

THE TROUBLE WITH BOYS

Jennifer Buckingham

Boys are falling behind at school at alarming rates while girls continue to improve. What is causing this gender gap? Has the promotion of gender equity in school education gone too far? What can be done to redress the balance?

Marked differences between girls and boys in overall school performance have emerged over the past decade. At the same time as girls have extended their schooling and are now 11% more likely than boys to complete Year 12 (ABS 1999), so too has their overall performance improved significantly, seemingly at the expense of boys. Boys are now said to be 'disadvantaged' in relation to girls.

While the evidence for a decline in boys' school performance is clear, the reasons behind it are not. Indeed, most explanations tend to raise more questions than they answer.

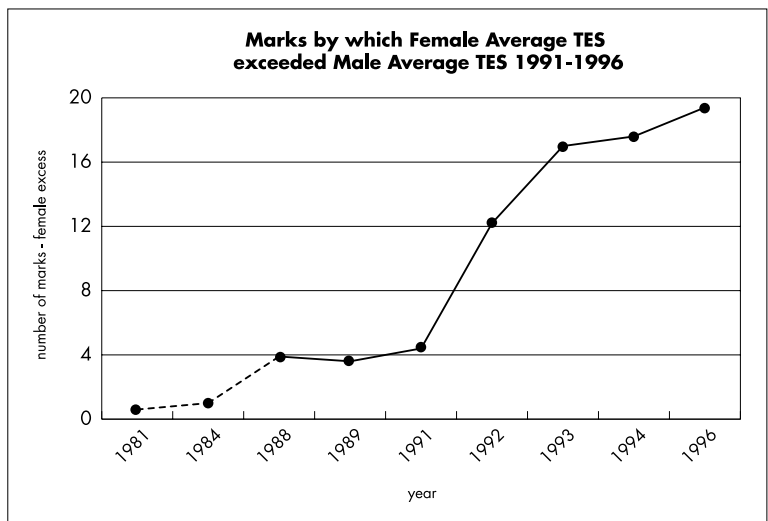
The decline in the overall school performance of boys compared to girls seems to be a result of their poorer performance in English, a subject based on literacy skills in which boys are also inferior to girls. This raises two questions: why are boys' literacy and English skills inferior to girls, and why is this gender gap increasing?

The gender gap

The comparative advantage of girls is apparent at the passing out level/final years. For example, in the 1998 New South Wales Higher School Certificate (HSC), the average mark for girls was higher than that for boys in 64 out of 70 subjects (those subjects with at least 100 students). The subjects in which the boys' average exceeded girls' were: 3-unit Computer studies; 3-unit Economics; 2-unit Japanese; 2-unit Maths in Practice (the lowest maths level); and 3-unit Music. The amount by which the boys' average exceeded the girls', however, was no more than 1%. In contrast, for subjects in which the girls' average was higher, the difference was up to 11%.

This gender gap in average school performance is illustrated in Figure 1. The figure shows the difference in the average New South Wales Tertiary Entrance Score (TES)—the aggregated final mark out of 500 for Year 12 students—between girls and boys. In 1981, the female average TES exceeded the male average TES by just 0.6 marks. In 1996, the girls beat the boys by 19.4 marks. The most dramatic increase occurred in 1992, when the high scaling of maths and hard sciences was reduced.

Figure 1.



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Why are boys falling behind at school?

The increasing discrepancy in boys' and girls' school performance seems to be due to a combination of three related developments: the deteriorating comparative performance of boys in literacy and English, the improving performance of girls in maths and physical sciences, and changes in curriculum and assessment.

The deteriorating comparative performance of boys in literacy and English

Dr Kemp, Federal Minister for Education, Training and Youth Affairs, has stated that 'the single most important thing a school can provide to any individual is literacy skills' (Kemp 1996). Yet many children, both male and female, miss out.

The poorer average literacy performance of boys is evident as early as age nine. Boys underperformed compared to girls in the 1996 *NSW Basic Skills Tests* in both Year 3 and Year 5. There was no significant difference in numeracy (SCRCSSP 1999).

In the 1996 *National School English Literacy Survey* (NSELS), similar findings emerged. Year 3 and Year 5 students were tested on five modes of literacy: reading, writing, listening, speaking and viewing. Fewer boys than girls achieved the benchmark in every mode, with the largest gender differences in the 'expressive modes'—writing and speaking.

Literacy standards, however, are not just falling among boys: the decline is absolute. An analysis of data from the *Longitudinal Surveys of Australian Youth* program showed that there has been a small absolute decline in literacy in the last two decades. In 1975, 28% of 14 year olds in Year 9 failed to attain basic literacy skills. In 1995, this figure jumped to 30%. Failure rates were higher for boys than for girls in both years, with the boys' situation worsening considerably: 30% of 14 year old boys were illiterate in 1975, and 35% in 1995. For girls, the relative figures were better than boys—26% and 27% respectively—but still very unsatisfactory.

Boys' poor literacy skills in turn affect their results in English. In Year 12 English performance, boys' average results are consistently poorer than those of girls. Performance data from Western Australia and Queensland show stronger average English results for girls, with more girls than boys in the top achievement band, and more

boys than girls in the bottom band. In NSW, in 1992, girls strongly outperformed boys. There were twice as many girls in the highest achievement band, and twice as many boys in the lowest. In 1997, there were more than twice as many girls to boys in the top 25% of English students.

Improving performance of girls in maths and physical sciences

Until the early 1990s, the gender gap between boys' and girls' average school performance was relatively small. This balance was maintained because boys' poorer performance in English was offset by their stronger performance in, and the stronger weighting for, the physical sciences. The slight difference in average scores in the 1980s favouring girls was probably the result of girls' rising participation and performance in maths and chemistry, which were also scaled highly.

Changes in curriculum and assessment

In 1992, the higher scaling of the physical sciences was reduced, and boys lost their advantage. The improved performance of girls across the board and boys' poor English performance combined to create a divergence in their average scores. This gender gap has continued to grow.

The disadvantage to boys is exacerbated by the fact that English is compulsory. Girls' comparatively

poorer participation and performance in physics, for example, is not reflected in the average scores because it is elective. Similarly, if girls do not take computer studies, it will not affect their average score.

The inclusion of English results when calculating the UAI or its equivalent is now compulsory, so it is pointless to claim that this disadvantages boys. Although it may be true statistically, boys' poor performance in English is in itself cause for concern.

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Why are boys performing badly in literacy and English? If boys' inferior performance in English is responsible for their educational disadvantage, what is causing this disparity?

A number of factors may play a part in the decline in boys' capacity to use and understand English. They include: (i) biological differences between the sexes affecting capacities and interests; (ii) gender biases which define certain activities or skills as 'not masculine', or which underplay the role of masculine models in encouraging certain activities or skills; (iii) teaching, curricula and assessment; (iv) socio-economic factors, including family income, family structure and parental education.

The question is do these factors explain both the enduring differences in boys' literacy skills and the increasing gender gap in English performance?

Biological differences

Is boys' inferiority in literacy biologically determined? Moir and Jessel (1989) and, more recently, Steve Biddulph (1997), have cited neurological evidence that boys' brains are structurally different from girls', essentially in the brain's capacity to process linguistic information. The 'gender' of the brain is determined before birth by the presence or absence of particular sex hormones.

Although numerous studies have failed to show differences in brain structure (Gilbert & Gilbert 1998), the bulk of the evidence for sex differences in brain structure and functioning is, at this stage, still persuasive.

This, however, does not address boys' declining English performance. Biological differences may be responsible for enduring differences in boys' and girls' literacy skills, but they do not explain why the gender gap is *increasing*.

Gender biases and expectations

The problem of boys and literacy is sociological, according to educationists. They argue that behavioural differences between boys and girls arise from different gender expectations. Conventional conceptions of masculinity, for instance, and the narrow stereotypes associated with it, are restrictive and damaging to both boys and girls, in different ways.

Research evidence has shown that boys are just as capable of reading as girls (Shaywitz et al. 1990; Flynn & Rahbar 1994). Yet, boys are over-represented in

remedial reading classes (O'Doherty 1994). Apparently, boys have an aversion to reading, particularly fiction, and think reading is 'uncool' (Brown & Fletcher 1995). Some claim that boys simply do not view reading as masculine. They prefer more physical activities and, if they do read at all, it is more likely to be magazines or manuals. This may ring true for many, but the evidence is still largely observational and anecdotal.

How literacy is defined and measured may be part of the problem. Different tests of boys' literacy skills have been proposed on the grounds that boys are capable of the mechanics of reading, but are disadvantaged by the subjective, introspective nature of literacy as it is presented in schools. The *Boys and Literacy* project (Martino 1995), for instance, claimed that the emotional element of English at school is in direct conflict with masculinity, and is therefore unacceptable to most boys.

Angela Phillips (1993) has suggested that there is a learned association of reading with femininity due to the predominance of female teachers in primary schools. She argues that this association leads boys to reject reading, and hence literacy. If this were true, the same should occur for maths, which boys are also taught in primary school. This does not seem to be the case.

Gender bias theory may therefore account for some of boys' inferiority in literacy, but it does not shed any light on the *deterioration* in boys' English performance. Nor does it offer any explanation as to the genesis of these gender biases.

Teaching and curricula

Two other factors may be combining to weaken boys' literacy performance. As discussed already, for biological reasons of brain structure, boys may have a slight advantage in dealing with 'structured' or ordered subjects. At the same time, a major change has occurred in reading instruction which bears upon this difference and which may have affected boys' literacy, and hence their overall school performance. The 'phonics' method of teaching reading has been abandoned in favour of a 'whole word' or 'recognition' approach. The methodical approach to teaching writing—using copy books, writing on lines, etc.—is also uncommon now.

Children who fail to learn to read in the early stages of schooling may never catch up (Harrison & Zollner 1993). By not allowing for boys' developmental delay

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(Cratty 1986; Vann 1991), boys may be disadvantaged, especially those who do not have support for reading at home. Such a disadvantage in early literacy could seriously affect boys' subsequent performance in English.

There is some evidence that a more structured approach to literacy teaching has a beneficial effect on boys' performances (Victorian DET 1998; West 1995). Yet, although methods of teaching and assessment may well affect boys' literacy skills and English performance, this does not explain *why* boys learn differently.

Literacy/English and socio-economic status

There is a strong link between the socio-economic status of parents and the performance of their children at school. Socio-economic status is determined by household or parental income, family structure and parental education. The higher the socio-economic status of parents, according to these measures, the higher (on average) the literacy and English performance of their children is, both boys and girls.

Performance indicators showing a gender gap (figure 1) must therefore be seen in the context of socio-economic status. The gap between boys and girls varies with their socio-economic circumstances. High socio-economic status boys outperform low socio-economic status girls. However, the gender gap between boys' and girls' performance persists within each socio-economic level.

The influence of this factor has been demonstrated through extensive research by Richard Teese et al (1995). Their analysis of Victorian Year 12 exam results (VCE), for example, found that school performance varied with socio-economic status for both boys and girls, with girls nevertheless outperforming boys in each socio-economic cohort.

Comparable results were found in Year 3 students in NSW (Alloway & Gilbert 1997). When comparing girls and boys with the same socio-economic ranking, girls still did better. At the bottom of the socio-economic scale, both boys and girls exhibited the worst results for their gender, with boys performing worst of all.

The 1996 National Schools English Literacy Survey (NSELS) also found that boys and girls in higher socio-economic groups obtained better literacy results. In fact, it found that the performance gap between socio-economic groups widened from Year 3 to Year 5. Thus, socio-economic status does influence performance at school in English, for both girls and boys.

Of particular interest is the fact that higher socio-economic status has a moderating effect on boys'

performance relative to girls. In other words, the gender gap is smaller in high socio-economic groups. Results also fall faster for boys than for girls with progression down the socio-economic scale. (Teese et al. 1995). Moreover, socio-economic status appears to affect English performance specifically, and hence school performance generally, by either enlarging or reducing the gender gap.

Maths and socio-economic status

Year 12 results show that maths participation and performance also differ with socio-economic status. But the gender gap between participation and performance in maths is not comparable to that for English. Boys are about twice as likely to enrol in advanced maths courses and are over-represented in the top performance bands, but they are also more likely to fail (MacCann 1995; Teese et al. 1995). Consequently, girls' average in maths now exceeds boys' except in the most advanced course, where they are equal (NSW Board of Studies 1999; Ludowyke & Scanlon, 1997).

Maths is traditionally a male course of study and, until this decade, boys dominated in participation and performance. This is less the case now. Teese et al. (1995) claim that girls from higher socio-economic groups now participate more and perform better while, at the same time, boys from lower socio-economic groups participate less and perform worse than before.

So, there has been a shift whereby girls in higher socio-economic groups are overcoming the traditional gender barriers, and are exceeding the performance of boys in the lower socio-economic groups. This has led to the illusion that all girls significantly improved their school performance. In fact, only a subset of socio-economically advantaged girls has improved, while a subset of socio-economically disadvantaged boys has deteriorated. These discrepancies in performance in these key aspects of education have been intensified by the recent changes in assessment described earlier.

The importance of family

It is now widely accepted that family environment has a strong influence on school attainment. For example, an Australian study found that a family's socio-economic status was positively related to cognitive scores, and that family factors accounted for variations in children's educational performance, even after controlling for intellectual ability (Marjoribanks 1987).

Why socio-economic status affects English performance and school performance generally, and the gender gap specifically, is less clear.

Family income

Does the lack of financial resources in low socio-economic families account for lower school performance? The Western Australian Child Health Survey (Zubrick et al. 1997) showed a relationship between household income and school performance. It found that as income declined, overall academic competence declined.

These results, however, do not take into account other variables associated with differences in economic circumstances, such as family structure and parental education. Moreover, financial disadvantage would arguably affect both boys and girls equally, yet this does seem to be the case. If socio-economic status is relevant to the growing gender gap, there is presumably an aspect of low socio-economic status families, other than low income, which affects boys more than girls.

Family structure

Divorce often leads to a fall in socio-economic status, and this can adversely affect children's educational outcomes, according to research (Demo & Acock 1988; National Health Strategy 1992). The Western Australian Child Health Survey also provides evidence for a relationship between family structure and school attainment—the proportion of children with low academic competence was almost twice as high for sole-parent families as for couple families, i.e. 30% and 17% respectively (Zubrick et al. 1997).

Moreover, even after controlling for income, it has been found that children whose parents are divorced or separated have lower levels of educational attainment than children from intact families (Guidubaldi et al. 1983; Spruijt & de Goede 1997). If economic hardship were the main predictor of school performance, one would expect to find no difference between children in stepfamilies and children in intact families, where both received similar incomes. Yet, children in stepfamilies still generally perform less well (Amato & Keith 1991).

A custodial parent's remarriage also appears to have a different effect on boys and girls. The presence of a stepfather has been associated with the greater well-being of boys who have a custodial mother, but not girls (Amato & Keith 1991; Hetherington et al. 1985). Amato and Keith (1991) found that for a variety of outcomes, there is an interaction between the child's gender and the custodial parent's gender. Boys seem to be better off with their fathers, and girls better off with their mothers. These findings further support the idea that the absence of a father from home has a negative impact on the well-being of a child and its educational performance.

Therefore, as one of the strongest predictors of low socio-economic status is sole parenthood, so sole parenthood in turn is a predictor of lower average school performance. Nearly 90% of sole-parent families are headed by mothers. Since the majority of these mothers have poorer educational levels than mothers in general (ABS 1991), and insofar as parental education is a significant factor in children's educational performance, sole parent families, on average, are clearly a less propitious educational environment for children.

Studies have also shown that divorce has more pervasive and enduring negative consequences for boys than for girls (Guidubaldi et al. 1986), and that time spent in single-mother families has significantly stronger adverse effects on boys' educational attainment than girls' (Krein & Beller 1988). This might be because boys in sole parent families frequently lack a male role model and miss the discipline exercised by most fathers. However, there is little supporting evidence for such a view.

The fact therefore remains that there are some circumstantial aspects of low socio-economic status families that adversely affect boys more than girls. Without discounting the stresses and strains for parents with low family incomes, when we look more closely at the correlation between socio-economic status and school performance, family income *per se* declines in importance, and family structure, parental competence and parental influence come to the fore.

**Boys seem to be better off
with their fathers, and girls
better off with their mothers.**

Summary

- Against a background of poor standards of literacy in both boys and girls, the general school achievement levels of boys are declining in comparison with girls.
- The notable features of this significant and increasing discrepancy are boys' more serious literacy problems and subsequent poor performance in English.
- Biological differences, possibly involving hormonal and brain structure differences, may play a part by influencing capacities, interests and motivations, thereby

yielding advantages for boys in certain subjects, and for girls in others. The research evidence is so far inconclusive. But if significant innate gender differences do exist, any recent changes in curricula, instruction and assessment that are comparatively less congruent with boys' capabilities and interests, could be a factor in boys' declining performance.

- The socio-economic backgrounds of children are strong predictors of their literacy skills and school performance. For boys' English performance, the relationship is particularly significant in that the gender gap increases with decreasing socio-economic status. What matters most is not parental income, but rather parental education, general competence, and family stability. In broken families, the father is frequently absent from home and children's lives. A vital question is whether this disadvantages boys' education more than girls'.

Implications and recommendations

The declining educational achievement of boys is associated not only with subsequent unemployment, and an impoverished intellectual and social life, but also delinquency and crime (Kercher 1988; Gottfredson & Hirschi 1990). For these reasons alone, it is critical that the problem of boys' education be addressed in a systematic way.

The research evidence so far does not allow us to identify causes of the gender gap in performance with any confidence, but it does highlight areas where further research is urgently needed. Is the absence of a father at home more salient for boys than for girls? Are gender-specific role models important? Are there 'gender biases' in curricula, instruction and assessment, and, if so, how do they work and should they be reformed?

Key recommendation 1: *That methods of literacy instruction be critically examined and reviewed in light of the evidence that boys may not respond as well to the current methods.*

The intrinsic worth of education, and its impact on quality of life, attracts far less attention than the vocational outcomes of education. But what about the less tangible rewards, such as enjoyment of learning, the satisfaction to be found in reading, and the ability to appreciate the arts? These neglected benefits of education seem to be regarded as the privilege of girls, and of children in socially advantaged families. Educationally disadvantaged boys, who tend to

come from socially disadvantaged families, should have equal access to the intrinsic value of education as well as its vocational uses.

The success of feminist programmes in promoting gender equity in schools has been evident for some time. Girls are now participating in education to a greater extent,

widening their choice of subjects, and achieving comparable outcomes, so the focus has shifted to boys. The NSW Government's Report on Boys' Education (O'Doherty 1994), for instance, has 'gender equity' programmes as its key recommendation.

There is an inherent danger, however, in placing too much emphasis on gender. In fact, gender equity strategies should attempt to

minimise the importance of gender, rather than make it a central issue. Schools might also begin to question how their methods of teaching and assessment are unwittingly handicapping less resilient boys from an early age, rather than asking whether boys' and girls' subject choices in high-school are polarised on the basis of gender identity.

Key recommendation 2: *That a wide-scale, possibly longitudinal, study be commissioned, using data held or capable of being collected by the Departments of Education or other government agencies, to look into the effect of familial and environmental variables on both boys' and girls' educational performance in general, and literacy skills specifically.*

Departments of Education have been reluctant to release data which would help answer these questions, presumably to protect poorly performing schools and teachers, and inappropriate teaching methods, from critical scrutiny.

Key recommendation 3: *That strategies which promote gender equity be extended so that they target the obstacles to equal educational opportunities and enjoyment for boys and girls earlier rather than later, both in terms of curricula and gender biases.*

Inconclusive empirical evidence and an abundance of speculative opinion are hampering the search for a solution to the puzzle of boys' educational decline. Until this situation changes, possibilities for reform are limited, and the educational outcomes for boys will remain uncertain.

Policy

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