bunch of Arseholes”: Exploring the Politics of Masculinity for Adolescent Boys in Schools.” *Social Alternatives* 16, no. 3 (1997): 39-43.

Masters, Geoff N., and Margaret Forster. *Mapping Literary Achievement: Results of the 1996 National School English Literacy Survey*. : Management Committee for the National School English Literacy Survey, Australian Council for Educational Research, Department of Employment, Education, Training and Youth Affairs, 1997.

McCann, Robert. “Sex Differences a the New South Wales Higher School Certificate.” *Australian Journal of Education* 39, no. 2 (1995): 163-188.

McInnis, Shelley. *Girls, Schools ..... and Boys, Promoting Gender Equity through Schools: Twenty Years of Gender Equity Policy Development*. Canberra ACT, Australia: Department of the Parliamentary Library, 1996. Report of the Social Policy Group, Research Paper number 24.

McNeal, R. B. “High School Extracurricular Activities - Closed Structures and Stratifying Patterns of Participation.” *Journal of Educational Research* 91, no. 3 (1998): 183-191.

Milligan, S., K. Tmomson, Ashenden, and Associates. *Listening to girls: a report of the consultancy undertaken for the Australian Education Council Committee to Review the National Policy for*

the Education of Girls in Australian Schools. Carlton Vic: Curriculum Corporation (Australia), 1992.

Mills, M., and B. Lingard. "Reclaiming the `what about the boys?' discourse for gender justice in schools and society." *Social Alternatives* 16, no. 3 (1997): 51-54.

Ministerial Council on Education, Employment, Training and Youth Affairs. *National Action Plan for the Education of Girls 1993-97*. : Curriculum Corporation, Australian Education Council, 1993.

Ministerial Council on Education, Employment, Training and Youth Affairs, Gender-Equity Taskforce. *Gender Equity: A framework for Australian schools*. Canberra: Australian Capital Territory. Dept of Urban Services. Publications and Public Communication., 1997.

Ministerial Council, for Education Employment Training and Youth Affairs. "Proceedings of the Promoting Gender Equity Conference." A paper delivered at the Promoting Gender Equity Conference, Gender Equity Taskforce, Ministerial Council for Education, Employment, Training and Youth Affairs, Lakeside Hotel, Canberra, 1995.

Morton, Tom. *Altered Mates: The Man Question*. Sydney: Allen and Unwin, 1997.

Murphy, Patricia, and Jannette Elwood. "Gendered learning outside and inside school: influences on achievement." In *Failing Boys? Issues in gender and achievement*, ed. Debbie Epstein, Jannette Elwood, Valerie Hey, and Janet Maw, 162-180. Buckingham, Philadelphia: Open Unviersity Press, 1998.

O'Doherty, Stephen. *Challenges and Opportunities: A Discussion Paper:*

Pallotta-Chiarolli, Maria. "Cultural bridges or walkovers? Improving outcomes for girls who benefit least: a special focus on girls experiencing cultural conflict." A paper delivered at the Promoting Gender Equity Conference, February 1995, 1997 1997.

Parker, Lesley, and Leonie Rennie. "Teachers' perceptions of the implementation of single-sex classes in coeducational schools." *Australian Journal of Education* 41, no. 2 (1997): 119-133.

Payne, Joan, Yuan Cheng, and Sharon Witherspoon. *Education and Training for 16-18 year olds in England and Wales: Individual Paths and national trends*: Policy Studies Institute, 1996.

Pepperell, S, and S Smedley. "Calls for more men in primary teaching: problematizing the issues." *International Journal of Inclusive Education* 2, no. 4 (1998): 341-357.

Pickering, Des, and Christopher Szaday. *One in Eleven Revisited: Special education needs and gender, geographic location, socio-economic status and language other than English background.* : A project of the National Significance Element of the Special Education Program of DEET; Catholic Education Office, Victoria, 1990.

Power, Sally, Geoff Whitty, Tony Edwards, and Valerie Wigfall. "Schoolboys and schoolwork: gender identification and academic achievement." *Journal of Inclusive Education* vol.2, no. no.2 (1998): pp.135-153.

Powney, Janet. *Gender and Attainment: A Review*. Edinburgh: Scottish Council for Research in Education, 1996, SCRE Research Report no.81.

Pusey, M. "Incomes, standards of living and quality of life: preliminary findings from the middle Australia project." In *Measuring Progress: Is Life Getting Better?*, ed. R Eckersley. Collingwood, Victoria: CSIRO Publishing, 1998.

Somerville, A. (1999) Youth on Trial: A Hypothetical on Rural Youth Unemployment, *Rural Society*, http://www.csu.edu.au/research/crsr/ruralsoc/v2n4p

Sukhnandan, Laura. *An investigation into gender differencesw in achievement: Phase 1: a review of recent research and LEA information on provision*. Berkshire, UK: National Foundation for Educational Research, 1999.

Teese, R. "Gender equity in high-level mathematics: A study of regional socio-economic influences on participation and attainment." *Unicorn: Journal of the Australian College of Education* 21, no. 4 (1995): 48-54.

Teese, Richard, Davies Merryn, Margaret Charlton, and John Polesel. *Who Wins at School? Boys and Girls in Australian Secondary Education*. Melbourne: Department of Education Policy and Management, The University of Melbourne, 1995.

The Adelaide Declaration on National Goals for Schooling in the Twenty-First Century http://www.curriculum.edu.au/mceetya/nationalgorals/kemp.htm, 1999.

Theobold, Beverley. "Designing and evaluating programmes for boys within a gender equity strategy - key issues and implementation guidelines." A paper delivered at the Improving Outcomes in Boys' Education: where to now? The 1998 National Conference, Sydney, 1998.

Thompson, R. and Sherwood, A. (1993) Female, Single and pregnant: Adolescent Unwed Mothers', in D. Capuzzi and D. R. Gross eds *Youth at Risk: A Resource for Counselors, Teachers and Parents*, American Counselling Association, Alexandria, VA, pp. 195-230.

Thomson, P. (1998) Against the Odds: Developing school programs that make a difference for students and families in communities placed at risk. Paper presented at National Seminar *Children's Wellbeing at School: Safety, Health and Social Issues in Educational Settings*, University of Otago, New Zealand, December 1-2.

Thomson, P. (1999) How Doing Justice Got Boxed In: A cautionary curriculum tale for policy activists, in B. Johnson and A. Reid eds, *(Re) Shaping the Curriculum in Australian Schools: Critical Analyses of Contemporary Debates*, Social Science press, Sydney.

Thomson, P. (no date) Learning (Not) to Labour: How (some) working class kids get (some) working class jobs (some of the time), in A. Jamrozik, T. Winefield eds, *Unemployment: Economic promise and political Will*, Australian Academic Press, Brisbane.

Thomson, Pat. *Literature Review: Poverty and Class*. Adelaide: University of South Australia, 1999.

Vickers, M. "Why State Policies Matter: the uneven rise of Australian High School Completion." 1995.

Vinson, T. (1999) *Unequal in Life: the Distribution of Social Disadvantage in Victoria and new South Wales*, Jesuit Social Services Ltd., Richmond Victoria.

Weiner, G. "New era or old times: class gender and education." *International Journal of Inclusive Education* 2, no. 3 (1998): 189-207.

Weiner, Gaby, Madeleine Arnot, and Miriam David. "Is the Future Female? Female Success, Male Disadvantage, and Changing Gender Patterns in Education." In *Education: Culture, Economy and Society*, ed. A Halsey, H Lauder, P Brown, and A Wells, 620-630: Oxford University Press, Oxford, 1997.

Wellesley College, and Center for Research on Women. *How Schools Short Change Girls: A Study of Major Findings on Girls and Education (The AAUW Report)*: The American Association of University Women (AAUW), 1992.

West, Peter. “Boys, sport and schooling: the popular debate and some recent research.” A paper delivered at the Improving Outcomes in Boys' Education: where to now? The 1998 National Conference, Sydney, 1998.

West, Peter. *Giving Boys a Ray of Hope: Maculinity and Education*. Sydney: Discussion Paper for the Gender Equity Taskforce, Australia, 1995.

White, R. and Alder, C. eds (1994) *The Police and young People in Australia*, Cambridge University Press, Cambridge.

Woodward, Catherine, Woodward, Nicholas. “Girls and Science: Does a core curriuclum in primary school give cause for optimism.” *Gender and Education* 10, no. 4 (1998): 387-400.

Yates, L. & Leder, G. “The Student Pathways Project: A study of large data bases and gender equity.” *Unicorn, Journal of the Australian College of Education* 21, no. 4 (1995): 39-47.

Yates, L. “Gender equity and the boys debate: what sort of challenge is it?” *British Journal of Sociology of Education* 18, no. 3 (1997): 337-347.

Yates, Lyn. “Constructing and deconstructing 'girls' as a category of concern.” In *Education into the 21st Century: Dangerous Terrain for Women?*, ed. Alison MacKinnon, Inga Elgqvist-Saltzman, and Alison Prentice, 199. London: Falmer Press, 1998.

Yates, Lyn. *The Education of Girls: Policy, Research and the Question of Gender*. Melbourne: Australian Council for Educational Research, 1993.

Zubrick S. R., Silburn S. R., Gurrin L., Teoh H., Shepherd C., Carlton J. and Lawrence D. *Western Australain Child Health Survey: Education, Health and Competence*. Perth, WA: Australian Bureau of Statistics and the TVW Telethon Institute for Child Health Research, 1997.